Operation Environmental Management Plan

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Glossary of terms

Term/acronym	Definition						
AQCCC	Air Quality Community Consultative Committee						
Asset	The New M5 Motorway between the existing M5 East corridor at Beverly Hills via tunnel to St Peters						
Blue Book	Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2006)						
CoA	Minister's Conditions of Approval						
Construction Contractor	CPB Contractors Dragados Samsung joint venture; a consortium comprising CPB Contractors, Dragados and Samsung C&T Corporation, which was engaged to design and construct the New M5 Project						
CRP	Community Relations Plan						
CTP	Compliance Tracking Program						
DPIE	NSW Department of Planning, Industry & Environment						
DPI Fisheries	NSW Department of Primary Industries – Fisheries						
DPI Water	NSW Department of Primary Industries – Water (formerly NSW Office of Water, NoW)						
EIS	Environmental impact statement						
EM	Environment Manager						
EMP	Environmental Management Plan						
EMS	Environmental Management System						
Environmental aspect	Element of an organisation's activities, products or services that can interact with the environment						
Environmental impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services						
EP&A Act	Environmental Planning and Assessment Act 1979						
EPA	NSW Environment Protection Authority						
EPL	Environment protection licence						
EWMS	Environmental Work Method Statement – a component of the environmental management system that addresses environmental management issues relevant to a specific site and/or activity						
FRNSW	Fire & Rescue New South Wales						
GGBF	Green and Gold Bell Frog						
IRP	Incident response procedures (IRPs)						
MCC	Motorway Operations Complex						
NRAR	Natural Resource Access Regulator (previously Department of Primary Industries – Water)						
NSW	New South Wales						
O&M	Operation and Management						
O&M Contractor	Fulton Hogan Egis O&M Pty Ltd						
OAQMP	Operational Air Quality Management Plan						
OEH	NSW Office of Environment and Heritage						
OEMP	Operation Environmental Management Plan						
ONMP	Operational Noise Management Plan						
0111/5	Operational Noise and Vibration Review						
ONVR	Operational Noise and Vibration Review						

Term/acronym	Definition
OWMP	Operational Water Management Plan
OVALMS	Operational Visual Amenity and Landscape Management Strategy
POEO Act	Protection of the Environment Operations Act 1997
Project Company	WCXM5 PT Pty Ltd in its capacity as trustee of the WCXM5 Project Trust or its successor in title or assigns
QSE	Quality, safety and environment
REMM	Revised environmental management measure (from the Submissions Report)
Roads and Maritime,	Roads and Maritime Services, the Proponent for the New M5 project
RMS	Roads and Maritime has engaged the Project Company to deliver the New M5 project.
SDS	Safety Data Sheets
Secretary, the	Secretary of the NSW Department of Planning & Environment
Site, the	The New M5 Motorway between the existing M5 East corridor at Beverly Hills via tunnel to St Peters
SMC	Sydney Motorway Corporation Pty Limited (SMC) (ABN 601 507 591) is a special purpose entity that has been created by the NSW Government to manage the delivery of WestConnex. For the purposes this New M5 Motorway Operation Environmental Management Plan (OEMP), WCX M5 PT Pty Ltd will act on behalf of Sydney Motorway Corporation Pty Limited (SMC).
SOP	Standard Operating Procedure
SSI	State significant infrastructure
WCX	WestConnex

1 Introduction

This document forms the operation environmental management plan (OEMP) for the New M5 Motorway between the existing M5 East corridor at Beverley Hills via tunnel to St Peters (SSI 6788, 'the Asset'). It has been prepared in accordance with:

- the Guideline for the Preparation of Environmental Management Plans, Department of Infrastructure, Planning and Natural Resources, 2004 (DIPNR, 2004) (refer Annexure A for compliance table);
- Environmental Management System Guidelines 3rd Edition (EMS Guidelines, NSW Government, 2013), which helps prepare and implement systematic practices to manage environmental performance and conformance;
- ISO 14001:2016 environmental management standards (Standards International, 2016), which provide a
 defined system for managing operations to minimise their environmental impacts, ensure legal compliance,
 and allow for continual improvement over time;
- relevant conditions of approval (CoA) relating to the operation of the WestConnex New M5 project ('the approved project'), refer to Section 4.1.1.

This OEMP will be made available on the WestConnex New M5 project website (https://www.westconnex.com.au/) and provided to the public upon request.

1.1 Purpose

This OEMP identifies risks and legal obligations associated with the Asset's day-to-day operations by:

- identifying best environmental management practices for operating the Asset in the future;
- setting-out relevant operational environmental management commitments, safeguards and management measures;
- describing relevant legal and regulatory provisions;
- managing environmental risk.

The OEMP also:

- satisfies and executes relevant operational environmental obligations in the CoA (refer to Section 4.1.1) and revised environmental management measures (REMM) identified in the New M5 Submissions Report (2015) (refer to Section 4.1.2);
- allows environmental performance to be easily reported, audited and monitored;
- allows management plans, standard operating procedures (SOPs) and environmental work method statements (EWMSs) to be developed and implemented.

1.2 Objectives

The OEMP's objectives are to:

- provide a reference document that defines and interprets operational environmental commitments;
- identify legislative and regulatory compliance requirements;
- satisfy the operational CoA and REMMs relevant to operation of the Asset (as detailed in Section 4.1) relating to:
 - air quality;
 - operational noise and vibration management and compliance;
 - traffic;

- climate change and energy use;
- visual amenity and landscaping;
- groundwater level/pressure, inflows, treatment and discharge, soil and subsidence;
- surface water quality, hydrology and stormwater management;
- management of waste (including measures to avoid, reduce, reuse and recycle);
- detection, treatment and disposal of contaminated materials and water;
- provide training and awareness to allow all personnel to undertake activities in an environmentally responsible manner;
- identify and appropriately manage risks in order to prevent, or minimise, environmental harm;
- provide management measures, processes and procedures to minimise road user disturbance and local community impacts during the operation of the Asset;
- monitor the Asset's operational environmental impacts in accordance with this document;
- document the environmental monitoring requirements needed to maintain the environment in relation to the operation of the Asset;
- develop, implement and maintain effective management systems and plans to control and manage activities associated with the operation of the Asset that may have an adverse environmental impact;
- demonstrate environmental protection, pollution prevention control and continual improvement;
- maintain consistency with current ISO 14001 environmental management standards.

1.3 OEMP structure

The structure of the OEMP, displayed in Figure 1-1, consists of a main document with issue-specific management strategies and three issue-specific sub-plans for key environmental concerns. The OEMP is the overarching document detailing governance and a structured approach to the management of environmental issues during operation and maintenance of the Asset.

Operation Environmental Management Plan CoA E31

Traffic Management Strategy CoA E31h(iii)
Waste and Resources Management Strategy CoA E31h(iv)
Visual Amenity and Landscape Management Strategy CoA E31h(v)
Dangerous Goods Management Strategy CoA E31 h(vi), (viii)

Operational Air Quality Management Sub-Plan CoA E31h(i)
Operational Noise Management Sub-Plan CoA E31h(ii)
Operational Water Management Sub-Plan CoA E31h(vi), (viii), (viii)

Figure 1-1: OEMP structure

1.4 Management, update, and approval

This OEMP must remain a flexible document that provides continual feedback and improvement. Updates to this plan may be required to reflect:

- improvements, observations and non-conformances;
- improvements in mitigation, management and monitoring measures;
- changes in:
 - project implementation and operation;
 - environment resulting in new or amended risks;
 - maintenance methods;
 - organisational structure, roles and responsibilities;
 - legislation, regulation, policy and guidance;
- after the occurrence of an emergency situation or test;
- where requested or required by DPIE or any other relevant authority.

This OEMP must be submitted for the approval of the Secretary no later than one month prior to the commencement of operation, or as otherwise agreed by the Secretary. Operation must not commence until written approval of the OEMP has been received from the Secretary.

Updates to the plan in response to regular review of the OEMP (refer to Section 10.1) may be approved internally if they are considered minor. Minor changes would typically include those that:

- are editorial in nature (e.g. staff and agency/authority name changes);
- do not increase the magnitude of impacts on the environment when considered individually or cumulatively;
- are in response to audit findings or periodic reviews; or
- do not comprise the ability of the project to meet approval or legislative requirements.

Where necessary, the OEMP will be provided to relevant stakeholders for review and comment if required, and forwarded to the Secretary of DPIE for approval.

1.5 OEMP consultation

The OEMP must be prepared in consultation with relevant agencies in accordance with CoA E31. The stakeholders identified in Table 1-1 were consulted during the preparation of this plan as agreed with DPIE.

Table 1-1: OEMP consultation

	CoA	NRAR	ЕРА	TŕNSW	Sydney Water	LGAs	State Emergency Service	NSW Health
Operation Environmental Management Plan	E31	•	•	•	•	•	•	•
Operational Air Quality Management Plan	E31h(i)		•			•		•
Operational Noise Management Plan	E34		•			•		

	CoA	NRAR	EPA	TŕNSW	Sydney Water	LGAs	State Emergency Service	NSW Health
Operational Water Management Plan	E31h(vi) E31h(vii) E31h(viii)	•	•		•	•		

NRAR: Natural Resource Access Regulator (previously Department of Primary Industries – Water); EPA: Environment Protection Authority; LGAs: Local Government Areas including Canterbury Bankstown, City of Sydney, Inner West Council, Botany Council and Georges River Council; AQCCC: Air Quality Community Consultative Committee; TfNSW: Transport for New South (including TMC: Traffic Management Center)

A document titled 'Consultation for the New M5 OEMP and sub-plans' has been prepared separately to this plan to provide detail relating to the consultation received and where feedback has been covered or addressed in this OEMP. Subsequent feedback will be documented and used to inform revisions and updates of this OEMP (refer Section 10.1).

2 Asset description

2.1 Location

Figure 2-1 shows the location and key features of the Asset.

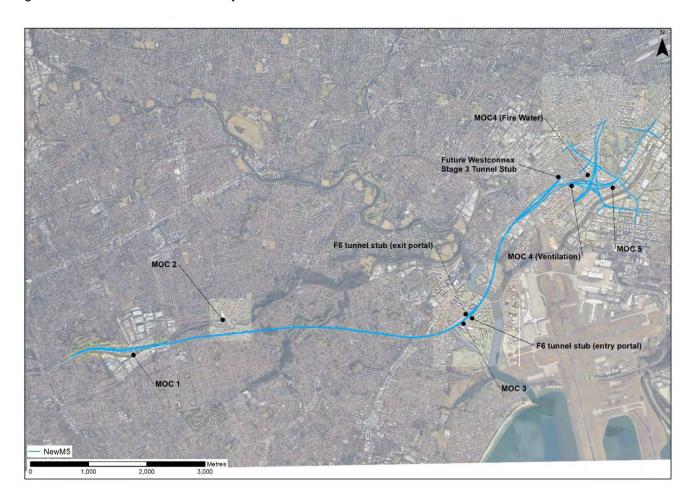


Figure 2-1: Key features of the Asset as upgraded under the approved project

2.2 Asset components

The Asset comprises the New M5 Motorway between the existing M5 East Motorway (between King Georges Road and Bexley Road) and St Peters. A summary of the Asset components is included in Table 2-1. The key facilities are further described in the following sub-sections.

Table 2-1: Key Asset components

Asset	Location
Interchanges (including on and off ramp tunnels)	St Peters interchange Gardeners Road on-ramp to New M5 (westbound) Gardeners Road on-ramp to M4 - M5 Link New M5 ramps on-ramp to M4 - M5 Link New M5 ramps Sydney Gateway ramps Sydney Gateway on-ramp to New M5 (westbound)

Asset	Location
ASSEL	
	M4 - M5 Link off ramp to local roads King Georges interchange
	`.,
	New M5 Eastbound Carriageway M5 Matanuay Fastbound
	M5 Motorway Eastbound M5 Motorway Weatbound
	M5 Motorway Westbound New M5 Westbound Carriageway
Local Dood upgrade	New M5 Westbound Bypass Ramp Outside II Board / Freetra Board intersection to the intersection with Models of Character than 10 and 10 a
Local Road upgrade	Campbell Road / Euston Road intersection to the intersection with Maddox Street to the north of Sydney Park
	Bedwin Road / Campbell Street / Campbell Road from the railway bridge near Camdenville Park to a new intersection with Bourke Road, Mascot
	Bourke Road / Bourke Street, Mascot between Church Street and the Campbell Road extension
	Widening of Gardeners Road
Motorway Operations	Kingsgrove Motorway Operations Complex (MOC1)
Complexes	Bexley Road South Motorway Operations Complex (MOC2)
	Arncliffe Motorway Operations Complex (MOC3)
	St Peters Motorway Operations Complex – Ventilation Facilities (MOC4)
	St Peters Motorway Operations Complex – Fire Water Tanks and Pump Rooms (MOC4)
	Burrows Road Motorway Operations Complex (MOC5)
Mainline Tunnel	Two motorway tunnels between the existing M5 East Motorway (between King Georges Road and Bexley Road) and St Peters interchange (which will connect to future M4-M5 Link).
Tunnel ventilation	Kingsgrove Ventilation Facility within the M5 Motorway corridor
system	Arncliffe Ventilation Facility at the Kogarah Golf Course
	St Peters Ventilation Facility within the St Peters interchange
Tunnel support	Electricity substations
systems and services	Fire pump rooms and tanks
	Water treatment facilities and pump station
	Low point sump for detention of stormwater, groundwater inflows and/or spills in the tunnel
	Fire and life safety systems including emergency evacuation infrastructure
Bridges	Kindilan underpass located south of Arinya Street, Kingsgrove
Watercourse bridge	Gardeners Road bridge (Alexandria Canal)
	Campbell Road bridge (Alexandria Canal)
Off-road shared use	Shared pedestrian and cycle paths within Beverly Grove Park north and south of the
path	western surface works, Kingsgrove
Intelligent transport	Tolling equipment
systems	Gantries
	Equipment shelters
	Substations
	Cameras
	Cabling and conduits
	Traffic control systems
Environmental and	Noise barriers
amenity controls	Planting and landscape treatments
	Water quality basins
	Green and Golden Bell Frog habitat area, Arncliffe

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Asset	Location			
Stormwater drainage	Longitudinal drains (pits and pipes)			
	Cross drains (culverts)			
	Detention (storage) basins			
Road furniture	Lighting			
	Signage			
Utilities	Power			
	Communications			
	Cables and conduits			

2.3 Motorway Operational Ancillary Infrastructure

The New M5 Motorway includes the following operational ancillary infrastructure:

- Operational management control systems and incident and emergency response infrastructure
- Tunnel ventilation systems and facilities
- · Drainage and water treatment facilities
- Noise attenuation measures
- Utilities
- Roadside furniture and lighting.

Most operational ancillary infrastructure is established in five main Motorway Operations Complexes (MOC). The O&M Contractor will operate and maintain the MOCs.

2.3.1 Kingsgrove Motorway Operations Complex

The Kingsgrove Motorway Operations Complex (MOC1) is located to the south of the western project portals and the existing M5 East Motorway.

MOC1 includes a separate emergency response system as a back-up in the unlikely event that the motorway control centre at St Peters is affected by an incident or emergency. MOC1 includes a maintenance facility to support maintenance of the New M5 during operation.

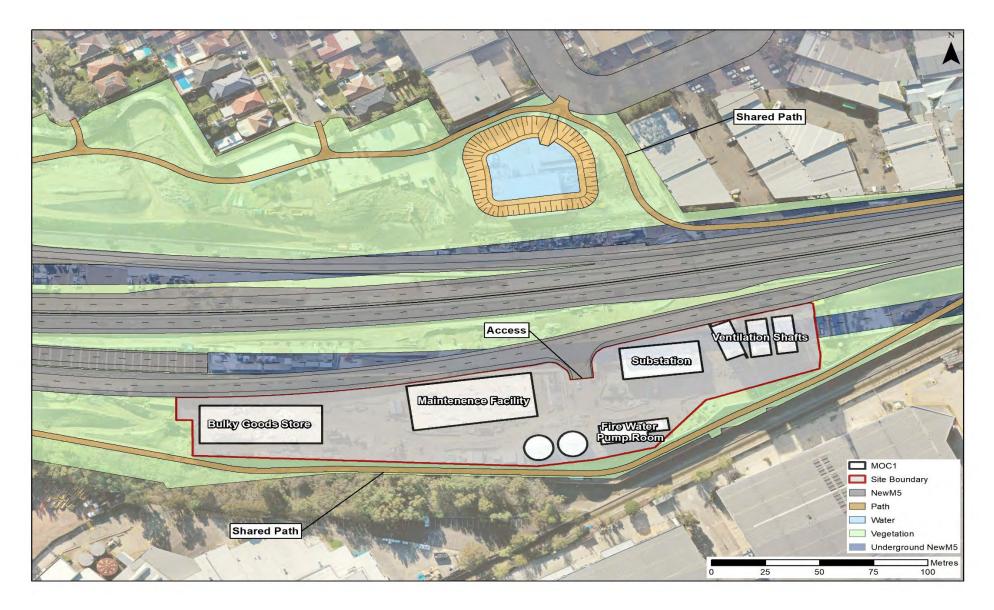


Figure 2-2: Kingsgrove (MOC1)

The operational features of Kingsgrove (MOC1) are included in Table 2-2.

Table 2-2: Kingsgrove (MOC1) infrastructure and equipment

Aspect	Infrastructure / equipment
Buildings	Distribution substation buildingThree ventilation shafts
	Workshop and office maintenance facility
	Bulky spare parts and equipment storage facility
	Fire water tanks and pump room.
	Hardstand and site parking
Access	Access road via the New M5 East westbound ramp
	24 hours per day
	O&M Contractor vehicles
	At all times a minimum of two people shall attend site. During maintenance activities up to 10 people shall attend the site.

2.3.2 Bexley Road South Motorway Operations Complex

The Bexley Road South motorway operations complex (MOC2) is located to the south of the M5 East Motorway western portals, adjacent to Bexley Road.

The operational features of the Underwood Road ventilation facility are included in Table 2-3.

Table 2-3: Bexley Road South (MOC2) infrastructure and equipment

Aspect	Infrastructure / equipment
Buildings	 Ventilation building with vertical fans located below ground Distribution substation located east of the shaft
Access	 Vehicle access to the facility is from Bexley Road 24 hours per day O&M Contractor vehicles At all times a minimum of two people shall attend site. During maintenance activities up to 10 people shall attend the site.



Figure 2-3 Bexley Road South Motorway Operations Complex (MOC2)

2.3.3 Arncliffe Motorway Operations Complex

The Arncliffe Motorway Operations Complex (MOC3) is located near the south-western corner of the Kogarah Golf Course site.

The operational features of Arncliffe (MOC3) are included in Table 2-4.

Table 2-4: Arncliffe (MOC3)

Aspect	Infrastructure / equipment						
Infrastructure	Four ventilation shafts and station building						
	Distribution substation building						
	Water treatment plant and tidal basin						
	Hardstand and site parking						
Access	Vehicle access to the facilities is provided from Marsh Street						
	24 hours per day						
	O&M Contractor vehicles						
	At all times a minimum of two people shall attend site. During maintenance activities up to 10 people shall attend the site.						



Figure 2-4: Arncliffe (MOC3)

2.3.4 St Peters Motorway Operations Complex

2.3.4.1 Ventilation Facilities

The St Peters motorway operations complex (MOC4) is located near the western corner of the St Peters interchange, adjacent to the Prince Highway / Canal Road intersection.

The operational features of the ventilation facilities are included in Table 2-5.

Table 2-5: St Peters (MOC4) – ventilation facilities

Aspect	Infrastructure / equipment						
Equipment	Two ventilation shafts						
	Distribution substation building						
	Four exhaust fans arranged horizontally in a two-storey configuration						
	Hardstand and site parking						
Access	Vehicle access to the facilities is provided from Canal Road						
	24 hours per day						
	O&M Contractor vehicles						
	At all times a minimum of two people shall attend site. During maintenance activities up to 10 people shall attend the site.						



Figure 2-5: St Peters (MOC4) – ventilation facilities

2.3.4.2 Fire Water Tanks and Pump

The MOC4 Fire Water Tanks and Pump Rooms are located within the St Peters Interchange site between Bishop Street and Albert Street. The facilities are located between the existing Alexandria Landfill Leachate Treatment Plant and the light industrial properties along Albert Street.

The facility will be accessed via the shared user paths within the public parkland and will be secured with fencing fronting the public areas.

The operational features of the ventilation facilities are included in Table 2-6.

Table 2-6: St Peters (MOC4) – Fire Water Tanks and Pumps Room

Aspect	Infrastructure / equipment					
Infrastructure	Stage 2 fire pump room					
	Stage 3 fire pump room					
	Fire water tanks					
	Hardstand and site parking					
	Area for gas extraction facility (if required)					
Access	24 hours per day					
	O&M Contractor vehicles					
	At all times a minimum of two people shall attend site. During maintenance activities up to 10 people shall attend the site.					

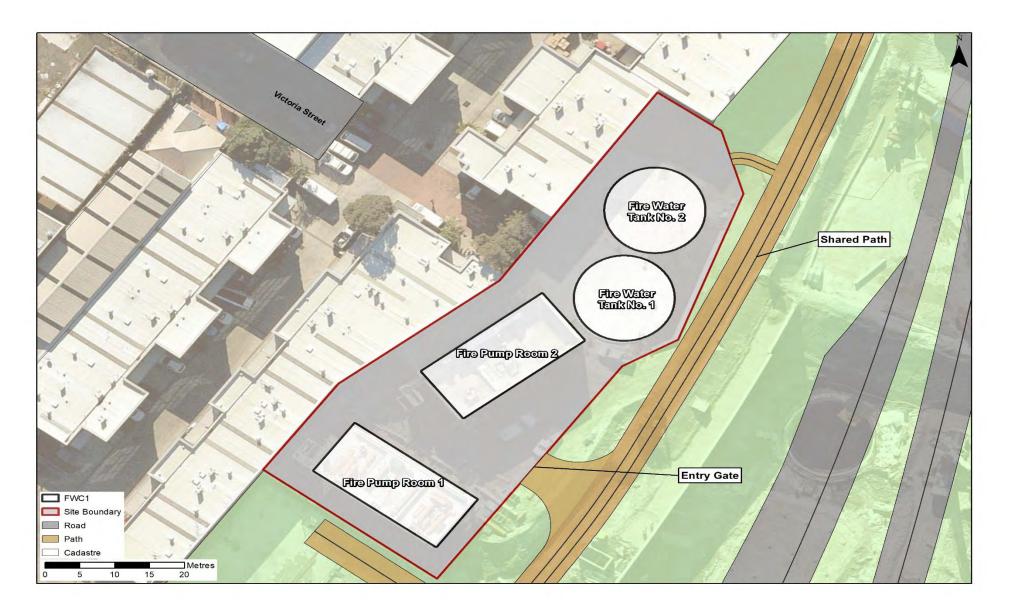


Figure 2-6: St Peters (MOC4) fire water tank and pump room

2.3.1 Burrows Road Motorway Operations Complex

The Burrows Road motorway operations complex (MOC5) is located at the corner of Burrows Road and Campbell Road.

The WestConnex motorway control centre is within MOC5. The motorway control is the central building for all communications and control of the project's operational management control systems. The motorway control centre will be staffed 24 hours a day, seven days a week.

Table 2-7: Burrows Road (MOC5)

Aspect	Infrastructure / equipment				
Infrastructure	Motorway Control Centre with car parking beneath Distribution substation				
Access	General vehicle access is provided via Burrows Road and emergency vehicle access is provided via the New M5 interchange				
	24 hours per day				
	O&M Contractor vehicles				
	At all times a minimum of two people shall attend site. During maintenance activities up to 10 people shall attend the site.				

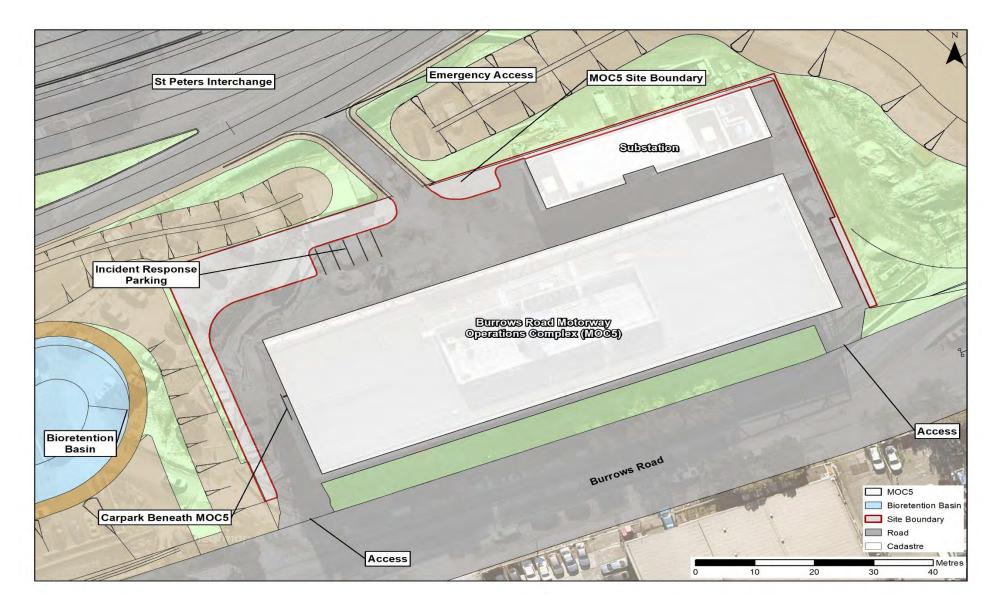


Figure 2-7: Burrows Road (MOC5)

3 Operation and maintenance activities

3.1 Operation and maintenance activities summary

Table 3-1 includes a list of activities to be undertaken during operation and maintenance of the Asset.

Table 3-1: Operational and maintenance services

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
Operations services			All things necessary for the use, operation and control of the Motorway including:			
	Motorway	Refer below and to section 2.2	Traffic management including monitoring the operation of traffic signalling devices from the Motorway Control Centre (MCC)		Daily	24 hours / 7 days
	Tunnel		Operation and periodic testing of tunnel ventilation equipment and facilities to maintain acceptable air quality within and outside of tunnel		Daily	24 hours / 7 days
	Motorway		Equipment and systems management including monitoring the operation of tolling systems and tunnel ventilation system		Daily	24 hours / 7 days
	Motorway		Incident management including attending and clearing all breakdowns and other vehicle incidents (including spills) on the New M5 Motorway		As required	24 hours / 7 days
	Kingsgrove (MOC1)		Storage of liquids and chemicals at the workshop and maintenance facilities		Daily	24 hours / 7 days
	Arncliffe (MOC3)		Storage of liquids and chemicals at the water treatment plant.		Daily	24 hours / 7 days

Operation Environmental Management Plan

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
Maintenance services	At all times a people shall a During maint	At all times a minimum of two people shall attend site. During maintenance activities up to 10 people shall attend the site.	Maintenance of ventilation plant, facilities and monitoring equipment: (e.g. fans, ventilation facilities, monitors) including: Testing of the tunnel ventilation system Inspect fan assemblies and airways into fans Diagnosis for out of balance vibration and bearing condition Measure and record operating current and voltage, and motor winding insulation resistance Inspect protective coatings and tightness of bolts Inspect impeller for abrasion, corrosion or dirt deposits Check the fan, impeller, motor for corrosion and damage Inspect ventilation facility for structural integrity and soundness of fixtures and fittings	Maintenance activities are generally carried out in situ with no machinery requirements. Over the life of the asset major refurbishment may be required and heavy lifting machinery will be required to facilitate the removal of equipment and access at ventilation facilities. Maintenance is generally completed with minimal impact to the community, with the activities conducted within the facilities.	Weekly inspections and monthly routine tasks	Major activities generally occur during quarterly nightly closures; minor activities generally occur during day hours, providing Motorway operations are unaffected and it is safe to do so.
			Maintain external areas including: Removing rubbish Maintain visual appearance	Routine activities with repairs involving machinery as required	Weekly inspections and monthly routine tasks	Generally during daylight hours as required
			Maintaining landscaped areas including vegetation trimming, grass mowing and replanting using equipment such as tractor slashers, ride on mowers, hand mowers, brush cutters, blower/vacs, small skids steer, augers, water carts, etc.	Routine activities with access to adjacent areas	Weekly inspections and monthly routine tasks	Generally during daylight hours as required
		Cleaning out drains	Routine inspection; cleaning activities may require machinery, with appropriate controls and notification measures in place	Maintenance as required following annual inspection	Generally during daylight hours as required	

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Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
			Graffiti removal from the facility using non- hazardous materials and a pressure cleaner after application of removal agent (graffiti treatment may also include re-painting)	Activities may involve high pressure water machinery. These shall normally be conducted during day time shifts and appropriate control	Maintenance as required following weekly inspection	Generally during daylight hours as required
			Remove unauthorised posters from assets by appropriate means such that the strata from which the items are removed are not damaged and, where possible, minimal damage to the poster occurs. Record details of the poster, sign, location and, where practical, name and address the owner. Once removed, unauthorised posters (including supporting structures) must be stored for one month before disposing.		Maintenance as required following weekly inspection	Generally during daylight hours as required
	Bexley Road South (MOC2)	At all times a minimum of two people shall attend site. During maintenance activities up to 10 people shall attend the site.	Maintenance of ventilation plant, facilities and monitoring equipment: (e.g. fans, ventilation facilities, monitors) including: Testing of the tunnel ventilation system Inspect fan assemblies and airways into fans Diagnose for out of balance vibration and bearing condition Measure and record operating current and voltage, and motor winding insulation resistance Inspect protective coatings and tightness of bolts Inspect impeller for abrasion, corrosion or dirt deposits Check the fan, impeller, motor for corrosion and damage Inspect ventilation facility for structural integrity and soundness of fixtures and fittings	Maintenance activities are generally carried out in situ with no machinery requirements. Over the life of the asset major refurbishment maybe required and heavy lifting machinery will be required to facilitate the removal of equipment and access at ventilation facilities. Maintenance is generally completed with minimal impact to the community, with the activities conducted within the facilities.	Weekly inspections and monthly routine tasks	Major activities generally occur during quarterly nightly closures; minor activities generally occur during day hours, providing Motorway operations are unaffected and it is safe to do so.

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
			Maintain external areas including: Removing rubbish Maintain visual appearance	Routine activities with repairs involving machinery as required	Weekly inspections and monthly routine tasks	Generally during daylight hours as required
			Maintaining landscaped areas including vegetation trimming, grass mowing and replanting using equipment such as tractor slashers, ride on mowers, hand mowers, brush cutters, blower/vacs, small skids steer, augers, water carts, etc.	Routine activities with access to adjacent areas	Weekly inspections and monthly routine tasks	Generally during daylight hours as required
			Cleaning out drains	Routine inspection; cleaning activities may require machinery, with appropriate controls and notification measures in place	Maintenance as required following annual inspection	Generally during daylight hours as required
			Graffiti removal from the facility using non- hazardous materials and a pressure cleaner after application of removal agent (graffiti treatment may also include re-painting)	Will be completed as identified after inspections or reported through any of the	Maintenance as required following weekly inspection	Generally during daylight hours as required
			Remove unauthorised posters from assets by appropriate means such that the strata from which the items are removed are not damaged and, where possible, minimal damage to the poster occurs. Record details of the poster, sign, location and, where practical, name and address the owner. Once removed, unauthorised posters (including supporting structures) must be stored for one month before disposing.	communication mediums. Activities may involve high pressure water machinery. These shall normally be conducted during day time shifts and appropriate control and notification measures in place.	Maintenance as required following weekly inspection	Generally during daylight hours as required
	Arncliffe (MOC3)	At all times a minimum of two people shall attend site. During maintenance activities up to ten people shall attend the site.	Maintenance of ventilation plant, facilities and monitoring equipment: (e.g. fans, ventilation facilities, monitors) including: Testing of the tunnel ventilation system Inspect fan assemblies and airways into fans	Maintenance activities are generally carried out in situ with no machinery requirements. Over the life of the asset major refurbishment	Weekly inspections and monthly routine tasks	Major activities generally occur during quarterly nightly closures; minor activities generally occur during day hours,

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
			 Diagnose for out of balance vibration and bearing condition Measure and record operating current and voltage and motor winding insulation resistance Inspect protective coatings and tightness of bolts Inspect impeller for abrasion, corrosion or dirt deposits Check the fan, impeller, motor for corrosion and damage Inspect ventilation facility for structural integrity and soundness of fixtures and fittings 	maybe required and heavy lifting machinery will be required to facilitate the removal of equipment and access at ventilation facilities. Maintenance is generally completed with minimal impact to the community, with activities conducted within the facilities.		providing Motorway operations are unaffected and it is safe to do so.
			Maintain external areas including: Removing rubbish Maintain visual appearance	Routine activities with repairs involving machinery as required	Weekly inspections and monthly routine tasks	Generally during daylight hours as required
			Maintaining landscaped areas including vegetation trimming, grass mowing and replanting using equipment such as tractor slashers, ride on mowers, hand mowers, brush cutters, blower/vacs, small skids steer, augers, water carts, etc.	Routine activities with access to adjacent areas	Weekly inspections and monthly routine tasks	Generally during daylight hours as required
			Cleaning out drains	Routine inspection; cleaning activities may require machinery, with appropriate controls and notification measures in place	Annually and as required	Generally during daylight hours as required
			Water treatment (through Water Treatment Plant) at MOC3	Routine activity with dedicated machinery	Weekly	Generally during daylight hours as required
			Delivery of chemicals to the WTP involving one chemical tanker	Routine activity with dedicated machinery	Weekly	Generally during daylight hours as required

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
			Removal of sludge produced as a by-product of the treatment process utilising one skip bin truck	Routine activity with dedicated machinery	Weekly	Generally during daylight hours as required
			Graffiti removal from the facility using non- hazardous materials and a pressure cleaner after application of removal agent (graffiti treatment may also include re-painting)	Will be completed as identified after inspections or reported through any of the communication mediums. Activities may involve high pressure water machinery. These shall normally be conducted during day time shifts and appropriate control and notification measures in place.	Maintenance as required following weekly inspection	Generally during daylight hours as required
			Remove unauthorised posters from assets by appropriate means such that the strata from which the items are removed are not damaged and, where possible, minimal damage to the poster occurs. Record details of the poster, sign, location and, where practical, name and address the owner. Once removed, unauthorised posters (including supporting structures) must be stored for one month before disposing.		Maintenance as required following weekly inspection	Generally during daylight hours as required
	St Peters (MOC4)	At all times a minimum of two people shall attend site. During maintenance activities up to 10 people shall attend the site.	Maintenance of ventilation plant, facilities and monitoring equipment: (e.g. fans, ventilation facilities, monitors) including: Testing of the tunnel ventilation system Inspect fan assemblies and airways into fans Diagnose for out of balance vibration and bearing condition Measure and record operating current and voltage, and motor winding insulation resistance Inspect protective coatings and tightness of bolts Inspect impeller for abrasion, corrosion or dirt deposits Check the fan, impeller, motor for corrosion and damage	Maintenance activities are generally carried out in situ with no machinery requirements. Over the life of the asset major refurbishment maybe required and heavy lifting machinery will be required to facilitate the removal of equipment and access at ventilation facilities. Maintenance is generally completed with minimal impact to the community, with the activities conducted within the facilities.	Weekly inspections and monthly routine tasks	Major activities generally occur during quarterly nightly closures; minor activities generally occur during day hours, providing Motorway operations are unaffected and it is safe to do so.

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
			 Inspect ventilation facility for structural integrity and soundness of fixtures and fittings 			
			Maintain external areas including:Removing rubbishMaintain visual appearance	Routine activities with repairs involving machinery as required	Weekly inspections and monthly routine tasks	Generally during daylight hours as required
			Maintaining landscaped areas including vegetation trimming, grass mowing and replanting using equipment such as tractor slashers, ride on mowers, hand mowers, brush cutters, blower/vacs, small skids steer, augers, water carts, etc.	Routine activities with access to adjacent areas	Weekly inspections and monthly routine tasks	Generally during daylight hours as required
			Cleaning out drains	Routine inspection; cleaning activities may require machinery, with appropriate controls and notification measures in place	Maintenance as required following annual inspection	Generally during daylight hours as required
			Graffiti removal from the facility using non- hazardous materials and a pressure cleaner after application of removal agent (graffiti treatment may also include re-painting)	Will be completed as identified after inspections or reported through any of the	Maintenance as required following weekly inspection	Generally during daylight hours as required
			Remove unauthorised posters from assets by appropriate means such that the strata from which the items are removed are not damaged and, where possible, minimal damage to the poster occurs. Record details of the poster, sign, location and, where practical, name and address the owner. Once removed, unauthorised posters (including supporting structures) must be stored for one month before disposing.	communication mediums. Activities may involve high pressure water machinery. These shall normally be conducted during day time shifts and appropriate control and notification measures in place.	Maintenance as required following weekly inspection	Generally during daylight hours as required

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
	Burrows Road (MOC5)		Building maintenance	Routine activities and general facilities maintenance.	Weekly	Generally during daylight hours as required
			Maintaining landscaped areas including vegetation trimming, grass mowing and replanting using equipment such as tractor slashers, ride on mowers, hand mowers, brush cutters, blower/vacs, small skids steer, augers, water carts, etc.	Routine activities and general maintenance of facility landscaping.	Weekly inspections and monthly routine tasks	Generally during daylight hours as required
			Cleaning out drains	Routine inspection; cleaning activities may require machinery, with appropriate controls and notification measures in place	Maintenance as required following annual inspection	Generally during daylight hours as required
			Graffiti removal from the facility using non- hazardous materials and a pressure cleaner after application of removal agent (graffiti treatment may also include re-painting)	As identified after inspections or reported through any of the communication mediums. Activities may	Maintenance as required following weekly inspection	Generally during daylight hours as required
			Remove unauthorised posters from assets by appropriate means such that the strata from which the items are removed are not damaged and, where possible, minimal damage to the poster occurs. Record details of the poster, sign, location and, where practical, name and address the owner. Once removed, unauthorised posters (including supporting structures) must be stored for one month before disposing.	involve high pressure water machinery and noise. These shall normally be conducted during day time shifts and appropriate control and notification measures in place.	Maintenance as required following weekly inspection	Generally during daylight hours as required
	All external landscaped areas	At all times a minimum of two people shall attend site. During maintenance activities up to four people shall attend the site.	Maintaining landscaped areas including vegetation trimming, grass mowing and replanting using equipment such as tractor slashers, ride on mowers, hand mowers, brush cutters, blower/vacs, small skids steer, augers, water carts, etc.	Routine activities with access to adjacent areas	Weekly	Generally during daylight hours as required

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
	Motorway (includes all areas within the operational boundary of the	udes all people shall attend site. s within the ational people shall attend attend up to four people shall attend the site.	Removing material deposited by motorists, such as non-biodegradable litter and food wastes from the Motorway verges using road sweeping equipment and maintenance crew members	As identified, sweeping conducted weekly	Maintenance as required following daily inspection	Generally during daylight hours as required
	project)		Cleaning up any spills from motor vehicles using spill kits containing material to absorb spills, then shovelled/swept up and material disposed at approved waste facilities	As required as part of clean up after incidents	Maintenance as required following daily inspection	As required and safe to do so
			Graffiti removal from road furnishings, retaining walls, bridges, etc. using non-hazardous materials and a pressure cleaner after application of removal agent (graffiti treatment may also include re-painting). Remove graffiti and clean the surface according to any requirements for anti-graffiti coatings. Remove unauthorised posters from assets by appropriate means such that the strata from which the items are removed are not damaged and, where possible, minimal damage to the poster occurs. Record details of the poster, sign, location and, where practical, name and address the owner. Once removed, unauthorised posters (including supporting structures) must be stored for one month before disposing.	Will be completed as identified after inspections or reported through any of the communication mediums. Activities may involve high pressure water machinery. These shall normally be conducted during day time shifts and appropriate control and notification measures in place.	Maintenance as required following daily inspection	As required and safe to do so

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
			Stormwater system maintenance and repair including: Cleaning out drains (including detention and sedimentation basins) Inspect Pits for structural integrity and flow obstructions (Note: flame trap pits fill with water) Inspect pipes for structural integrity and flow obstructions Inspect sub-surface drains	Routine inspection with CCTV equipment requiring access to inlet pits. Cleaning activities may require heavy machinery, these shall generally be conducted during day time shifts, with appropriate controls and notification measures in place.	Annually and as required	Night closures and during 24 hour operations as safe to do so.
			Pavement maintenance and repair including: Undertake inspection of assets following heavy rains and storms Undertake asset inspection which is prompted by a public complaint Undertake detailed Inspection Test carriageway and ramps in minimum 100m lengths for roughness	Periodic repairs of degraded pavement will be conducted by onsite teams with minimal machinery. Significant pavement works as result of reaching end of effective life will require significant machinery and be undertaken as a major project.	Maintenance as required following daily inspections	During permitted night closures
			Maintenance of road furnishings (including noise barriers). Visual inspection for accident damage, vandalism or graffiti.	Routine activities with repairs involving machinery as required	Monthly	Night closures and during 24 hour operations as safe to do so.
			Maintenance of roadside and medians (including fences, retaining walls and landscaping) including removal of graffiti with issues identified through inspections of the structural integrity and stability and public complaint. Inspections will also include ensuring retaining walls are not sloping or falling.	Routine activities with repairs involving machinery as required	Monthly	Night closures and during 24 hour operations as safe to do so.

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
			Maintenance of mechanical and electrical systems (lighting, hydraulics, instrumentation) including replacement of light globes	Routine activities with repairs involving machine as required	Monthly	Night closures and during 24 hour operations as safe to do so.
			Line marking inspections, both scheduled (alternating day and night) and prompted by public complaints. Maintenance as required by the inspection. Maintenance and repair of intelligent transport systems (traffic lights, traffic signs, safety cameras)	Routine activities with repairs involving machine as required	Quarterly	During permitted night closures.
	Bridges	At all times a minimum of two people shall attend site. During maintenance activities up to four people shall attend the site.	Bridge maintenance including repairs after collisions and removal of graffiti, will be prompted following the following inspections: Level 1 Inspections (all bridges) – basic and relatively cursory inspection performed as part of the general network asset management Level 2 inspections (concrete and steel bridges) – condition assessment by accredited inspector (if all structural elements are Condition 1 at the last inspection interval can be extended up to 5 years) Level 3 Inspections – Structural Safety Assessment by Structural Engineer based on reported deterioration of individual elements within the bridge Level 4 Inspections – Load Capacity Assessment	Routine general inspection activities requiring specialist access machinery. Significant works or repairs will require dedicated machinery and undertaken as a major project.	Maintenance as required following annual inspection	During permitted night closures.
	Tunnel	At all times a minimum of two people shall attend site. During maintenance activities	Tunnel washing	Routine activity with dedicated machinery under closed or controlled conditions	Quarterly	During permitted night closures.

Services	Facility/ Location	Number of personnel (indicative)	Activities	Considerations	Frequency	Access Hours
		up to ten people shall attend the site.	Tunnel operation systems including ventilation, fire and life safety, etc.	During scheduled closures operation and testing of systems in accordance with maintenance standards.	Quarterly	Night closures and during 24 hour operations as safe to do so.

3.2 Staging and scheduling of operation and maintenance activities

The Department of Planning, Industry and Environment (DPIE) will be notified of the date of the commencement of the operation of the road in accordance with CoA A14(a), prior to the commencement of operation. The completion time is 40 years from that date.

Table 3-2 includes a list of assets that are proposed to be staged as part of the operation of the SSI.

Table 3-2 Staged Assets

Asset	Location	Timeframe
Bridge 1	Northbound entry ramp from Euston Road and Gardeners Road to New M5 at St Peters Interchange	Upon completion of Local Roads scope (2021)
Bridge 3	Southbound exit ramp from the New M5 Motorway to Gardeners Road at St Peters Interchange	Upon completion of Local Roads scope (2021)
Bridge 4	Southbound exit ramp from New M5 to Sydney Gateway at St Peters Interchanges	Upon completion of Sydney Gateway Project (2023)
Bridge 5 and 6	Twin bridges over the New M5 connecting M4-M5 link to Sydney Gateway	Upon completion of Sydney Gateway Project (2023)
Arncliffe tunnel stubs	Entry and exit portals connecting the New M5 to the F6 Extension	Upon completion of F6 Extension Project (2024)
St Peters tunnel stub	Future WestConnex (Stage 3) tunnel stub	Upon completion of WestConnex Stage 3A (2023)

It is noted that the Local Roads package of works associated with the SSI will be delivered and handed over to the relevant Councils at a later date.

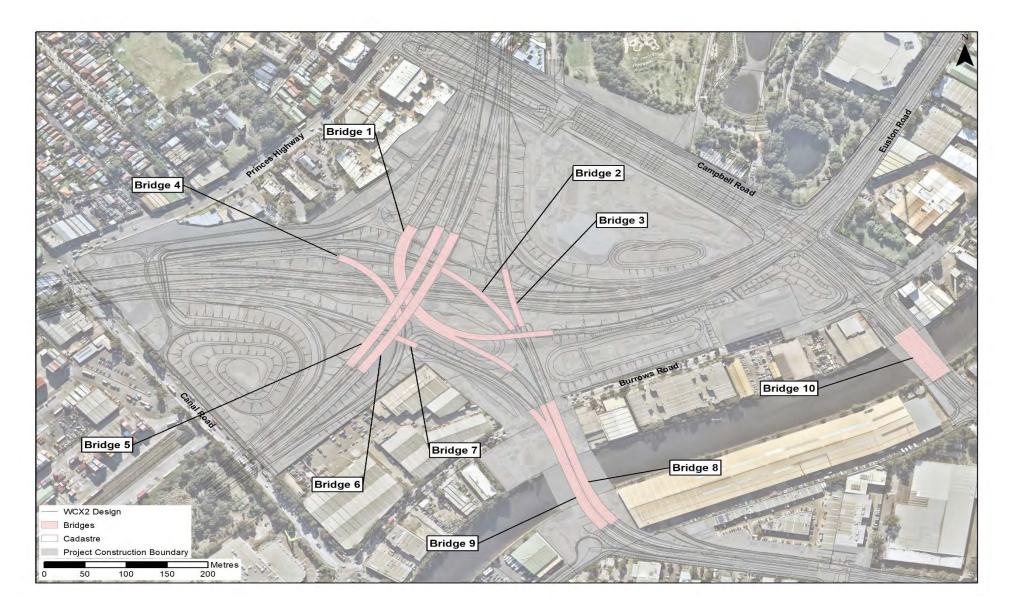


Figure 3-1: St Peters Interchange – Stage Assets

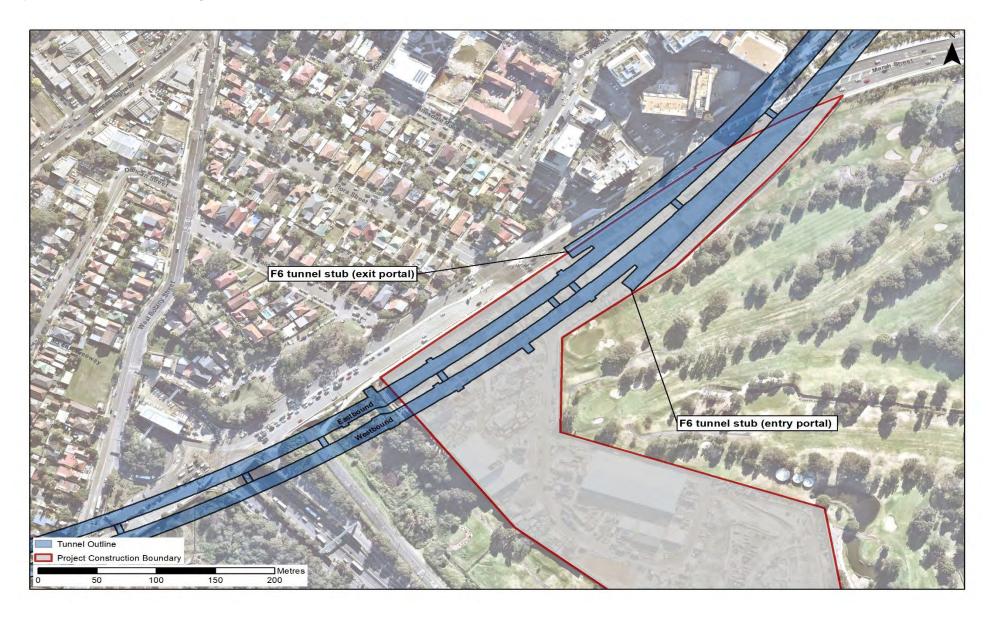


Figure 3-2: Arncliffe tunnel stubs

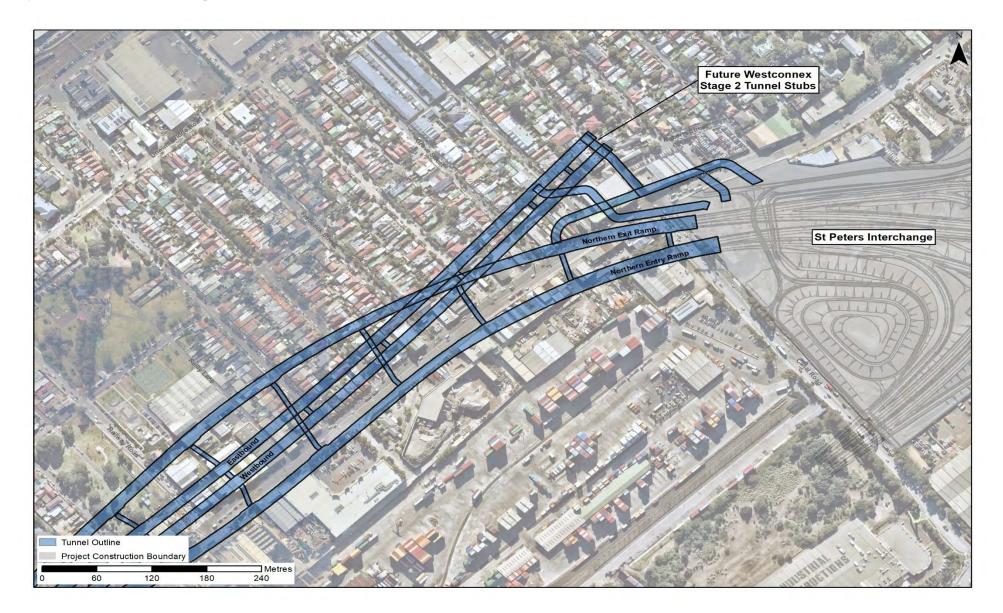


Figure 3-3: St Peters tunnel stub

Operation Environmental Management Plan

The Asset will be continuously operated and maintained 24-hours per day, 7-days a week, 365 days a year.

Programmed maintenance works will be undertaken where possible, during daylight hours (including off-motorway works, e.g. landscaping, litter removal, graffiti removal, gantry access etc.). However due to the strategic importance of the motorway, certain motorway, maintenance works will be required to occur during:

- hours of low traffic volumes to ensure maintenance works limits impacts on peak traffic flow
- scheduled maintenance shutdowns.

The O&M Contractor will notify the public and other stakeholders before working at night or out of hours, using the methods described in section 7.3.1. Urgent unplanned maintenance will be undertaken in accordance with the O&M Contractor's Community Relations Plan (refer to section 7.3.1).

4 Environmental obligations

4.1 Statutory obligations

This section describes the statutory and other obligations covering the operational Asset.

4.1.1 Conditions of approval

Conditions of Approval (CoAs) relevant to the operation of the Asset are included in Table 4-1. Those CoAs that are specific to the Operational Noise Management Plan, Operational Air Quality Management Plan and Operational Water Management Plan are identified in those relevant sub-plans.

Table 4-1: Relevant operational conditions of approval

CoA	Relevant requirement	Reference
A1	In addition to meeting the specific performance criteria established under this approval, the Proponent must implement all feasible and reasonable measures to prevent and/or minimise any harm to the environment that may result from the construction or operation of the SSI.	This OEMP and sub-plans have been developed to minimise harm to the environment. The plans have been developed considering CoA, REMMs and good practice. Environmental safeguards are included in each sub-plan.
A2	The Proponent must carry out the SSI in accordance with the conditions of approval and generally in accordance with the: a) State significant infrastructure application;	This OEMP and subs plans have been developed in accordance with the requirements of CoA A2(a-e).
	 b) New M5 Environmental Impact Statement - Volumes 1A, 1B, 1C, 2A, 2B, 2C, 2D, 2E, 2F, 2G and 2H prepared by AECOM Australia, dated November 2015; c) New M5 Submissions and Preferred Infrastructure Report - Volumes 1A, 1B and 2 prepared by AECOM Australia, dated March 2016; d) WestConnex New M5 Addendum to the Submissions and Preferred Infrastructure Report - Temporary Construction Power Enabling Works prepared by RMS, dated April 2016; and 	
	e) Supplementary material provided as an addendum to the New M5 Submissions and Preferred Infrastructure Report	
A8	The Proponent must ensure that all licences, permits and approvals are obtained as required by law and maintained as required throughout the life of the SSI. No condition of this approval removes the obligation for the Proponent to obtain, renew or comply with such licences, permits or approvals.	All applicable licences, permits and approvals required for the operation and maintenance of the Asset will be obtained. Licences, permits and approvals are addressed in Section 4.1.4.

CoA	Relevant requirement	Reference
A10	The Proponent may elect to construct and/or operate the SSI in stages. Where staging is proposed, the Proponent must submit a Staging Report to the Secretary prior to the commencement of each proposed stage. The Staging Report must provide details of: a) How the SSI would be staged, including general details of work activities associated with each stage and the general timing of when each stage would commence; and b) Details of the relevant conditions of approval, which would apply to each stage and how	Operation of the Asset is proposed to be staged. Refer to section 3.2 of this OEMP.
	these will be complied across and between the stages of the SSI. Where staging of the SSI is propose, these conditions of approval are only required to be complied with ay the relevant time and to the extent that they are relevant to the specific stage(s)	
A12	The Proponent will be responsible for any breaches of the conditions of approval resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.	Compliance, training and awareness (refer Section 6) for the operation of the Asset, including the compulsory site induction, will provide opportunities to inform O&M personnel of the requirements under the conditions of approval relevant to the operation of the Asset.
A14	The Proponent must prepare and implement a Compliance Tracking Program to track compliance with the requirements of this approval. The Compliance Tracking Program must be submitted to the Secretary for approval prior to the commencement of construction and operate for a minimum of 24 months following commencement of operation, subject to the Secretary's review of the outcomes of the Independent Environmental Audit Report required by condition E46. The operation of the program may be extended if the Secretary determines that there has been unsatisfactory compliance. The Program shall include, but not necessarily be limited to:	
	(a) provision for the notification of the Secretary prior to the commencement of construction and prior to the commencement of operation of the SSI (including prior to each stage, where works are being staged);	The Compliance Tracking Program (CTP) was prepared to satisfy this condition. The CTP is
	 (b) provision for periodic review of the compliance status of the SSI against the requirements of this approval and the environmental management measures committed to in the document referred to in condition A2(c); 	discussed in Section 9.5.
	(c) provision for periodic reporting of compliance status to the Secretary, including but not limited to	
	i. a Pre-Construction Compliance Report prior to the commencement of construction,	
	 ii. quarterly Construction Compliance Reports, for the duration of construction, and/ iii. a Pre-Operation Compliance Report prior to the commencement of operation; 	
	(d) a program for independent environmental auditing in accordance with AS/NZS ISO 19011:2014 - Guidelines for Auditing Management Systems;	

CoA	Relevant requirement	Reference
	(e) mechanisms for recording environmental incidents during construction and actions taken in response to those incidents;	
	(f) provision for reporting environmental incidents to the Secretary during construction, in accordance with conditions A15 and A16;	
	(g) procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management; and	
	(h) provision for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.	
A15	The Proponent shall notify the EPA in relation to any pollution incident in carrying out the SSI as required by the Protection of the Environment (Operations) Act 1997. The proponent shall provide the Secretary with a record of any such notification.	Incident management, including notification of the Secretary, is summarised in Section 8.2.
A16	The proponent shall notify the Secretary (using the contact name and phone number notified by the Department from time to time) of any incident (other than those relating to the Protection of the Environment (Operations) Act 1997) with actual or potential significant off-site impacts on people or the biophysical environment within 24 hours of becoming aware of the incident on weekdays, or the following business day on weekends, public holidays and site shutdown. The Proponent shall provide full written details of the incident to the Secretary within seven days of the date on which the incident occurred.	Incident management, including notification of the Secretary, is summarised in Section 8.2.
A17	The Proponent shall meet the requirements of the Secretary or relevant public authority (as determined by the Secretary) to address the cause or impact of any incident, as it relates to this approval.	The requirements of the Secretary or relevant public authority, to address the cause of impact of any incident associated with the operation and maintenance of the Asset will be met as described in Section 8.2.
B4	The tunnel ventilation system must be designed, constructed and operated to only release emissions from the ventilation outlets referred to in condition B2, and to avoid emissions from the portals and/or the emergency smoke extraction facilities at Bexley and Arncliffe. Emissions from the emergency smoke extraction facilities are excepted for emergency smoke management purposes in the event of a fire in the tunnel and periodic testing of the system as defined in the Operation Environmental Management Plan required under condition E31(g)	The tunnel ventilation system will be operated to release emissions from the ventilation outlets only, and to avoid emissions from the portals and/or emergency smoke extraction facilities at Bexley and Arncliffe, except during emergency smoke management and periodic testing. The definition of an 'emergency' as it applies to this condition is included in Section 8.2. Periodic testing of the system is addressed in Section 3.2.4 of the Operation Air Quality Management Plan (OAQMP).

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CoA	Relevant requirement	Reference
B14	The Proponent must prepare and submit to the Secretary for approval an updated Green and Golden Bell Frog Plan of Management for the Arncliffe population of Green and Golden Bell Frog prior to commencing construction at the Arncliffe construction compound. The Plan must be developed from the Green and Golden Bell Frog Management Plan presented in the document referred to in condition A2(b), by a suitably qualified and experienced frog specialist, in consultation with OEH. The updated Plan must include, but not necessarily be limited to: a) an adaptive monitoring program to assess the effectiveness of the construction and operational mitigation measures and ongoing survival of the Arncliffe population at the Kogarah Golf Course. The monitoring program must — [refer CoA B14] The Green and Golden Bell Frog Management Plan must be implemented.	Refer to the Green and Golden Bell Frog Plan of Management (ELA April 2018)
B20	Except as may be provided by an EPL, the SSI must be constructed and operated to comply with section 120 of the Protection of the Environment Operations Act 1997, which prohibits the pollution of waters.	The Asset will be operated to comply with section 120 of the <i>Protection of the Environment Operations Act</i> 1997. Relevant statutory obligations for the Asset are discussed in Section 4.1. Refer also to Annexure L– Operational Water Management Plan.
B23	A Flood Mitigation Strategy must be prepared and implemented in respect of the flood prone land and overland flow paths for the waterways and catchments in the vicinity of the SSI. The Flood Mitigation Strategy must be designed to ensure that the SSI, where feasible and reasonable, does not worsen existing flooding characteristics in the vicinity of the SSI during construction and operation. The Flood Mitigation Strategy must include but not be limited to: [refer CoA B23] The Flood Mitigation Strategy must be prepared by a suitably qualified and experienced person in consultation with directly affected landowners, Sydney Water, OEH, and relevant councils. The Flood Mitigation Strategy must be independently peer reviewed and confirmed as meeting the requirements of this condition by a suitably qualified and experienced independent hydrological engineer. The Flood Mitigation Strategy and details of the peer review must be submitted to the Secretary and the relevant council(s) prior to the commencement of works which have been identified in documents listed in condition A2(b) and A2(c) as potentially increasing flood levels, or as otherwise agreed by ther Secretary.	Refer to the Flood Mitigation Strategy.
B26	The Proponent must take all feasible and reasonable measures to limit operational groundwater inflows into each tunnel to no greater than one litre per second across any given kilometre.	Refer to the Hydrogeological Design Report and 24- month Hydrogeological Design Review.

CoA	Relevant requirement	Reference
B28	A Water Quality Plan and Monitoring Program must be prepared and implemented to monitor and avoid or mitigate impacts on surface and groundwater quality and resources, during construction and operation. The Water Quality Plan and Monitoring Program must be developed in consultation with DPI (Water), Sydney Water and relevant councils, and must include, but not be limited to: [refer CoA B28] The Water Quality Plan and Monitoring Program must be submitted to the Secretary for approval prior to the commencement of construction of the SSI, unless otherwise agreed by the Secretary. A copy of the Water Quality Plan and Monitoring Program must be submitted to the DPI (Water), Sydney Water and relevant councils prior to its implementation. Nothing in this condition prevents the Proponent from preparing separate Water Quality and Monitoring Programs for the construction and operational stages of the SSI. Where a separate Water Quality and Monitoring Program is prepared for the operation of the SSI, this must be submitted to the Secretary for approval at least six months prior to the commencement of operation of the SSI.	Refer to Annexure M: OEMPSP3 – Operational Water Management Plan
B30	The Proponent must prepare a Water Reuse Strategy which sets out feasible and reasonable options for the reuse of collected stormwater and groundwater during construction and operation of the SSI. The Water Reuse Strategy must include, but not be limited to: a) evaluation of all feasible and reasonable reuse options; b) details on the preferred reuse option(s), including volumes of water to be reuse, proposed reuse locations and/or activities, proposed treatment (if required), and any additional licences or approvals that may be required; and c) a time frame for the implementation of the preferred reuse option(s). Justification must be provided in the event that it is concluded that no feasible or reasonable reuse options prevail. A copy of the Water Reuse Strategy must be submitted to the Secretary for approval prior to commencement of tunnelling works. Nothing in this condition prevents the Proponent from preparing separate Water Reuse Strategies for the construction and operational phases of the SSI. Where a separate Strategy is prepared for the operation of the SSI, this must be submitted to the Secretary for approval at least six months prior to the commencement of operation of the SSI.	Refer to the Operational Water Reuse Strategy

CoA	Relevant requirement	Reference
B32	The Proponent must submit a copy of the final Landfill Closure Management Plan to the Secretary prior to the commencement of any closure or construction works at Lot 2 DP 1168612, 10-16 Albert Street, St Peters (the Alexandria Landfill). The Plan must be accompanied by a statement which sets out where the following have been addressed in the Landfill Closure Management Plan: [refer CoA B32] Where any of the above details have not been included in the final Landfill Closure Management Plan, then the	Refer to the Landfill Closure Management Plan (M5N-GOL-MNP-900-300-WT-9400)
	Proponent must provide the details in the statement accompanying the plan required by this condition.	
B33	The Proponent must not destroy, modify or otherwise physically affect any heritage items, including human	The Project will not impact any items outside the SSI footprint.
	remains, outside of the SSI footprint. This approval does not allow the Proponent to harm, modify, or otherwise impact human remains uncovered during the construction and operation of the SSI.	The Asset will be operated under the RMS Standard Management Procedure – Unexpected Heritage Items (March 2015).
B36	Except for necessary stabilisation or maintenance works agreed in consultation with the Secretary, the Proponent must not destroy, modify or otherwise physically affect the Service Garage located at 316 Princes Highway, St Peters	RMS and Project Company is in consultation with Inner West Council over an alternative use for the site while still meeting the obligations of the Condition to maintain the heritage character of the building.
		RMS is investigating if an Arts Space can be established, and if necessary, a Modification will be sought to allow the building to be used as a publicly accessible facility.
B52	Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence or waste exemption under the <i>Protection of the Environment Operations Act 1997</i> , if such a licence is required in relation to that waste.	No wastes will be received at the Site, except as permitted by a licence, if required. Refer to 'general' in Annexure I – Waste and Resource Management Strategy.
B53	The reuse and/or recycling of waste materials generated on site must be maximised as far as practicable, to minimise the need for treatment or disposal of those materials off site.	The waste management hierarchy will be implemented during operation and maintenance activities for the Asset. Wastes will be reduced or avoided in the first instance, followed by reuse and/or recycling of waste materials. Refer to 'waste management hierarchy' in Annexure I – Waste and Resource Management Strategy.
B54	All liquid and/or non-liquid waste generated on the site must be assessed and classified in accordance with Waste Classification Guidelines (DECCW, 2009) or any superseding documents.	All wastes generated on the site will be classified in accordance with the Waste Classification Guidelines (EPA, 2014) or any superseding documents. Refer to 'classification' in Annexure I – Waste and Resource Management Strategy.
B55	All waste materials removed from the SSI site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.	All waste materials removed from the Site will be directed to a licenced waste facility or premises lawfully permitted to accept the materials. Refer to 'waste disposal' in Annexure I – Waste and Resource Management Strategy.

CoA	Relevant requirement	Reference
B66	No later than 12 months from the date of this approval, unless otherwise agreed to by the Secretary, the Proponent must prepare a Community and Social Management Plan for precincts directly impacted by the SSI. The Community and Social Management Plan must be prepared by a suitably qualified and experienced person(s) and in consultation with relevant council(s) and the community and submitted to the Secretary for approval. The Community and Social Management Plan must include but is not limited to: [refer CoA B66] The Proponent must maintain and implement the Community and Social Management Plan throughout construction and for the first three years of operation of the SSI.	The Community and Social Management Plan was submitted to DPIE to satisfy this condition. This Plan will be implemented for the first three years of operation of the SSI.
B69	The Proponent must ensure that all residual land set aside for open space uses in accordance with condition B67 be available to the relevant council within 12 months of the completion of construction, unless otherwise agreed to by the Secretary.	Roads and Maritime will manage the handover of residual land set aside for open space separate to this OEMP.

CoA	Relevant requirement	Reference
B73	The Proponent must construct and operate the SSI with the objective of minimising light spillage to residential properties and be generally consistent with the requirements of <i>Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting.</i> Notwithstanding, the Proponent must provide mitigation measures to manage any residual night lighting impacts to protect properties adjoining or adjacent to the project, in consultation with affected landowners.	This standard sets limits on light spill at property boundaries and at the window plane of habitable rooms in residential properties for pre-curfew and post curfew hours, respectively. Public lighting (lighting provided for the purposes of all-night safety and security on public roads, cycle paths, footpaths and pedestrian movement areas within public parks and gardens, but not including carparks) has been excluded from this Standard because such lighting is provided to facilitate all-night safety and security for the public at large. For any non-public roads (e.g. gated facility access roads, MOCs) and carparks, lighting would comply with the light spill requirements via selection of luminaires that offer precise light control, but public road lighting is exempt from these requirements. AS4282 has been applied to the lighting design for public roads as follows: AS4282 excludes public roads from the light spill limits within this standard on the basis of all night
		 safety and security for the public AS4282 refers to AS1158.1.1 for the minimisation of the obtrusive effects of public road lighting through the upward waste light ratio The public road lighting design complies with the upward waste light limits
		 The public road lighting design is compliant with AS4282 The public road lighting design is compliant with
		AS1158.1.1. Any complaints related to night lighting impacts at adjoining or adjacent residential properties will be managed in accordance with the O&M Contractor's Community Relations Plan, as identified in Annexure I — Visual Amenity and Landscape Management Strategy. If complaints are received relating to light spill they would be investigated, and remedial action taken if required. Remedial action at the facilities, including MOCs, may include: turning off the lights if not required, installation of shrouds, repositioning of fixtures and review of lamp wattage.
B75	Opportunities to reduce operational greenhouse gas emissions must be investigated during detailed design. The sustainability initiatives identified must be regularly reviewed, updated and implemented throughout the design development and construction phase, and annually during the operational phases.	Sustainability opportunities relating to operational and maintenance energy consumption, materials, water and waste will be managed through an initiatives and opportunities register that will be maintained throughout operation and maintenance of the Asset as identified in Annexure I– Waste and Resource Management Strategy. The initiatives will be reviewed, updated and where appropriate, implemented, annually during the operation phase. An annual GHG Initiatives Report (Refer to Annexure H – Waste and Resource Management Strategy.) will be prepared by the O&M Contractor and provided to Project Company to satisfy this condition.

CoA	Relevant requirement	Reference
C4	Prior to the commencement of construction, or as otherwise agreed by the Secretary, the Proponent must prepare and implement a Construction Complaints Management System consistent with AS/NZS 10002:2014 Guidelines for Complaint management in Organisations and maintain the Construction Complaints Management System for the duration of construction and up to 12 months following completion of construction of the SSI. Information on all complaints received, including the means by which they were addressed and whether resolution was reached, with or without mediation, must be maintained in a complaints register and included in the construction compliance reports required by this approval. The information contained within the Construction Complaints Management System must be made available to the Secretary on request.	Project Company established the complaints management system to comply with this condition during the preparation of the Environmental Impact Statement for the Project, fulfilling the requirements of this condition. This same consultation manager system is being utilised during operation of the Asset to ensure consistency in reporting of enquiries and complaints. This will continue for up to 12 months following the completion of the construction of the SSI Complaints and enquiries are discussed in Section 7.3.2.
C5	Prior to the commencement of construction, or as otherwise agreed by the Secretary, the Proponent must establish and maintain a new website, or dedicated pages within an existing website, for the provision of electronic information associated with the SSI, for the duration of construction and for 12 months following completion of the SSI. The Proponent must, subject to confidentiality, publish and maintain up-to-date information on the website or dedicated pages including, but not limited to: (a) information on the current implementation status of the SSI; (b) a copy of the documents listed in condition A2, and any documentation supporting modifications to this approval that may be granted from time to time; (c) a copy of this approval and any future modification to this approval; (d) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the SSI; (e) a copy of each current report, plan, or other document required under this approval; (f) the outcomes of compliance tracking in accordance with condition A14 of this approval; (g) details of contact point(s) to which community complaints and enquiries may be directed, including a telephone number, a postal address and an email address; and (h) information on how to receive important information in the common community languages of the area.	The website for the Project was established by Project Company during the preparation of the Environmental Impact Statement, and will remain in place for 12 months following completion of the project. The website is: www.westconnex.com.au Further detail of documentation for the New M5 Project can be found at: http://www.westconnex.com.au/projects/new-m5 Information to be included on the resources page includes: a) Updates and notifications, b) New M5 SSI application, New M5 EIS and New M5 Submissions Report, c) Instrument of approval and modifications, d) N/A e) OEMP and sub-plans, f) Pre-Operation Compliance Report, g) This information is available on the 'Contact us' page: http://www.westconnex.com.au/contact_us.html, and h) Information regarding translating and interpreting service is also available on the 'Contact us' page.

CoA	Relevant requirement	Reference
E31	Prior to the commencement of operation, or as otherwise agreed by the Secretary, the Proponent must prepare and implement an Operation Environmental Management Plan (OEMP) for the SSI. The OEMP must outline the environmental management practices and procedures that are to be followed during operation, and must be prepared in consultation with relevant agencies and in accordance with the Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004). The OEMP must include, but not be limited to:	This OEMP has been prepared to satisfy this condition. This plan has been developed in accordance with the <i>Guideline for the Preparation of Environmental Management Plans</i> (Department of Infrastructure, Planning and Natural Resources, 2004) as identified in Section 1. The plan has been developed in consultation with relevant stakeholders. Consultation on this plan is summarised in Section 1.5. A separate document 'Consultation for the New M5 OEMP and sub-plans' has been prepared separately to this plan to describe the OEMP consultation activities to date and how comments received have been addressed or considered.
	 (a) a description of activities to be undertaken during operation of the SSI (including staging and scheduling); 	A general summary of the operational activities is included in Section 2.3.
	(b) statutory and other obligations that the Proponent is required to fulfil during operation, including approvals, consultations and agreements required from authorities and other stakeholders under key legislation and policies;	The statutory obligations of the Asset are discussed in Section 4.1. The licences, permits and approvals expected to be required for the Asset are described in Section 4.1.4.
	(c) overall environmental policies, guidelines and principles to be applied to the operation of the SSI;	The environmental policies, guidelines and principles relevant to the Asset are described in Section 4.2. The O&M Company's environment and sustainability polices are contained within Annexure B.
	 (d) a description of the roles and responsibilities for relevant employees involved in the operation of the SSI, including relevant training and induction provisions for ensuring that employees are aware of their environmental and compliance obligations under these conditions of approval; 	The key roles and responsibilities relevant to the environmental management of the Asset are summarised in Section 5.8. All O&M personnel will undergo a compulsory project induction that will address specific environmental issues as described in Section 6.1. Environmental and compliance obligations with respect to the Asset will be communicated via various competence, training and awareness activities as described in Sections 6.2 and 6.3.
	(e) an environmental risk analysis to identify the key environmental performance issues associated with the operation phase;	An analysis of the typical inherent environmental risks associated with the Asset's operation is described in Section 8.1. An operational environmental risk register is provided in Annexure D.
	(f) details of periodic testing of the tunnel ventilation system;	Testing of the tunnel ventilation system is included in Annexure J – Operational Air Quality Management Plan (OAQMP).
	A definition of emergency as it applies to conditions B4, E22 and E44 is included in Section 8.2.1.	
	(h) details of how environmental performance would be managed and monitored to meet acceptable outcomes, including what actions will be taken to address identified potential adverse environmental impacts, including those safeguards and mitigation measures detailed in Section 8 the document referred to in condition A2 (and any impacts arising from the staging of the construction of the SSI). In particular, the following environmental performance issues must be addressed in the OEMP:	Refer Section 4.1.2 for safeguards and mitigation measures detailed in Section 8 of the New M5 Submissions Report that are relevant to the operation and maintenance of the Asset. Environmental performance will be managed through the implementation of the OEMP and sub-plans and will be monitored through inspections, monitoring, audits and reviews as described in Section 9 and Section 10.

CoA	Relevant r	requirement	Reference
	i.	air quality;	The management of potential adverse impacts on air quality is discussed in Annexure J – Operational Air Quality Management Plan.
	ii.	noise and vibration, through preparation of the Operational Noise Management Plan required under condition E34;	The management of potential noise and vibration impacts is discussed in Annexure K – Operational Noise Management Plan.
	iii.	traffic;	The management of potential adverse impacts on traffic is discussed in Annexure G – Traffic Management Strategy.
	iv.	climate change and energy use	The management of climate change and energy use relevant to the operation of the Asset is addressed in Annexure H – Waste and Resource Management Strategy.
	V.	visual amenity and landscaping;	The management of visual amenity and landscaping is addressed in Annexure I – Visual Amenity and Landscape Management Strategy.
	vi.	groundwater level/pressure, inflows, treatment and discharge, soil, and subsidence; and	The management of groundwater is addressed in Annexure L – Operational Water Management Plan.
	vii.	groundwater dependent ecosystems	The management of groundwater dependant ecosystems is addressed in Annexure L – Operational Water Management Plan.
	viii.	surface water quality and hydrology, including stormwater management.	The management of surface water is addressed in Annexure L – Operational Water Management Plan.
	Secretary commence by the Sec	P must be submitted for the approval of the no later than one month prior to the ement of operation, or as otherwise agreed cretary. Operation must not commence until proval of the OEMP has been received from ary.	The OEMP must be submitted to the Secretary at least one month prior to the commencement of operation as described in Section 1.3.
	Proponent approval. I OEMP and	oval of an OEMP does not relieve the of any requirement associated with this SSI f there is an inconsistency with an approved d the conditions of this SSI approval, the nts of this SSI approval prevail.	Noted.
E34	be prepare Manageme	Operational Noise Management Plan must ed as part of the Operational Environmental ent Plan required by condition E31 and to the Secretary for approval.	An Operational Noise Management Plan has been prepared to satisfy this condition. Refer to Annexure K – Operational Noise Management Plan.
E40	otherwise must prepare	12 months and 5 years after the ement of operation of the SSI, or as agreed to by the Secretary, the Proponent are a Road Network Performance Review consultation with relevant councils that	A Road Network Performance Review Plan will be prepared to satisfy this condition at both 12 months and 5 years after the commencement of operation of the Asset as identified in Section 9.4 and Annexure G – Traffic Management Strategy of this OEMP. The plan will be submitted to the Secretary, Transport for NSW (in relation to impacts on bus services) and relevant councils within 60 days of its completion and made publicly available. Any applicable mitigation measures identified in the Road Network Performance Review Plan will be implemented by the Asset.

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CoA	Relevant requirement	Reference
E43	The ongoing maintenance and operation costs of urban design and landscaping items and works implemented as part of this infrastructure approval must remain the Proponent's responsibility until satisfactory arrangements have been put in place for the transfer of the asset to the relevant authority.	Noted.
	Prior to the transfer of assets, the Proponent will maintain items and works to the design standards established in the Urban Design and Landscape Plan required by condition B45.	Urban design and landscaping items will be maintained to the design standards established in the Urban Design and Landscape Plan until the transfer of the Asset to the relevant authority, as identified in Annexure I – Visual Amenity and Landscape Management Strategy.
E44	Prior to operation, the Proponent must prepare an Emergency Response Plan, in consultation with FRNSW and NSW Police Force. The Emergency Response Plan must include, but not be limited to:	The Emergency Response Plan has been prepared to satisfy this condition. The plan is discussed in Section 8.2.3.
E44	The Proponent must undertake annual Hazard Reviews of the project for the first five years of operation. The Hazard Review must detail all hazardous incidents that have occurred during the preceding period, as per (i) to (iii) below, identify safety measures required to rectify those incidents, and address any ongoing issues. i. The first Hazard Review must be undertaken	Annual Hazard Reviews will be undertaken for the Asset in accordance with this condition. Refer to Section 9.4.
	for the first three months of operation after the opening of the project to traffic. ii. Subsequent Hazard Reviews must be undertaken for the following nine months and	
	thereafter twelve monthly intervals. iii. FRNSW may also direct the Proponent to undertake a Hazard Review following any major incident in the tunnel.	
	A Hazard Review Report, outlining the results of a Hazard Review, and any proposed additional safety measures to be implemented in response to the findings of the Hazard Review, must be submitted to FRNSW no later than one month after the review period.	
	The Proponent must respond in writing to any recommendation made by FRNSW in relation to the findings of a Hazard Review, within such time as may be agreed by FRNSW. Any outstanding concerns are to be resolved between FRNSW and the Proponent.	
E46	A detailed maintenance-testing program outlining the methods of testing the fire and life safety systems and schedule for implementation must be developed in consultation with FRNSW prior to opening of the project to traffic.	A detailed maintenance testing program has been prepared to satisfy this condition and is being managed separate to this OEMP. Refer to the O&M Manual for additional detail.
	The Proponent must respond in writing to any recommendations made by FRNSW. Any outstanding concerns are to be resolved between FRNSW and the Proponent.	

CoA	Relevant requirement	Reference
E50	Maintenance testing of fire and life safety systems must be undertaken at least annually, or any other interval as required by the design engineer and to the satisfaction of FRNSW. Results of maintenance testing must be made available to FRNSW for review, and the Proponent must respond in writing to any recommendations from FRNSW to ensure the reliability of the fire and life safety systems. Any outstanding concerns are to be resolved between FRNSW and the Proponent.	Annual maintenance testing of the fire and life safety systems will be undertaken in accordance with this condition. Refer to Section 9.4 of this OEMP and the O&M Manual for more detail.
E51	Within 12 months of the commencement of operation, and at any other stage required by the Secretary, the Proponent must commission and pay the full cost of an Independent Environmental Audit of the SSI. The Independent Environmental Audit must: (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been approved by the Secretary; (b) include consultation with the relevant agencies and relevant councils; (c) assess the environmental performance of the SSI and assess whether it is complying with the requirements in this approval, and any other relevant approvals (including any assessment, plan or program required under these approvals); (d) review the accuracy of predicted environmental outcomes discussed in the documents listed in conditions A2(b) and A2(d) inclusive; (e) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals in (c); and (f) recommend measures or actions to improve the environmental performance of the SSI, and/or any strategy, plan or program required under these approvals. Within 60 days of commissioning the Independent Environmental Audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary and relevant public authorities, together with its response to any recommendations contained in the audit report. Notes: This audit team must be led by a suitably qualified and experienced auditor, and include experts in air quality, biodiversity, noise and vibration, hydrology and any other fields specified by the Secretary. The audit may be staged to suit the staged operation of the SSI.	The Independent Environmental Audit of the Asset which is to be undertaken in accordance with this condition, is described in Section 9.3.2.

4.1.2 Mitigation and management commitments

Table 4-2 summarises the safeguards and mitigation measures included in the New M5 Submissions Report (Section 8 of the document referred to in CoA A2(c)) that relate to operation of the Asset.

Table 4-2: Operational environmental mitigation and management measure commitments

No.	Relevant requirement	Responsibility	OEMP reference
OpTT01	A road safety audit would be undertaken by a qualified auditor(s) as part of the detailed design, and again immediately prior to project opening, to examine the design from a road safety perspective and identify potential safety issues. This process would be undertaken in accordance with the Roads and Maritime Accident Reduction Guide Part 2: Road Safety Audits (RTA, 2005a).	Roads and Maritime	The Road Safety Audit required by CoA B49 will satisfy this REMM.
OpTT02	An operational traffic review would be conducted 12 months following the commencement of operation to confirm the operational traffic impacts of the project on surrounding arterial roads and major intersections. The operational traffic review would be undertaken by a suitably qualified traffic specialist that is independent of the design and traffic studies undertaken as part of the environmental impact statement. The operational traffic review would include (but is not limited to) an assessment of the level of service at major intersections on local roads around the St Peters interchange, the King Georges Road interchange and changes in traffic levels on parallel arterial roads, such as Stoney Creek Road.	Roads and Maritime	The 12-month Road Network Performance Review Plan required by CoA E36 will satisfy this REMM.
OpNV01	At locations where residual impacts remain after all feasible and reasonable approaches have been exhausted, noise mitigation in the form of acoustic treatment of existing individual dwellings will be considered.	Roads and Maritime	At-property treatment have been identified for dwellings that exceed the Noise Criteria Guideline. Refer to section 10.3 of the Operational Noise and Vibration Review Revision E (M5N-RNZ-DRT-800-700-VN-8410).
OpNV02	Operational traffic noise will be monitored at sensitive receivers between six months and one year after opening. If the traffic noise levels are above the predicted levels, consideration of additional feasible and reasonable mitigation measures will be undertaken.	Roads and Maritime	Operational noise monitoring will be undertaken in accordance with Practice Note viii of Roads and Maritime Services' 'Environmental Noise Management Manual' (ENMM), as identified in Annexure L – Operational Noise Management Plan

Operation Environmental Management Plan

No.	Relevant requirement	Responsibility	OEMP reference
No. OpSW03	Operational water quality monitoring would be conducted for 12 months post-construction or as otherwise required by the conditions of approval. This would include upstream (control) and downstream monitoring locations. The details of this monitoring program would be contained in the Soil and Water Management Plan, and would include the following: • Sampling locations to include upstream (control) and downstream measurement locations • Samples taken twice a month, once in dry conditions and once in wet conditions where possible • In-situ monitoring of: • pH • Reduction Oxidation Potential • Dissolved Oxygen • Temperature • Conductivity • Turbidity • Odour • Analytical sampling of the following potential constituents of concern: • Total Recoverable Hydrocarbons • Benzene, Toluene, Ethylbenzene, Xylene and	Responsibility Roads and Maritime	OEMP reference Operational water quality monitoring will be undertaken for a minimum of 12 months post construction. Refer to Annexure M – Operational Water Management Plan.
	 Naphthalene Nutrients including: Total Nitrogen, Total Kjeldahl Nitrogen, Nitrogen Oxide, Nitrite, Nitrate, 		
	Total Phosphorous and Reactive Phosphorous		
	Heavy metals (Arsenic, Cadmium, Copper, Chromium, Lead, Mercury, Nickel, Zinc)		
	Manganese		
	Ferrous Iron and Total Iron.		

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Operation Environmental Management Plan

No.	Relevant requirement	Responsibility	OEMP reference
OpSW07	The operational water treatment plant would be designed to meet the Water Quality Reference Criteria outlined in Annexure A of the Technical working paper: Surface water (Annexure N). Monitoring of the Cooks River would be undertaken during initial operation of the project to ensure discharge meets these criteria.	Roads and Maritime	Water quality monitoring within the Cooks River will be undertaken to monitor discharges for the Operational Water Treatment Plant. Refer to Annexure M – Operational Water Management Plan.
OpCM1	The ongoing management of the Alexandria Landfill will be undertaken in line with the LCMP (see Section 17.3.4 and Section 5.9.1 of the EIS)	Roads and Maritime	Refer to the Landfill Closure Management Plan (M5N-GOL-MNP-900-300-WT-9400) for management measures during operation.
OpCM2	Procedures to address spills, leaks and tunnel washing would be developed and implemented during operation of the project	O&M Contractor	An Incident Response Plan has been prepared for the Asset as described in Section 8.2.3.
OpCM4	Ongoing management of sites with contamination managed or emplaced in-situ would be managed in accordance with site specific Site Management Plans. Where required, a Site Management Plan (SMP) would be developed and implemented to manage risks associated with the presence of residual contamination that in situ. The requirement for an SMP would be evaluated based on the nature, concentration and extent of contamination as well as the current and proposed land use.	O&M Contractor	Refer to the Landfill Closure Management Plan (M5N-GOL-MNP-900-300-WT-9400) for management measures during operation.
OpGW01	An OEMP would be prepared and implemented to outline management measures for groundwater inflows, treatment and discharge and protocols for spillages or incidents. Monitoring parameters may include groundwater levels, groundwater quality including field parameters, laboratory analytes and sample frequency.	O&M Contractor	Refer to Annexure M – Operational Water Management Plan.
OpGW02	The drainage system would be regularly maintained in accordance with the Operational Environmental Management Plan.	O&M Contractor	Refer to Annexure M – Operational Water Management Plan.

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No.	Relevant requirement	Responsibility	OEMP reference
OpGW03	A groundwater quality monitoring program would be prepared and implemented to monitor groundwater impacts during tunnel operations. This would include the monitoring of groundwater inflow into the tunnels. The program would be developed in consultation with the EPA, DPI (Fisheries), NSW DPI Water and relevant councils. The groundwater monitoring program would continue (where appropriate) the construction groundwater monitoring program (GW13) and would continue for three years, after which, the requirement for further monitoring would be assessed. The following analytes would be added to the groundwater baseline monitoring program for the project in order to inform the discharge water quality criteria Ammonium Phenols Organophosphorus pesticides Polychlorinated biphenyls (PCBs). Discharge water quality criteria would be developed in consultation with the EPA.	Roads and Maritime	Refer to Annexure M – Operational Water Management Plan
OpGW04	Contingency measures to address leachate management in the event of pump failure would be explored during detailed design and implemented in the Landfill Closure Plan.	Roads and Maritime	Refer to the Landfill Closure Management Plan (M5N-GOL-MNP-900-300-WT-9400)
OpB01	A management plan will be developed and implemented to identify and mitigate potential ongoing impacts to biodiversity, including procedures for: Management of weeds Management, maintenance and rehabilitation of riparian land disturbed by the project and riparian areas associated with the discharge of treated water Maintenance of nest boxes	Roads and Maritime / O&M Contractor	Refer to Annexure J – Visual Amenity and Landscape Management Strategy.

No.	Relevant requirement	Responsibility	OEMP reference
OpWM01	Wastes would be managed and disposed of in accordance with relevant State legislation and government policies including the POEO Act, Waste Avoidance and Resource Recovery Act 2001, Waste Avoidance and Resource Recovery Strategy 2014-2021 (EPA, 2014b), and the sustainable procurement objective of the WestConnex sustainability strategy (WestConnex Delivery Authority, 2015).	O&M Contractor	Refer to Annexure I – Waste and Resource Management Strategy
OpWM02	Opportunities for reuse of wastewater would be considered in preference to discharge to the local stormwater system.	O&M Contractor	Refer to Annexure I – Waste and Resource Management Strategy
OpWM03	In order to reduce demand on local water supplies, options would be investigated for providing water required for operation of the deluge system from wastewater produced through the tunnel drainage system where it meets appropriate quality parameters.	O&M Contractor	Refer to the Operational Water Reuse Strategy required under condition B30
OpHR02	Storage of dangerous goods and hazardous materials would occur in accordance with supplier's instructions and relevant Australian standards and may include bulk storage tanks, chemical storage cabinets / containers or impervious bunds.	O&M Contractor	Dangerous goods and hazardous materials will be stored in accordance with the relevant standards and legislation, as identified in Annexure L – Operational Water Management Plan. Relevant legislation for the operation of the Asset is included in Section 4.1.3 and relevant policies, guidelines and principles are identified in Section 4.2.
OpHR03	Storage, handling and use of dangerous goods and hazardous substances would be in accordance with the Work Health and Safety Act 2011 and the Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005).	O&M Contractor	Dangerous goods and hazardous materials will be stored in accordance with the relevant standards and legislation, as identified in Annexure L – Operational Water Management Plan. Relevant legislation for the operation of the Asset is included in Section 4.1.3 and relevant policies, guidelines and principles are identified in Section 4.2.
OpHR04	Secure, bunded areas would be provided around storage areas for oils, fuels and other hazardous liquids. Impervious bunds would be of sufficient capacity to contain at least 110 per cent of the volume of the largest stored container.	O&M Contractor	Dangerous goods and hazardous materials will be stored in secure accordance with the relevant standards and legislation, as identified in Annexure L – Operational Water Management Plan. Relevant legislation for the operation of the Asset is included in Section 4.1.3 and relevant policies, guidelines and principles are identified in 4.2

No.	Relevant requirement	Responsibility	OEMP reference
OpHR05	Bunds would be provided around activities such as vehicle refuelling, servicing, maintenance or wash-down, where there is a potential for spills and contamination.	O&M Contractor	Bunds shall be provided around activities such as vehicle refuelling, servicing, maintenance or wash-down, where there is a potential for spills and contamination.
			Where refuelling occurs outside bunded areas, specific refuelling procedures would be in place and operators would be trained in these procedures. Spill kits would be readily available to manage re-fuelling outside bunded areas.
			Relevant legislation for the operation of the Asset is included in Section 4.1.3 and relevant policies, guidelines and principles are identified in Section 4.2.
OpHR06	Material Safety Data Sheets would be obtained for dangerous goods and hazardous substances stored onsite prior to their arrival.	O&M Contractor	Dangerous goods and hazardous materials will be stored in accordance with the relevant standards and legislation, as identified in Annexure L – Operational Water Management Plan.
			Relevant legislation for the operation of the Asset is included in Section 4.1.3 and relevant policies, guidelines and principles are identified in Section 4.2.
OpHR07	The transport of dangerous goods and hazardous substances would be prohibited through the main alignment tunnels and on and off-ramp tunnels.	O&M Contractor	Dangerous goods and hazardous materials will be transported in accordance with the relevant standards and legislation, as identified in Annexure L – Operational Water Management Plan.
			Relevant legislation for the operation of the Asset is included in Section 4.1.3 and relevant policies, guidelines and principles are identified in Section 4.2.
OpHR08	An Incident Response Plan would be developed and implemented in the event of an accident or incident.	O&M Contractor	An Incident Response Plan has been prepared for the Asset as described in Section 8.2.3.
OpHR09	The response to incidents within the motorway would be managed in accordance with the memorandum of understanding between Roads and Maritime and the NSW Police Service, NSW Rural Fire Service, NSW Fire Brigade and other emergency services.	O&M Contractor	An Incident Response Plan has been prepared for the Asset as described in Section 8.2.3.
OpHR12	Aviation hazard lighting, building lighting and surface road lighting would be designed and operated in accordance with the requirements of the Civil Aviation Safety Authority and the Sydney Airport Master Plan 2033.	Roads and Maritime / D&C Contractor	Refer to the Urban Design and Landscape Management Plan for design requirements in accordance with Project requirements. (https://www.westconnex.com.au/sites/default/files/WCXSTAG2-CDSJV-WCX-GEN-003191-180219_MSN-HSL-MNP-100-110-TR-1970_E_Urban_Design_and_Landscape_Plan_%5bLR%5d_COMBINED.pdf)
OpGHG3	Low carbon energy generation options would be investigated as part of the detailed design process in order to reduce the demand on mains electricity and generate renewable energy onsite, where feasible. At least six per cent of energy required for the project would be sourced from an accredited GreenPower energy supplier, where possible.	Roads and Maritime	A total of 6% of electricity consumption utilised during operation and maintenance of the asset will be 100% renewable either through onsite renewables or purchase of accredited GreenPower. Refer to Appendix H – Waste and Resource Management Strategy.

No.	Relevant requirement	Responsibility	OEMP reference
OpRW1	Wastes will be managed and disposed of in accordance with relevant State legislation and government policies.	O&M Contractor	Refer to waste disposal in Appendix H – Waste and Resource Management Strategy.
OpRW2	Opportunities for reuse of wastewater will be considered including irrigation of landscaped areas within the project or local parks in preference to discharge to the local stormwater system.	Roads and Maritime / O&M Contractor	Refer to Tunnel Operations in Table 2 – New M5 East water reuse options in the New M5 East Water Reuse Strategy.
OpRW3	In order to reduce demand on local water supplies, options will be investigated to provide water for the deluge system from wastewater produced through the tunnel drainage system where it meets appropriate quality parameters.	Roads and Maritime / D&C Contractor	Tunnel drainage collects both road stormwater and groundwater, and goes as single stream into the Operational WTP for treatment prior to discharge.

4.1.3 Legislation

The following legislation is relevant to the OEMP and its implementation.

Table 4-3: Relevant key environmental legislation

Legislation	Relevance
General	
Environmental Planning and Assessment Act 1979	Planning and development control
Local Government Act 1993	Pollution control, protection of Aborigina heritage, and watercourse managemen
Protection of the Environment Operations Act 1997	Pollution and waste management
Work Health and Safety Act 2011	Worker safety
Noise and vibration	
Protection of the Environment Operations Act 1997	Noise and vibration management
Protection of the Environment (Noise Control) Regulation 2017 (as amended)	
Traffic and transport	
Roads Act 1993	Traffic management and working on public roads
Surface water quality and hydrology	
Protection of the Environment Operations Act 1997	Soil and water management
Soil Conservation Act 1938	Erosion and sediment control
Contaminated Land Management Act 1997	Contaminated land management
National Environmental Protection (Assessment of Site Contamination) Measure 1999 (amended 2013)	Stockpile management Spill management
Water Management Act 2000 Water Management Amendment Act 2014	Watercourse protection Water access and use Water use approval Water management work approval Activity approval (other than aquifer interference)
Sydney Water Act 1994	Requirement to obtain consent to discharge waste water to a sewer
Pesticides Act 1999	Safe use and application of pesticides Public notification requirements before applying pesticides
Dangerous Goods (Road and Rail Transport) Act 2008	Safe and licenced transportation of dangerous goods.
Biodiversity	
NSW Biosecurity Act 2015	Weed management and control
Fisheries Management Act 1994	Safe fish passage
Biodiversity Conservation Act 2016	Protection of threatened (fish) species, populations and communities
Aboriginal heritage	
National Parks and Wildlife Act 1974	Aboriginal heritage protection Management of unexpected finds
Non-Aboriginal heritage	

Legislation	Relevance	
Heritage Act 1977	Non-Aboriginal heritage protection	
	Management of unexpected finds	
Air quality		
Protection of the Environment Operations Act 1997	Pollution management	
Protection of the Environment (Clean Air) Regulation 2010	Prohibition of burning	
Greenhouse gas		
National Greenhouse and Energy Reporting Act 2007	Minimisation of greenhouse gas generation	
Waste and resource management		
Protection of the Environment Operations (Waste) Regulation 2014	Waste classification, management,	
Protection of the Environment Operations Act 1997	storage, transportation and disposal	
Waste Avoidance and Resource Recovery Act 2001	Waste hierarchy: reduction, in preference to reuse and recycling	
	Littering	
	Reduction of resource consumption	
	Minimisation of transport impacts	
Dangerous and hazardous materials		
Work Health and Safety Act 2011	Dangerous goods and hazardous	
Dangerous Goods (Road and Rail Transport) Act 2008 (NSW)	materials	
Dangerous Goods (Road and Rail Transport) Regulation 2014 (NSW)		

4.1.4 Licences, permits and approvals

The Asset does not routinely operate under any additional permits, licences and/or approvals. However, permissions and licences may be needed for maintenance activities as described in Table 4-4.

The need for any permit or licence would be determined by the Project Company Representative on a case-by-case basis depending on the nature of the proposed work.

Table 4-4: Licences, permits and approvals for operation of the Asset

Requirement	Comment	
Environment Protection Licence (EPL) under Schedule 1 of the POEO Act	The EPA concluded that the groundwater is contaminated. The operation (activity) of the Water Treatment Plant at Arncliffe (MOC3) is considered to be a scheduled activity identified in the <i>Protection of the Environment Operations Act</i> 1997 (POEO Act).	
	The Water Treatment Plant will operate under an EPL. Details regarding the specific monitoring locations and targets are included in the Operation phase Water Quality Monitoring Program and will be confirmed prior to operation.	
Landfill Management	The site will be operated under an EPL. Details regarding the specific monitoring locations and targets will be confirmed prior to operation.	
Section 138: NSW Roads Act 1993: road occupancy	Required when operation of maintenance activities require the occupation of the road carriageway	
Aquifer interference approval may be required in accordance with section 91 of the <i>Water Management Act</i> 2000	Section 5.23 (previously 115ZG) of the EP&A Act states that a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the <i>Water Management Act 2000</i> are not required for SSIs.	
Water access licence	Licence will be sought in accordance with the Water Management Act 2000 if required.	

Requirement	Comment
Section 199: NSW Fisheries Management Act 1994: permission to undertake dredging or reclamation work	Dredging or reclamation works are not proposed to occur. In the event that they are, notification to DPI Fisheries is to occur.
Subdivision 3C of the Environment Protection and Biodiversity Conservation Act 1999; approval to impact listed threatened species and communities	The Green and Golden Bell Frog is listed as 'Vulnerable' under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act</i> 1999 (EPBC Act).
	The project was referred to the Commonwealth for approval under the EPBC Act and it was determined to be a controlled action on the basis of impacts to Green and Golden Bell Frog. The project received approval on 11 July 2016 under Sections 18 and 18A (listed threatened species and communities).
	Green and Golden Bell Frog Plan of Management (ELA April 2018) has been developed by the construction contractor to manage and mitigate impact to the Green and Golden Bell Frog community.
	The Plan of Management is to be implemented throughout operation of the Asset. Results of the monitoring, review and any amendments must be reported annually to the Secretary of the Department of Planning and Environment and provided to OEH.

4.2 Environmental guidelines and principles

The policies, guidelines and principles relevant to the OEMP and its implementation are identified in Table 4-5.

Table 4-5: Environmental policies, guidelines and principles

Ро	Policy / Guideline / principles Relevance			
General				
G3	G36: Environmental Protection (Roads and Maritime, 2017) Environmental protection			
EIA-PO5-1 Environmental Assessment Procedure for Routine and Minor Works (Roads and Maritime, 2015). Management of routine an minor work		Management of routine and minor work		
•	Interim Community Consultation Requirements for Applicants (DEC, 2005) International Association for Public Participation: Public Participation Spectrum (IAP2, 2014)	Community consultation		
Ai	r Quality			
•	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC, 2007)	Management of air quality and dust		
•	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2016)			
•	9TP-SD-107/2.0 Air Quality Management Guideline (Transport for NSW, 2016)			
•	Australain Standard: AS3580.8 Methods for sampling and analysis of ambient air (Standards Australia, 2008)			
•	Australian Standard: AS/NZS3580.9 Methods for sampling and analysis of ambient air (Standards Australia, 2013)			
No	oise and vibration			
•	Interim Construction Noise Guidelines (DECC, 2009) Construction Noise and Vibration Guidelines (Roads and Maritime, 2016) Assessing vibration: a technical guideline (DEC, 2006)	Maintenance and repair noise management		
•	Environmental Noise Management Manual (Roads and Maritime, 2001) Noise Mitigation Guideline (Roads and Maritime, 2015) Noise Criteria Guideline (Roads and Maritime, 2015) NSW Road Noise Policy (RNP, DECCW, 2011)	Operational road traffic noise		
•	Noise Policy for Industry (EPA, 2017)	Operational equipment noise		

Policy / Guideline / principles Relevance				
•	Australian Standard: AS1055 Acoustics (Standards Australia, 1997)	Description and measurement o environmental noise		
Tra	affic and Transport			
•	Guide to Traffic Management (Austroads, 2014)	Traffic management and		
•	Guide to Traffic Generating Developments (Roads and Maritime, 2002)	working on public roads		
•	Traffic Control at Work Sites (Roads and Maritime, Version 4, 2010)			
•	Sydney CBD to Parramatta Strategic Transport Plan (Transport for NSW, 2015)	Public transport management		
Cli	mate change and energy use			
•	Australian Standard: AS 5334 Climate Change Adaptation for Settlements and Infrastructure (Standards Australia, 2013)	Climate change adaptation		
•	Climate Change Impacts and Risk Management: A Guide for Business and Government (Department of the Environment and Heritage, Australian Greenhouse Office, 2006)			
•	Environmental Sustainability Strategy 2015-2019 (Roads and Maritime, 2016).			
Vis	sual amenity and landscaping			
•	WestConnex New M5 Urban Design and Landscaping Plan (Roads and Maritime, 2018)	Landscape, urban design and vegetation management		
•	RMS QA Specification M321 Landscape Maintenance (Roads and Maritime, 2008)			
•	Bridge Aesthetic Design Guidelines (Roads and Maritime, 2012)			
	Noise Wall Design Guideline (Roads and Maritime, 2016)			
•	Urban Design Report and Landscape Character and Visual Impact Assessment (EIA-N04, Roads and Maritime, 2013)			
•	Landscape Guideline (Roads and Maritime, 2008)			
•	Beyond the Pavement (Roads and Maritime, 2014)			
•	G40: Clearing and Grubbing (Roads and Maritime, 2012)			
•	GreenWay Species List: Native plants of the Cooks River to Iron Cove GreenWay			
•	Australian Standard: AS4282 Control of the obtrusive effects of outdoor lighting (Standards Australia, 1997)	Light spill		
Gr	oundwater			
•	Australian Groundwater Modelling Guidelines (National Water Commission, 2012)	Groundwater modelling		
•	NSW Aquifer Interference Policy (DPI, 2012)			
Su	rface water quality and hydrology			
•	G38: Soil and Water Management (Roads and Maritime, 2015)	Soil and water quality		
•	Code of Practice for Water Management: Road Development and Management (Roads and Maritime, 1999)	management		
•	Guidelines for Controlled Activities on Waterfront land (DPI, 2012)			
•	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Agriculture and Resource Management Council of Australia and New Zealand and the Australian and New Zealand Environment and Conservation Council, 2000)			
•	Bunding and Spill Management Guidelines (NSW EPA, 2017)	Working with chemical		
•	Australian Standard: AS1940 The Storage and Handling of Flammables and Combustibles (Standards Australia, 1994)	substances near watercourses		
•	Australian Standard: AS4452 The Storage and Handling of Toxic Substances (Standards Australia, 1997)			
	Storage and Handling Liquids: Environmental Protection: Participant's Manual			

Po	licy / Guideline / principles	Relevance
٠	Code of Practice for Water Management: Road Development and Management (Roads and Maritime, 1999)	Stormwater runoff management
•	Guidelines for Treatment of Stormwater Runoff from the Road Infrastructure (AP- R232, Austroads, 2003)	
•	Technical Guideline: Temporary Stormwater Drainage for Road Construction (Roads and Maritime, 2011)	
•	Managing Urban Stormwater Soils and Construction: Volume 2D Main Road Construction (DECC, 2008)	
•	The Blue Book: Managing Urban Stormwater: Soils and Construction, Volume 1 and 2 (Landcom, 2004)	
•	Floodplain Risk Management Guideline: Practical Consideration of Climate Change (NSW DECC, 2007)	Working in flood plains and over/close to watercourses
•	Guidelines for watercourse crossing on waterfront land (NSW DPI – Water, 2012) $$	
•	Guidelines for Construction Water Monitoring (Roads and Maritime, undated)	Water quality sampling
•	Australian/New Zealand Standard: AS/NZS5667.1 Water Quality – Sampling, Guidelines on the Design of Sampling Programs, Sampling Techniques and the Preservation and Handling of Samples (Standards Australia, 1998)	
•	Australian and New Zealand Guidelines for Fresh and Marine Water Quality: Volume 1 –The Guidelines ('the ANZECC guidelines', ANZECC, 2000)	
•	Guidelines for Construction Water Quality Monitoring (Roads and Maritime, 2003)	
•	The Blue Book: Managing Urban Stormwater: Soils and Construction, Volume 1 and Volume 2 (Landcom, 2004)	
•	Guidelines for the Assessment and Management of Groundwater Contamination (DEC, 2007)	Contaminated waters and leachate management
•	Environmental Direction: Management of Tannins from Vegetation Mulch (Roads and Maritime, 2012)	
•	Guideline for the Management of Contamination (Roads and Maritime, 2013)	
•	Environmental Incident Classification and Reporting Procedure (Road and Maritime, 2017)	
•	Best Practice Guidelines for Contaminated Water Retention and Treatment Systems (NSW Government, 1994)	Storage and treatment of firefighting water
Bio	odiversity	
•	Biodiversity Guidelines – Protecting and managing biodiversity (Roads and Maritime, 2011)	Threatened Species Management
•	Environmental Impact Assessment Practice Note: Biodiversity Assessment (EIA-N06, Roads and Maritime, 2016)	
•	Matters of National Environmental Significance: Significant Impact Guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 (DEWHA, 2009)	
•	Threatened Biodiversity Survey and Assessment: Guidelines for developments and activities (working draft, NSW DEC, 2004)	
•	G40: Clearing and Grubbing (Roads and Maritime, 2016)	
•	NSW Guidelines for Controlled Activities Watercourse Crossings (DPI, 2012)	Safe fish passage
•	Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (Fairfull and Witheridge, 2003)	
•	Policy and Guidelines for Fish Friendly Waterway Crossings (NSW Fisheries, 2004)	
•	Guidelines for Fish Habitat Conservation and Management (DPI Fisheries, 2013)	

Policy / Guideline / principles Relevance			
So	ils and Geology		
•	G38: Soil and Water Management: Soil and Water Management Plan (Roads and Maritime, 2016)	Soil and water management	
•	Acid Sulfate Soils Assessment Guidelines (Acid Sulfate Soil Management Advisory Committee, 1998)	Acid Sulfate soils	
•	Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998)		
•	Guidelines for the Management of Acid Sulphate materials: Acid Sulphate Soils, Acid Sulphate Rock and Monosulphidic Black Ooze (Roads and Maritime, 2005)		
•	Waste Classification Guidelines Part 4: Acid Sulfate Soils (EPA. 2014)		
Ab	original Heritage		
•	Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH, 2011)	Investigating and managing Aboriginal heritage	
•	Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW, 2010)		
•	Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (NSW DECCW, 2010)		
•	Procedure for Aboriginal Heritage Consultation and Investigation (Roads and Maritime, 2011)		
•	Standard Management Procedure – Unexpected Heritage Items (Roads and Maritime, 2015)	Management of unexpected finds	
No	n-Aboriginal Heritage		
•	Statements of Heritage Impact (Heritage Office and Department of Urban Affairs and Planning, 2002)	Investigating and managing nor Aboriginal heritage	
•	NSW Heritage Manual (Heritage Office and Department of Urban Affairs and Planning, 1996)		
•	Assessing Heritage Significance (Heritage Office, 2001)		
•	Statements of Heritage Impact (Heritage Office and Department of Urban Affairs and Planning, 2002)		
•	How to Prepare Archival Records of Heritage Items, (Heritage Office, 1998)		
•	Standard Management Procedure – Unexpected Heritage Items (Roads and Maritime, 2015)	Management of unexpected finds	
Gr	eenhouse gas		
•	The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (World Council for Sustainable Business Development and World Resources Institute, 2004)	Minimisation of greenhouse gas generation	
•	Greenhouse Gas Assessment Workbook for Road projects (Transport Authorities Greenhouse Group, 2013)		
	National Greenhouse Accounts Factors (Department of Environment and Energy, 2017)		
Wa	aste and resource management		
•	Environmental Compliance Report: Liquid Chemical Storage, Handling and Spill Management (NSW DEC, 2005)	Materials handling and storage, and waste management	
•	Environmental Procedure: Management of Wastes on Roads and Maritime Services Land (Roads and Maritime, 2014)		
•	The reclaimed asphalt pavement exemption 2014 (NSW EPA, 2014)		
•	The stormwater exemption 2014 (NSW EPA, 2014)		
•	Waste Classification Guidelines (NSW EPA, 2014)		
•	Excavated Natural Material Exemption 2014 (NSW EPA, 2014)		
•	Excavated Public Road Material Exemption 2014 (NSW EPA, 2014)		
	Raw Mulch Exemption 2014 (NSW EPA, 2014)		

Ро	licy / Guideline / principles	Relevance	
•	Fact Sheet 1: Virgin Excavated Natural Material (Roads and Maritime, 2015) Fact Sheet 2: Excavated Natural Material (Roads and Maritime, 2015) Fact Sheet 3: Excavated Public Road Materials (Roads and Maritime, 2015) Fact Sheet 4: Reclaimed Asphalt Pavements (Roads and Maritime, 2015) Fact Sheet 5: Asbestos Waste (Roads and Maritime, 2015) Fact Sheet 6: Waste Sampling (Roads and Maritime, 2015).	Roads and Maritime waste factsheets	
• NS	Waste Avoidance and Resource Recovery Strategy (NSW EPA, 2014) Sustainability Policy: Waste Reduction and Purchasing Policy (WRAPP, W OEH, 2011)	Waste hierarchy	
•	Waste Reduction and Purchasing Plan (Roads and Maritime, 2010	Reduction of resource consumption	
Da	Dangerous goods and hazardous materials		
•	Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW 2005)	Dangerous goods and hazardous materials	
•	The Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (Environment Protection Authority 1997)		
•	Australian Code for the Transport of Dangerous Goods by Road and Rail (National Transport Commission 2008).		

5 Implementation

This section describes how the OEMP will be implemented.

5.1 Environmental management system

The O&M Contractor will utilise an Integrated Management System for environmental management. The environmental management system (EMS) has been certified as complying with AS/NZS ISO 14001.

The EMS forms the context for this OEMP, which is summarised in Figure 5-1.

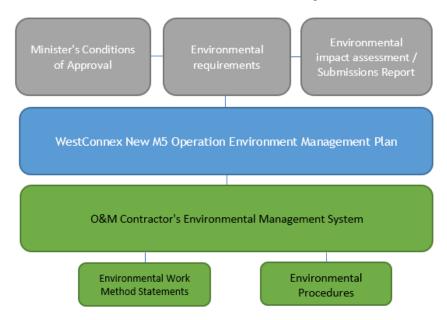


Figure 5-1: OEMP context

5.2 Environment policy

The environmental and sustainability performance of the Asset will be guided by the Project Company's Environment and Sustainability Policies (refer Annexure B). These policies will be displayed on the project website and displayed at relevant offices. The O&M Contractor's environment and sustainability policies will be consistent with the Project Company's policies.

5.3 Operation environmental management plan

This OEMP outlines the environmental management practices and procedures that are to be followed during the operation and maintenance of the Asset. It provides the overall frameworks for the systems and controls to minimise environmental impacts and meet legislative and other requirements.

5.4 Environmental management activities and controls

Site specific operational impacts have been identified and addressed through strategies and sub-plans (refer to Annexure G-L). Each strategy or sub-plan outlines management activities and controls which will be implemented to mitigate potential adverse impacts and assigns responsibility for these control measures.

The following table provides a summary of the environmental aspects which have a moderate to high risk of site-specific impacts, and the mitigation measures which have been identified to lower the risk. For more detail

regarding the specific impacts refer to the sub-plans in Annexure G-I. Aspects that have low risks have not been included in Table 5-1; they are addressed through the specific strategies (refer to Annexure J-L).

Table 5-1 Impact and mitigation measure summary

Aspect	Mitigation
Noise and vibration	Measures will be implemented to minimise the risk of noise and vibration. These measures may include: Inform residents of planned maintenance works Implement a complaints hotline and handling procedure Undertake regular maintenance of equipment to ensure noise emissions do not increase over time Schedule maintenance works during normal construction hours (if possible) Seek registration of interested parties to be included on a notification register to be utilised if any urgent unplanned works were to arise Undertake consultation with affected sensitive receivers during maintenance planning Undertaken noise monitoring during operation when required Analyse complaints and report to Project Trustee with recommendations to minimise impact
Surface water	Refer to the Operational Noise Management Plan for further mitigation measures. Measures will be implemented to minimise the risk of adverse surface water quality. These measures may include: Program regular landscape maintenance activities Routine surface water quality monitoring Maintenance of drainage and sump pump in tunnels Manage vegetation stockpiles All maintenance and incident response vehicles to contain a spill kit Provision of 24/7 hotline for motorists to advise of any major dumping and or spill All refuelling to be undertaken out of the Maintenance site at normal approved filling station Promptly report all spills to the QSE Manager Refer to the Operational Water Management Plan for further mitigation measures.
Groundwater Erosion and sediment	 Measures will be implemented to minimise the risk of adverse groundwater quality. These measures may include: Maintenance of drainage and sump pump in tunnels Contain spills in the spill containment chamber of tunnel sump and/or cap outfall points to prevent offsite discharge of polluted water if required and feasible Ensure that all groundwater monitoring is undertaken in accordance with the Water Quality Monitoring Program, including if an exceedance is recorded. Refer to the Operational Water Management Plan for further mitigation measures. Measures will be implemented to minimise the risk of erosion and sedimentation. These measures may include: Undertake routine post-construction monitoring to ensure successful establishment of landscaping and vegetation Undertake remedial planting in locations where vegetation cover has not been established
Contamination	 Use mulch bunds or straw bales as alternatives to sediment fencing where appropriate Refer to the Operational Water Management Plan for further mitigation measures. Measures will be implemented to minimise the risk of contamination. These measures may include: Develop a remedial action plan or ASSMP if contamination or acid sulfate soils are found to pose unacceptable risks Engage reputable subcontractor to remove and dispose of sludge Undertake storage and transport of liquid and dry chemicals in bunded areas and according to relevant Australian standards

Aspect	Mitigation				
	Keep liquid chemicals and fuels in bunded storage areas or sheds that have capacity to contain spills from leaky containers or from an incident				
	Advise all personnel of the following:				
	- Location of bunded storage areas, liquid absorbent materials and other spill				
	containment materials and kits				
	 Storage of large quantities of fuel for O&M vehicles and plant is not permitted All drums and decanted containers must be labelled and stored within bunded areas 				
	whenever not in use				
	Refer to the Operational Water Management Plan for further mitigation measures.				
Flora and fauna	Measures will be implemented to minimise the risk of adverse effects towards flora and fauna. These measures may include:				
	Maintain landscaping in accordance with the UDLP to ensure local native species are used to stabilise the soil and enhance the area				
	If EEC/ threatened species is identified, incorporate specific procedures to deal with that species is incorporated into the OEMP				
	Where fauna is encountered that requires handling or rescue, follow the Fauna Handling Rescue Procedure				
	Weed management controls will be undertaken in accordance with the Biodiversity Guidelines				
	Cleaning of maintenance vehicles and equipment regularly to avoid the spread of weeds				
	Refer to the Visual Amenity and Landscape Management Strategy for further mitigation measures.				
Air quality	Measures will be implemented to minimise the risk of air quality. These measures may include:				
	The tunnel ventilation system is to be automatically controlled using real-time traffic data				
	Tunnel ventilation is to be regularly tested				
	Regular Maintenance of ventilations stacks				
	Put exhaust fans into overdrive to further disperse emissions in the local environment				
	Cover any mulch stockpiles				
	Maintain vegetation to eliminate bare land				
	Only use equipment with appropriate filters				
	Modify or stop dust creating maintenance activities during periods of strong wind				
	Cover all loads that enter or leave the Maintenance Site				
	Refer to the Operational Air Quality Management Plan for further mitigation measures.				
Waste and resources	Measures will be implemented to minimise the risk of waste and resources. These measures may include:				
	Calculate precise estimate of materials prior to placing orders				
	Implement, where possible, agreements with suppliers to return excess packaging for future reuse				
	Encourage all staff to separate waste types				
	Purchase low energy equipment with 'standby' mode				
	Adopt and promote waste hierarchy				
	Establish a list of preferred suppliers for waste management services				
	Record all waste removed from Maintenance Site in the Waste Register				
	Monitor fuel consumption and investigate and implement minimisation measures were possible				
	Reuse waste material generated onsite where possible, particularly mulch				
	Refer to the Waste and Resource Management Strategy for further mitigation measures.				
Traffic and Transport	Measures will be implemented to minimise the risk of adverse effects to traffic and transport. These measures may include:				
	 Prior to commencement of works, undertake consultation with Transport Management Centre, the Sydney Coordination Office, and/or relevant Council and where required, obtain Road Occupancy Licence (ROL) under section 138 of the NSW Roads Act 1993 and fulfil other required legislative requirements 				

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Aspect	Mitigation			
	Undertake works in accordance with Road Occupancy Licences (ROLs)			
	Develop a specific Traffic Control Plan (TCP) or Traffic Management Plan (TMP), as required, covering controls relevant to the location and O&M activity taking place			
	Notify road users and the local community two weeks prior to implementing traffic management controls for planned maintenance			
	Refer to the Traffic Management Strategy for further mitigation measures.			
Visual Amenity and Landscape	Measures will be implemented to minimise the risk of adverse effects towards visual amenity and landscaping. These measures may include:			
	Develop and implement relevant environmental procedures and EWMSs for vegetation and landscape management including the provisions and actions of the urban design and landscape plan			
	 Inspect the rehabilitated and revegetated areas within the New M5 Motorway site that provide screening and amenity and prevent erosion once every month for the first year of operation. If there is evidence of poor establishment (e.g. plants under stress and wilting) replace with suitable plant species. Continue inspections after one-year in locations where there is evidence of poor establishment in the first year until a point in time where the area is established 			
	Maintain landscaping in accordance with the UDLP to ensure local native species are used to stabilise the soil and enhance the area			
	Refer to the Visual Amenity and Landscape Management Strategy for further mitigation measures.			

5.5 Environmental control plans and maps

Environmental control plans and maps are planning documents that clearly show the site layout and location of project specific constraints, including but not limited to:

- environmentally sensitive areas;
- waterways;
- · monitoring locations; and
- vegetation.

Refer to Annexure C for the site specific environmental control maps.

5.6 Environmental schedules

The environmental schedules include documents such as site inspection checklists, environmental incident reports and waste registers. These are outlined in the appropriate sub-plans (refer to Annexure G-L).

5.7 Responsible parties for the OEMP

The key responsible parties for the OEMP are:

- Roads and Maritime Services (RMS);
- Project Company;
- O&M Contractor.

Table 5-2: Roles and functions for key O&M responsible parties

Organisation	Roles and function
Roads and Maritime: proponent	 Act on behalf of the Government as the client and commissioning agency Manage concession arrangements on behalf of the NSW Government Is the proponent for the planning approval Acquired the property needed to build and operate WestConnex Maintain responsibility for tolling policy (with Transport for NSW) Provide advice and leadership on environmental policy and regulation
Project Company: delivery	 Project manage delivery of WestConnex Assist with communication and stakeholder activities including Ministerial liaison during operation Contractor management, performance monitoring and auditing.
O&M Contractor: operation	 Operation Services: Procure and manage contracts for the operation and maintenance of WestConnex and any impacts that could result from this Traffic management including monitoring the operation of traffic signalling devices from the Motorway Control Centre (MCC) Equipment and systems management including monitoring the operation of tolling systems Incident management, including attending and clearing all breakdowns and other vehicle incidents (including spills) on the New M5 Motorway. Maintenance Services: Routine and non-routine preventative maintenance activities required to maintain the safe and continuous operation of the NEW M5 Motorway Corrective maintenance (activities required to repair an unexpected failure of, or defect or damage to the Asset, to restore it to full operational condition) Condition monitoring and reporting (to provide objective assessment of the condition of the Asset) Spare parts management (custody, use and management of spare parts).

5.8 Roles and responsibilities

This section describes the key environmental management roles and responsibilities that will operate for the Asset's lifetime. Figure 5-2 shows the organisational structure.

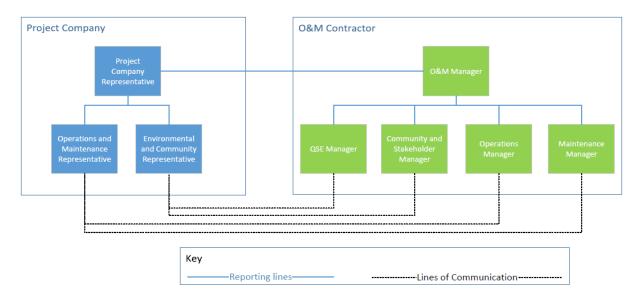


Figure 5-2: OEMP management structure

The environmental responsibilities of key O&M personnel are included in Table 5-3.

Table 5-3: Management responsibilities

Organisation and job title	Names and responsibilities
O&M Manager	 Ensure all O&M activities comply with relevant regulatory, Roads and Maritime and Project Company requirements
	• Ensure the requirements of the OEMP are fully implemented, and in particular, that environmental requirements are not secondary to other O&M requirements
	Implement the O&M contractor's environmental policy
	Liaise with Project Company and other Government authorities as required
	 Provide adequate resources (personnel, financial and technological) to ensure effective development, implementation and maintenance of the O&M Contractor's EMS
	 Ensure that all maintenance personnel receive appropriate induction training, including details of the environmental and community requirements
	 Ensure that complaints are investigated and issues raised resolved in accordance with the O&M Contractor's Community Relations Plan (CRP)
	• Direct work to stop immediately if there is likely to be an unacceptable environmental impact
	Report back to the Project Company's Project Director
	Confirm the need for any specific permissions and licences before work starts
	Report, as required to Project Company
O&M Operations Manager	 Plan operations and incident response services to avoids or minimises environmental impacts
	Ensure the requirements of the OEMP are fully implemented
	 Ensure O&M Contractor personnel manage operations in accordance with statutory approval requirements
	• Ensure environmental management procedures and protection measures are implemented
	Ensure all O&M Contractor personnel attend an induction before starting work
	Liaise with Project Company and other Government authorities as required
	 Direct work to stop immediately if there is likely to be an unacceptable environmental impact
	Report, as required to the Project Company
	 Ensure adequate resources are provided to effectively respond to incidents on the motorway
	Ensure that regular training is provided to all personnel participating in incident response
O&M Maintenance	Plan maintenance services in a manner that avoids or minimises impact to environment
Manager	Ensure the requirements of this OEMP are fully implemented
	 Ensure O&M Contractor personnel manage maintenance works in accordance with statutory and approval requirements
	 Ensure environmental management procedures and protection measures are implemented
	Ensure all O&M Contractor personnel attend an induction prior to commencing works
	Liaise with Project Company and other government authorities as required
	 Direct work to stop immediately if there is likely to be an unacceptable environmental impact
	Report, as required to Project Company
	 Providing maintenance staff for incident response and manage rectification of damage following incidents
O&M Quality, Safety	Manage environmental aspects of the O&M services
& Environment (QSE) Manager	 Report to O&M Manager and Project Company on the performance and implementation of the EMS and other environmental documentation
	Ensure environmental risks are identified and appropriate mitigation is implemented

Organisation and job title	Names and responsibilities				
	 Identify where environmental measures are not meeting the set targets and where improvement can be achieved 				
	Ensure environmental protocols are in place and managed				
	Ensure environmental compliance				
	Liaise with Project Company and approval authorities				
	 Direct work to stop immediately if there is likely to be an unacceptable environmental impact or to prevent an environmental non-conformance and advise the O&M Manager, O&M Operations Manager and O&M Maintenance Manager 				
	 Assist the O&M Community & Stakeholder Manager resolve environment-related complaints 				
	Report to the Project Company as required				
	Responsible for all environmental records and information relating to this OEMP				
O&M Community & Stakeholder	 Ensure all community consultation activities and notifications are carried out in accordance with the CoA 				
Manager	 Report environmental issues raised by stakeholders or members of the community to the QSE Manager 				
	 Communicate environment-related O&M Services, performance, mitigation measures and issues to stakeholders and the community 				
	Maintain the 24 hour complaints hotline				
All O&M Contractor	Participate in the O&M services induction program				
personnel	Implement activities in accordance with this OEMP				
	Work under the requirements of this OEMP, SOPs, EWSMSs				
	Minimise the potential for environmental impacts				
	 Feedback to the O&M Operations Manager and O&M Contractor's QSE Manager on the effectiveness and practicality of maintenance methods and environmental controls 				
	 Immediately report environmental incidents to the supervisor, or as soon as practicable if reasonable steps can be adopted to control the incident 				
	 Undertake remedial action as required to ensure environmental controls are maintained in good working order 				
	Stop work immediately if there is likely to be an unacceptable environmental impact				
Project Company	Receive a copy of this OEMP				
Representative	Review documentation provided by the O&M Contractor, where required				
	Liaise with relevant stakeholders				
	Attend site inspections and relevant project meetings as required				
	Monitor O&M Contractor's environmental performance and compliance				
	 Review and determine Consistency Assessments and Review of Environmental Factors, as required 				

5.9 Subcontractor environmental management

All O&M personnel are required to undertake work in accordance with this OEMP and sub-plans. Sub-contractors are required to provide their own environmental management system (EMS) relating to the activities they are contracted to perform. Sub-contractors' EMS must be consistent with this OEMP and sub-plans.

Sub-contractors to the O&M Contractor will be evaluated, selected and effectively monitored by the O&M Contractor to ensure their activities do not adversely affect the conforming deliverables. Additional detail is included in the O&M Contractor's Quality Plan.

6 Compliance, training and awareness

This section describes the processes and tools to inform the O&M personnel of their environmental obligations in undertaking their roles and responsibilities as discussed in Section 5.8. Relevant training and induction must be provided by the O&M Contractor to inform personnel of their environmental and compliance obligations under the conditions of approval.

Training requirements will be regularly reviewed and may form part of staff performance reviews, compliance tracking and ISO14001 audits. The QSE Manager may also determine additional training requirements relevant to any O&M personnel's environmental responsibilities based on his/her education, training and/or experience.

6.1 Environmental induction

The O&M Contractor will implement a compulsory site induction that includes an environmental component for all O&M personnel attending the site.

O&M personnel must be aware of the requirements of this OEMP and be familiar with implementing the associated management measures. Visitors will be required to be accompanied by inducted personnel at all times.

The environmental component of the site induction will include, but not be limited to an overview of:

- relevant details of this OEMP;
- key environmental issues;
- conditions of environmental licences, permits and approvals;
- specific environmental management requirements and responsibilities;
- mitigation measures for the control of environmental issues;
- incident response and reporting requirements, including near misses;
- spills, leaks, emissions, and contamination treatment;
- emergency response procedures, communications and equipment;
- localised health, safety and environment meetings;
- site and job-specific environmental impacts and aspects;
- environmental management system obligations;
- the media protocol summarised in Section 7.4.4;
- information relating to the location of environmental constraints; and
- · community awareness..

6.2 Toolbox talks

Toolbox talks will be one method of awareness training and educating for O&M personnel on issues related to all operational related aspects including environmental issues. The toolbox talks will be used to maintain environmental awareness throughout the Asset's lifetime. They will also be tailored to specific issues relevant to upcoming work, and include such as:

- environmental hazards and risks;
- SOPs, EWMSs and incident response procedures (IRPs);
- legislation changes;

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- inspection findings;
- audit results;
- incident or near-miss investigations;
- O&M personnel and community suggestions for improvements; and
- community feedback and actions.

6.3 Environmental awareness training

Targeted environmental awareness training will be provided to O&M personnel with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact.

Awareness notes will also be developed by the O&M contractor and distributed to inform O&M personnel. These will typically take the form of a poster, booklet, or similar and will be distributed to those responsible for managing specific work locations or activities. Training may include:

- ISO 14000 awareness, obligations and requirements;
- Project Company's and O&M Contractor's environmental policies, procedures, standards and guidelines;
- SOPs and EWMSs;
- auditing (including spot and formal auditing) and workplace inspections;
- incident reporting and investigation;
- continuous improvement policies;
- environment protection and sustainability;
- spill, leaks, emissions and contamination management; and
- the waste hierarchy.

Awareness training may be delivered through:

- distance and online training in the form of memoranda and instructions; and
- training sessions prepared and delivered by the QSE Manager.

6.4 Emergency response training

O&M personnel who are required to participate in an incident and/or emergency response will be trained under a program that focuses on implementing effective environmental management controls. The training will address:

- stop work procedures and follow-on actions;
- oil, fuel, chemical spill response;
- containment;
- clean up;
- waste management including removal, classification, storage, transport and disposal;
- liaison with Fire Brigade, NSW EPA and other emergency response services; and
- environmental management controls (e.g. water quality basins).

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The O&M Contractor will be suitably trained in emergency response procedures identified in the Emergency Response Plan (refer Section 8.2.3), including initiating the correct and most-appropriate response and reporting incidents to the correct authority, as required.

7 Communication

This section covers the requirements to implement internal and external communication procedures in operating, maintaining and repairing the Asset.

7.1 Internal communication

The QSE Manager, Maintenance Manager and Operations Manager will meet regularly to discuss on-site environmental management, amendments to plans, changes to O&M activities, environmental monitoring results and other relevant aspects of the O&M Services.

Regular meetings may also be scheduled with Project Company Representative to communicate ongoing environmental performance and to discuss issues to be addressed.

The QSE Manager will participate in toolbox talks (Section 6.2) and other environmental awareness training (Section 6.3) to communicate to O&M personnel on environmental performance including sensitive environmental matters for future work areas, and to receive feedback from on-site personnel.

7.2 External and Government consultation

The O&M Contractor's QSE Manager will be the main point of contact regarding specific environmental issues for external and Government stakeholders.

Relevant Government agencies will be notified as required by this OEMP following an incident and/or emergency. Routine meetings will be used to discuss environmental performance, upcoming work, and high-risk activities. The meetings will include inspections of the Asset as needed.

7.3 Community communication

7.3.1 Community engagement strategy

The O&M Contractor has developed a Community Relations Plan to provide an approach to stakeholder and community engagement. The O&M Contractor will be responsible for engaging with the community members impacted by the operation and maintenance.

The Community Relations Plan identifies opportunities for providing information and consulting with the community and stakeholders throughout the Asset's life. The plan defines:

- engagement groups (e.g. community, other road stakeholders);
- key messages; and
- tools that will be used to interact with community and stakeholders. These tools are detailed below in Section 7.4.

Consultation with stakeholders (e.g. relevant Councils, local community, other road stakeholder groups) will be undertaken throughout operation and maintenance of the Asset in accordance with the O&M Contractor's Community Relations Plan.

7.3.2 Complaints and enquiries procedure

A Complaints Management System, consistent with AS/NZS 10002:2014 Guidelines for Compliant management in Organisations will be implemented by the O&M Contractor during the operational life of the Asset.

There are several pathways to make a complaint or enquiry. These include the following:

- 24 hour phone number (1800 660 248) answered by the O&M Contractor's Stakeholder and Community Manager or delegated on-site supervisor during out of hours works
- postal address (Locked Bag 3905 GPO Sydney NSW 2001)
- email address (info@westconnex.com.au).

Community members can access the above resources, as required, to address any complaints or enquires they have.

All enquiries, feedback and complaints received through the above pathways or received by personnel working on the project will be forwarded to the O&M Contractor's Stakeholder and Community Manager, and to the O&M Contractor's QSE Manager (where appropriate) for issues relating to management of the environment.

Information on all complaints received, including the means by which they were addressed, whether resolution was reached, and whether mediation was required, will be included in a complaints register by the O&M Contractor's Stakeholder and Community Manager. The information contained within the register will be made available to DPIE on request.

The O&M Contractors Community Relations Plan provides the framework to manage and resolve complaints that arise from a number of communication methods, with this framework summarised in Table 7-1, Figure 7-1 and Figure 7-2.

All complaints should be closed off in the complaints register. The stakeholder(s) will also be kept informed of when they will receive a response.

The O&M Contractor will manage, record and respond to all complaints. Complaints will be reported to Project Company through regular Asset reporting.

Table 7-1: Response processes for complaints, enquiries and feedback

Item	Response Process
Enquiries from Federal, State and local government representatives via email, telephone or written correspondence	 O&M Contractor notifies the Project Company Representative immediately of all enquiries from Federal, State and local government representatives relating to the O&M Services. O&M Contractor acknowledges the correspondence / contact within 48 hours of its receipt. A draft response (if required) is provided to Project Company for approval within 5 working days of the correspondence/contact. Any briefings for these representatives will be arranged by the Project Company Representative
Calls (complaints/enquiries/ feedback)	 All calls or enquiries will be responded to immediately or within two working hours. Calls will be answered by the O&M Contractor's Stakeholder and Community Manager or a delegated on-site supervisor at the MCC during out of hours works. When a complaint or enquiry cannot be responded to immediately a follow up verbal response on what action is proposed will be provided to the complainant / enquirer within 24 hours of the complaint or enquiry being received.
	 A written response to the complainant / enquirer will be made within 10 business days if the complaint or enquiry cannot be resolved by the initial or follow up verbal response.
	A draft response will be provided to the Project Company (if required) before responding to the contact.
Written correspondence or representation	 Any representation is acknowledged within 5 business days of receipt by the O&M Contractor. Draft responses to be approved by Project Company.

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Item	Response Process
	The written response will be issued within 15 business days of receipt by FHEOM.

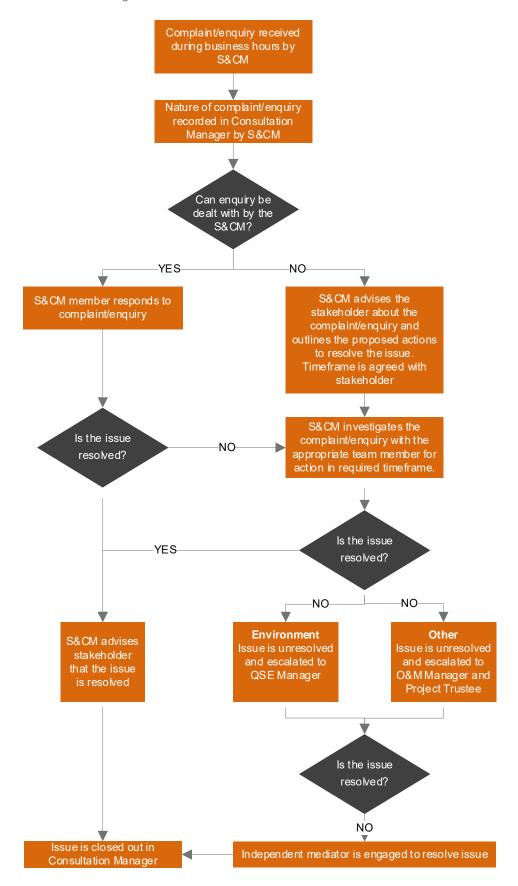


Figure 7-1: Process for enquiries and complaints recieved during business hours.

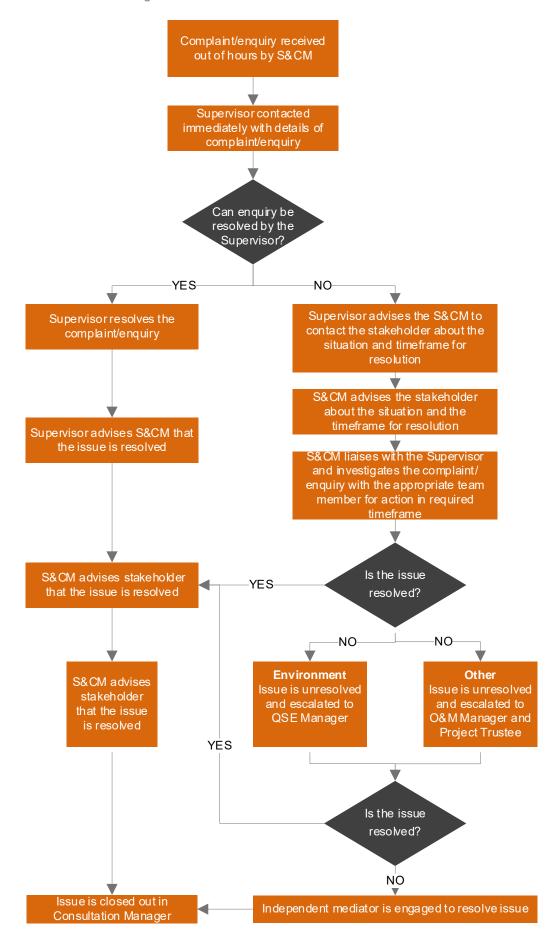


Figure 7-2: Process for enquiries and complaints received outside of business hours

7.4 Communication tools

Communication tools defined in the Community Relations Plan include:

- leaflets / letterbox notifications;
- advertisements;
- door knocking;
- signage;
- website updates;
- meetings; and
- 24-hour contact telephone number and email address.

7.4.1 Advertising routine operations and maintenance activities

Expected traffic delays and restrictions due to planned major operation and maintenance work will be publicly advertised through various media streams. The information to be advertised includes:

- the nature of the work;
- areas where the work is proposed;
- hours of work;
- contact information;
- changes to traffic and transport arrangements;
- how to register complaints;
- details of how to obtain further information.

The O&M Contractor must comply with the format of all written information and standard formats provided by the Project Company where appropriate.

Motorists will be informed of upcoming work and disruptions through:

- Variable message signs (VMS);
- WestConnex website;
- Livetraffic.com (http://www.livetraffic.com);
- Advertisements in newspapers and online; and / or
- Radio advertisements.

7.4.2 WestConnex website

Information relevant to the Asset is available to the public on the WestConnex website (https://www.westconnex.com.au/) including:

- information on the current implementation status of the SSI;
- the relevant approval documentation including the Project environmental impact statement (EIS), Submissions Report and modifications;
- the SSI 6788 approval;
- each relevant environmental approval, licence or permit required and obtained in relation to SSI 6788;

- each current report, plan or other document required under SSI 6788;
- outcomes of compliance tracking in accordance with CoA A14;
- details of contact point(s) to which community complaints and enquires may be directed, including a telephone number, a postal address and an email address; and
- how to receive important information in the common community languages of the area.

Further to this, air quality monitoring results will be made publicly available each month in hard copy format in an easy to interpret format in accordance with CoA E24. Further detail on air quality monitoring results, including the type of information available and where it can be obtained, is outlined in Annexure J – Operational Air Quality Management Plan.

7.4.3 Contact information

The relevant contact information for community complaints and enquiries is included in Table 7-2.

Table 7-2: Community contact information

Method	Information		
24-hour telephone number	A permanent 24-hour contact number (1800 660 248) will be maintained, publicised and advertised on the WestConnex website, mail outs and in all publications.		
Postal address	Locked Bag 3905 GPO Sydney NSW 2001		
Email address	info@westconnex.com.au		
Website	Project Company manages the Asset website (https://www.westconnex.com.au/). The website will be routinely and regularly updated to include:		
	The latest OEMP and sub-plans		
	EIS, Submissions report and Modification reports		
	Information on the current implementation status		
	Environmental approval, licences or permits required		
	Conditions of Approval and any future modifications		
	Tolling queries		
	Scheduled operations and maintenance activities		
	The outcome of compliance tracking		
	Complaints handling details		
	Contact details		
	Traffic management and patronage		
	Other relevant community information.		

7.4.4 Media protocol

O&M personnel will adhere to the following media communication protocol:

- Media enquiries will be directed to the Project Company Representative;
- No O&M personnel will be authorised to make a public statement without consulting with the Project Company Representative;
- Media will not be permitted onsite without Project Company approval;
- All O&M personnel will be made aware the media protocol in their induction training.

7.5 Air Quality Community Consultative Committee

The Air Quality Community Consultative Committee (AQCCC) has been established in accordance with CoA B9. The AQCCC consists of representatives from Roads and Maritime, the Project Company, relevant councils and the local community.

The AQCCC reviews and provides advice on the following, as they relate to air quality:

- location of the air quality monitoring station required under CoA E10, and the length of time during which monitoring is required;
- this OEMP and sub-plans;
- other operation stage documents;
- compliance tracking reports;
- the proposed air quality auditor(s) for the Asset, audit reports; and
- complaints received.

The AQCCC may also provide advice on the dissemination of monitoring results and other information on air quality issues. This OEMP will be updated, if required, in accordance with Section 1.3 of this plan to consider AQCCC advice on the availability of monitoring results or other air quality related information.

8 Risks, incidents and emergencies

This section covers the processes used to identify, monitor and manage risks, incidents and emergencies.

8.1 Environmental risk analysis

The typical inherent environmental risks associated with the Asset's operational key environmental performance issues are identified in Annexure D. The environmental risk analysis adopts the methods included in Australian Standard AS ISO 31000:2009 Risk Management, Principles and Guidelines (Standards Australia, 2009) and ISO 14001:2016 Environmental Management Systems. It includes:

- Routine operational risks;
- Non-routine operational risks.

The analysis then describes the measures that serve to manage these risks and consequently the residual outcome. The OEMP and supporting sub-plans serve to introduce risk mitigation controls to reduce:

- Likelihood, such as training and awareness, as well as the assignment of roles and responsibilities;
- Magnitude, such as water quality detention basin maintenance.

The potential consequence, likelihood and risk level were assessed using the ratings in Table 8-1, Table 8-2 and Table 8-3.

Table 8-1: Potential environmental consequence

	Insignificant	Minor	Significant	Major	Catastrophic
Environmental Consequence	No impact on or off site	On-site impact requiring routing internal remediation	Off-site impact requiring internal remediation OR on-site impact requiring substantial internal remediation	Impact on- or off- site requiring specialist external remediation	Impact on- or off- site with long term effect OR requiring immediate external response

Table 8-2: Potential environmental likelihood level

	Almost certain	Likely	Possible	Unlikely	Rare
Potential Likelihood Level	The potential consequence is expected to occur in most circumstances	The potential consequence will probably occur in most circumstances	The potential consequence is expected to occur at some time	The potential consequence could occur at some time	The potential consequence may occur in exceptional circumstances

Table 8-3: Environmental risk rating

		Potential Cons	Potential Consequence level			
		Insignificant	Minor	Significant	Major	Catastrophic
	Almost certain	Medium 11	High 16	High 20	Extreme 23	Extreme 25
	Likely	Medium 7	Medium 12	High 17	High 21	Extreme 24
Potential likelihood level	Possible	Low 4	Medium 8	Medium 13	High 18	High 22
	Unlikely	Low 2	Low 5	Medium 9	Medium 14	High 19
	Rare	Low 1	Low 3	Low 6	Medium 10	Medium 15

8.1.1 Continual improvement

The environmental risk register will be reviewed, and upgraded if required following an incident, emergency, change in legislation, change in operating and maintenance procedures/activities, audit findings, non-compliance, continual improvement measures or otherwise annually. New, atypical, non-routine or major environmental risks will be included and assessed under environmental risk analysis.

Where additional key environmental impacts are identified through this process, an appropriately detailed assessment of key environmental impact will be undertaken.

The O&M Contractor's QSE Manager will be responsible for maintaining and reviewing the environmental risk analysis process and environmental risk register, with input from Project Company.

8.1.2 Risk identification

Environmental risks may be identified through:

- Site audits;
- Reporting checks and audits;
- On-the-job observations;
- Site meetings;
- Toolbox talks;
- Investigations into an actual or potential breaches of the CoA and/or this OEMP;
- Corrective actions;
- Regular reviews of the O&M Contractor's environmental management system;
- Continuous improvement measures.

8.2 Incident and emergency management

8.2.1 Definition of emergency

An 'emergency' is required to be defined in this OEMP as it applies to conditions B4, E22 and E44. Relevant conditions are listed in Table 8-4.

Table 8-4: CoA relevant to the definition of an 'emergency'

CoA	Requirement
B4	The tunnel ventilation system must be designed, constructed and operated to release emissions from the ventilation outlets referred to in condition B2, and to avoid emissions from the portals and/or the emergency smoke extraction facilities at Bexley and Arncliffe. Emissions from the emergency smoke extraction facilities are excepted for emergency smoke management purposes in the event of a fire in the tunnel and periodic testing of the system as defined in the Operation Environmental Management Plan required under condition E31(g).
E22	Conditions E4, E5, E6, E14 and E19 do not apply in an emergency, as defined in the OEMP required by condition E31(g).
	The Proponent must, as soon as reasonably practicable, notify the Secretary and the EPA of any such discharge.
E44	Prior to operation, the Proponent must prepare an Emergency Response Plan, in consultation with FRNSW and NSW Police Force.
	The Emergency Response Plan must include, but not be limited to:
	(a) protocols and procedures to be followed during emergency situations associated with the operation of the project (including fires, explosions and, for the purposes of this condition, vehicle collisions). The protocols and procedures are to take into account the needs of people with a disability or who may experience access problems in emergency situations;
	(b) details of traffic management measures to be implemented during emergencies, where appropriate, to minimise the potential for escalation of the emergency;
	(c) design and management measures to address the potential environmental impacts of an emergency situation, including measures for containment of contaminated fire-fighting water, fuel spills and gaseous combustion products;
	(d) details of a training and testing program to ensure that
	(i) all operational staff are familiar with the Emergency Response Plan, and
	(ii) coordination with FRNSW and NSW Police is regularly exercised; and
	(e) provision for a simulated emergency response exercise, including the Proponent, FRNSW and NSW Police, to be conducted in accordance with the approved Emergency Response Plan on at least one occasion at least one month prior to the opening of the tunnels to traffic. The time for the exercise is to be agreed by the participants, and FRNSW and NSW Police are to be provided with at least one month prior notification of any proposed time.

The definition of an emergency for each of the above conditions is included in Table 8-5.

Table 8-5: Definition of 'emergency' by relevant CoA

CoA	Requirement
B4	An emergency smoke management purpose is what is reasonably necessary to manage smoke in response to a fire occurring in the tunnel, including in accordance with instructions given by NSW Emergency Services. An emergency smoke management purpose may also occur during a simulated emergency response exercise as referred to in the Emergency Response Plan required under condition E44 (e) of the approval.
	Periodic testing of the ventilation system is that which is done in accordance with Section 3.2.4 of the OAQMP.

CoA	Requirement
E22	An emergency discharge is an emission from the ventilation system that is caused by an incident or set of circumstances which does not ordinarily occur in the everyday use of the tunnel and is beyond:
	Merely heavy traffic or congestion, or
	The capacity of the tunnel operator to control or to have prevented by taking steps which a prudent, experience and competent operator would have taken.
	Conditions E4, E5, E6, E14 and E19 do not apply in the event of this emergency.
E44	An emergency to which the Plan applies is an out-of-the-ordinary event, or set of circumstances that causes or threatens to cause harm to the safety or well-being of the community, employees, or users of the Motorway or associated assets. It requires a coordinated response from NSW Emergency Services and the Tunnel Operator.

An emergency may require a coordinated response from relevant authorities, Emergency Services, O&M Contractor and Project Company.

Upon declaration of an emergency, the Operator will implement the relevant emergency or incident management plans and key O&M Contractor staff will form an emergency management team (EMT). The EMT will coordinate the O&M Contractor's response to best assist the Project Company's Crisis Management Team and Emergency Services in managing the event.

In relation to condition B4, all reasonable attempts have been made to avoid portal emissions during normal operations and during foreseeable incident conditions. The ventilation system has significant capacity to manage a broad range of Asset emergencies (as defined in Table 8-5), however, there may be emergency cases whereby portal emissions will be necessary to protect occupants inside of the tunnel. It is considered that based on the capacity of the ventilation system, that these emergency cases will be infrequent.

8.2.2 Directing and stopping work

All management roles in the organisation charts provided in Section 5.8 have the responsibility to stop works in instances where is likely to be an unacceptable environmental impact. The Project Company Representative and O&M Contractor roles are the key contacts with full authority over the works.

The O&M Contractor's Operation Manager will be available 24 hours a day, 7 days a week and has authority to stop or direct works.

8.2.3 Emergency Response Plan

An Emergency Response Plan has been prepared in consultation with Fire & Rescue NSW and NSW Police Force. The Emergency Response Plan consists of a number of O&M Contractor documents including an Incident Response Plan, safety plans, and emergency and evacuation plans.

These documents contain:

- protocols and procedures to be followed during emergency situations associated with the operation of the Asset (including fires, explosions and, for the purposes of this condition, vehicle collisions). The protocols and procedures are to take into account the needs of people with a disability or who may experience access problems in emergency situations;
- details of traffic management measures to be implemented during emergencies, where appropriate, to minimise the potential for escalation of the emergency;
- design and management measures to address the potential environmental impacts of an emergency situation, including measures for containment of contaminated fire-fighting water, fuel spills and gaseous combustion products;
- training and testing programs for all operational staff;
- details of simulated emergency response exercises including the O&M Contractor, Project Company, NSW Police and NSW Fire & Rescue.

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In the event of a flooding emergency, which causes or is expected to cause major road closures which potentially impacting on the ability of Emergency Services to respond and to evacuate people, the project will notify the NSW State Emergency Service, along with our emergency services.

8.2.4 Environmental incidents, notifications and reporting

The O&M Contractor operates under an environmental incident management procedure (refer to Annexure E) that will apply to the operational Asset. The O&M Contractor must include elements of this environmental incident procedure into its EMS.

Notification to EPA and other agencies

The Project Company Representative will notify the Environment Protection Authority (EPA) in relation to any pollution incident in accordance with the *Protection of the Environment Operations Act 1997* (POEO Act). The Secretary shall be provided with a record of any such pollution incident notification in accordance with CoA A15.

Notification to the Secretary, DPIE

In accordance with CoA A16, the Project Company Representative, must notify the Secretary of any incident (as defined by SSI 6788, other than those relating to the POEO Act) with actual or potential significant off-site impacts on people or the biophysical environment immediately on becoming aware of the incident on weekdays, or the following business day on weekends, public holidays and site shutdown. Full written details of the incident will be provided to the Secretary by the Project Company Representative within seven days of the date on which the incident occurred.

Incident reporting

The Project Company and O&M Contractor will meet the requirements of the Secretary or relevant public authority (as determined by the Secretary), to address the cause of impact of any incident associated with the operation and maintenance of the Asset, in accordance with CoA A17.

9 Managing and monitoring performance

This section addresses ongoing inspection and monitoring requirements, reporting obligations, non-conformance reporting, subcontractor requirements and operational audits of the OEMP. Project Company will remain responsible for managing and monitoring performance against the OEMP. The O&M Contractor will implement monitoring activities including inspections and will provide feedback to Project Company.

9.1 Environmental inspections

Environmental inspections of the operational Asset will be conducted in accordance with the requirements of the O&M Contractor's EMS to evaluate the effectiveness of environmental controls. Inspections will be scheduled in the EMS and will consider high risk activities. Inspections may include:

- works in environmentally sensitive areas
- issues such as spills, graffiti, vandalism and dust generation
- · waste management, including illegal dumping, litter, contamination of waste streams, system capacity
- plant and equipment operations
- evaluation of sub-contractor management controls.

9.2 Operational performance monitoring

Monitoring will be undertaken to validate and confirm the operational impact of the Asset on the environment. This monitoring will extend to the effectiveness of the installed environmental mitigation controls, such as the water quality basins.

Monitoring to be undertaken during operations of the Asset is identified in Table 9-1. Monitoring requirements are addressed within specific programs or plans as identified in the final column.

Table 9-1: Operational performance monitoring

CoA	Monitoring	Implementation	Where addressed
B28	Surface water and groundwater monitoring required at specific locations and frequency that are representative of the potential extent of impacts from the project.	Quarterly water monitoring will occur for both surface water and groundwater. There will be 11 locations for surface water and 25 for groundwater across the project.	Water quality plan and monitoring program
B61	Monitoring and maintenance procedures for built elements, rehabilitated vegetation and landscaping	Periodic site inspections will be used to review environmental performance and determine the need for any maintenance.	Urban Design and Landscape Plan Visual and Landscape Management Strategy
B66	Monitoring social impacts and reviewing the effectiveness of mitigation measures.	To be completed by author of Community and Social Management Plan.	Community and Social Management Plan
E2	Monitor pollutants within the tunnel	In-tunnel monitoring will be continuous, with monitoring undertaken on CO, NO ₂ and visibility.	Operational Air Quality Management Plan
E10	Monitor pollutants associated with ambient air quality.	Ambient air quality monitoring will be continuous. Monitoring will be undertaken for the following: NO	Operational Air Quality Management Plan
		• NO ₂	

CoA	Monitoring	Implementation	Where addressed
CoA	Monitor pollutants from the ventilation outlets.	Implementation NOx PM ₁₀ PM _{2.5} CO Wind speed @ 10m Wind direction @ 10m Sigma Theta @ 10m Temperature @ 2m Temperature @ 10m Pollutants from the ventilation outlets are measured at differing times such as continuous,	Operational Air Quality Management Plan
		quarterly and annual. This is dependent on the parameter being monitored.	
E31(h)	Monitor and manage environmental performance across the project during the operational phase.	Monitoring will include, but not be limited to environmental inspections, audits, reviews, compliance tracking and reporting.	This plan, specifically Section 9
E34(f) and (g)	Monitor operational noise, including on surrounding roads which experience significantly increased traffic volumes as a result of the project. Monitor noise in response to complaints. Monitor and review the Operational Noise Management Plan.	Monitoring will be undertaken at similar locations (where possible) to those selected prior to construction, to compare noise levels. Complaints shall be reviewed and investigated, noise and/or vibration monitoring undertaken and subject to results review all reasonable and feasible mitigation measures.	Operational Noise Management Plan
		The plan is a flexible document with continual updates from complaints, monitoring, changing regulation and feedback. Review will be undertaken annually.	
E37	Undertake additional noise monitoring and concurrent traffic counting to confirm proposed noise and vibration control measures that would be implemented for the operational phase of the project.	Noise modelling was undertaken to confirm the impact associated with the Project. This modelling was completed for noise sensitive locations.	Operational Noise and Vibration Review (ONVR)
E38	Monitor operational noise and vibration to compare actual noise and vibration performance of the project against the noise performance predicted in the Operational Noise and Vibration Review.	Noise modelling was undertaken to provide predictions of the operational noise impacts. During operation monitoring will occur at similar locations, where possible, to compare outputs.	Operational Noise and Vibration Compliance Report

9.3 Operational audits

9.3.1 Routine audit schedule

Environmental audits will be conducted at regular intervals during the operation of the Asset to evaluate compliance and identify opportunities for improvement. An audit schedule is included in Table 9-2.

Table 9-2: Audit schedule

Audit	Details	Timing	Responsibility	Recipient of the audit report
Internal audit	Compliance with approval and legal requirements, Roads and Maritime specifications, OEMP	6 monthly, or in accordance with the EMS schedule	O&M Contractor: suitably qualified and experienced internal member not directly associated with the O&M Services	O&M Contractor Project Company
External audit	Compliance with EMS (ISO 14001) in accordance with environmental management system requirements	6 monthly, or in accordance with the EMS schedule*	O&M Contractor to engage independent external auditor	O&M Contractor Project Company
External audit	Independent environmental audit (CoA E51)	Within 12 months of the commencement of operation, and at any other stage required by the Secretary	O&M Contractor to engage a suitably qualified, experienced and independent team of experts (including experts in air quality, biodiversity, noise and vibration, hydrology and any other fields nominated by the Secretary) whose appointment has been approved by the Secretary	Project Company, Secretary, relevant public authorities

^{*} Independent environmental audit (CoA E51) may satisfy an external audit.

Additional audit requirements identified in the CoA are summarised in Table 9-3. The document in which the requirement is addressed is included in the final column.

Table 9-3: Additional audit requirements identified in the CoA

CoA	Audit details	Recipient of the audit report	Implementation
E3	In-tunnel air quality sampling points and visibility monitoring points established must be audited prior to its commencement of monitoring. Verification and compliance auditing is to be undertaken by an independent person(s) or organisation(s) approved by the Secretary,	N/A	Operational Air Quality Management Plan
E12	Ambient air quality monitoring results must be subject to an independent audit at six-monthly intervals (or at a longer interval, if approved by the Secretary). The auditor must be approved by the Secretary in consultation with the NSW Environment Protection Authority and the project's Air Quality Community Consultative Committee (AQCCC),	The auditor's report must be directly provided to the Proponent and the AQCCC.	Operational Air Quality Management Plan
E18	Ventilation outlet monitoring equipment must be independently audited prior to its commencement of monitoring. Auditing is to be undertaken by an independent person(s) or organisation(s) approved by the Secretary	N/A	Operational Air Quality Management Plan
E26	Continuous emissions monitoring systems installed and operated as required by CoA E18 must undergo relative accuracy test audits at an interval not exceeding 12 months, or as otherwise agreed to by the Secretary in consultation with the EPA.	N/A	Operational Air Quality Management Plan

CoA	Audit details	Recipient of the audit report	Implementation
E27	Conduct an audit of the air quality monitoring (in tunnel and external) at six-monthly intervals.	All audit data will be available for inspection by the Secretary, upon request.	Operational Air Quality Management Plan
		A copy of the audit report must be issued to the Proponent and AQCCC.	
E40	Traffic mitigation measures recommended as part of the Road Network Performance Review Plan would be subject to independent road safety audits.	N/A	Operational Traffic Management Plan
E51	Within 12 months of the commencement of operation, and at any other stage required by the Secretary, the Proponent must commission an Independent Environmental Audit of the SSI.	The Proponent must submit a copy of the audit report to the Secretary and relevant public authorities, together with its response to any recommendations contained in the audit report.	OEMP, Section 9.3.2

9.3.2 Independent environmental audit

An independent environmental audit will be undertaken within 12 months of the commencement of operation, and at any other stage as required by the Secretary. In accordance with CoA E51, the audit must:

- be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been approved by the Secretary;
- include consultation with the relevant agencies and relevant councils;
- assess the environmental performance of the SSI and assess whether it is complying with the requirements in SSI 6788, and any other relevant approvals (including any assessment, plan or program required under these approvals);
- review the accuracy of predicted environmental outcomes discussed in the documents listed in conditions CoA A2(b) and CoA A2(d) inclusive;
- review the adequacy of any approved strategy, plan or program required under the abovementioned approvals;
- recommended measures or actions to improve the environmental performance of the SSI, and/or any strategy, plan or program required under these approvals.

The audit team must be led by a suitably qualified and experienced auditor, and include experts in air quality, biodiversity, noise and vibration, hydrology and any other fields specified by the Secretary.

A copy of the audit report must be submitted to the Secretary and relevant public authorities within 60 days of commissioning the independent environmental audit, or as otherwise agreed by the Secretary.

9.4 Operational reviews and checks

Operational reviews and other maintenance / checks or tests will be conducted as required during the operation of the Asset. Reviews identified in the CoA are summarised in Table 9-4. The document in which the requirement is addressed is included in the final column.

Table 9-4: Review requirements identified in the CoA

CoA	Audit details	Frequency / Timing	Recipient of the review report	Implementation
E40	A Road Network Performance Review Plan prepared to optimise road network performance and manage performance impacts of the Asset on the adjoining road network.	12 months and 5 years after the commencement of operation of the Asset	Secretary, Transport for NSW (in relation to impacts on bus services) and relevant council(s)	Road Network Performance Review Plan
E46	Hazard Reviews detailing all hazardous incidents that have occurred during the preceding review period, identify safety measures required to rectify those incidents, and address any ongoing issues.	For the first 5 years of operation: • first 3 months of operation • subsequent 9 months Thereafter 12 month intervals	FRNSW	O&M Manual
E50	Annual maintenance testing of fire and life safety systems	Annual, or any other interval as required by the design engineer and to the satisfaction of FRNSW	FRNSW	O&M Manual

9.5 Periodic Testing

In accordance with CoA B4, the operation of the tunnel ventilation system is to avoid emissions of tunnel air from the portals and/ or the tunnel support facilities at Bexley Road (MOC2) and Arncliffe (MOC3). Portal emissions are prohibited, except for the following circumstances:

- Emergency smoke management purposes in the event of a fire in the tunnel;
- Period testing.

Periodic testing may include, but not be limited to testing during commissioning; replacement, repair and testing of faulty ventilation equipment; and routine testing and maintenance periods. Further detail on periodic testing is outlined in Annexure J - OAQMP.

9.6 Compliance tracking

The CTP prepared to support design and construction was approved by DPIE on 25 July 2016. It described how the requirements of CoA A14 will be met. It also identifies the frequency for the compliance reporting and independent auditing. The Project Company will use this CTP during this Asset's operation. The CTP contains:

- Provisions for:
 - Notifying DPIE before the Asset is operational;
 - Periodic compliance reviews against the CoA and REMMs;
 - Periodic reporting to DPIE including a pre-operation compliance report;
 - All employees, contractors and sub-contractors to be aware and comply with the relevant CoA relating to their respective roles and responsibilities;
- An independent environmental auditing program;
- Procedures for rectifying any non-compliance identified during environmental auditing.

The CTP will operate for at least 24 months following the commencement of operation. The CTP will be included in the Independent Environmental Audit (CoA E51, refer to Section 9.3.2).

9.7 Reporting to DPIE

Table 9-5 lists the DPIE reporting requirements relevant to the operation of the Asset and this OEMP.

Table 9-5: DPIE reporting requirements

Document (CoA ref)	Details / timing
OEMP (CoA E31): submission	The OEMP must be submitted to DPIE no later than one month prior to commencement of operation
Operational Noise and Vibration Compliance Report (CoA E38): submission	The Operational Noise and Vibration Compliance Report will be submitted to the Secretary and the EPA within 60days of completing the operational noise monitoring (undertaken within 12 months of commencement of operation).
Water quality plan and monitoring program (CoA B28(s)): submission	Annual summary report of water monitoring data to be provided to DPIE, DPI (Water) and relevant councils.
Compliance tracking program (CoA A14(a)): notification	Notification to the Secretary prior to the commencement of operation and operate for a minimum of 24 months.
EPA notification (CoA A15): notification	Following any EPA notification, provide DPIE with record of such notification
Incident notification (CoA A16): notification and submission	Notification immediately on becoming aware of a relevant incident; Reporting of full written details within seven days of the date on which the incident occurred.
Incident investigation (CoA A17): corrective action	Causal factors and or impact from the incident must be addressed to the satisfaction of the Secretary (or relevant public authority)
Independent environmental audit (CoA E51): submission	Independent Environmental Audit report (and responses to recommendations) to be provided to the Secretary and relevant public authorities within 60 days of commissioning the Independent Environmental Audit.
Road Network Performance Review Plan (CoA E40): submission	At both 12 months and 5 years after commencement of operation the plan must be prepared. Within 60 days of its completion, the plan must be submitted to the Secretary, Transport for NSW and to relevant councils, and made publicly available.

9.8 Non-conformity, correction and preventative actions

A non-conformance is a failure to comply with a requirement, standard or procedure such as the Conditions of Approval, this OEMP or associated documents. Environmental non-conformances may be identified through regular inspections, monitoring, audits, complaints, observations or through incident management. They may be identified by the O&M Contractor, the Project Company and/or a public authority.

Environmental incident reports will be used to record non-conformances.

Following the identification of a non-conformance, corrective actions will be identified and determined by the relevant manager and will reflect the nature and scale of the incident and whether it presents and material risk to human health, the environment or property.

Corrective actions will be preventative-based, where possible. They will be implemented, monitored, checked and reviewed. The corrective action process is summarised as:

O&M Contractor's QSE Manager to be made aware of the non-conformance;

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Operation Environmental Management Plan

- O&M Contractor's QSE Manager to prepare an environmental incident report and/or environmental improvement notice;
- O&M Contractor's QSE Manager (or relevant manager) to assign corrective actions and responsibility to specific O&M personnel(s) including timeframes, follow-up dates, and close-out expectations;
- Close-out the action, following monitoring, and follow-up observation that the non-conformance and associated risks have been removed or appropriately managed to limit the potential for material harm as far as is reasonably feasible and reasonable.

10 OEMP review and records management

10.1 OEMP review

The OEMP and sub plans will be checked, reviewed and updated annually or as required if there is a significant change in operations, maintenance, organisational structure, reporting lines or legislation. The review will ensure that identified issues and corrective actions are being appropriately managed and reported. The review will be conducted by the QSE Manager and will include relevant O&M personnel who may include:

- O&M Contractor's O&M Manager;
- O&M Contractor's Quality, Safety & Environment Manager;
- Project Company Representative;
- O&M Contractor's Operations Manager.

As a minimum, the review will consider:

- Changes to the environment or generally accepted environmental management practices;
- Opportunities to improve environmental management processes and practices;
- Feedback, comments, actions and communications provided by Government agencies, regulators, and independent specialists;
- Audit findings;
- Environmental monitoring outcomes;
- Incidents and non-conformances;
- Environmental risks, including any new or additional (type or volume) of hazardous substances or contamination;
- · Community feedback, including trends and persistent issues;
- Organisational structure changes;
- Role and responsibility changes;
- Operations and maintenance responsibility changes;
- Legislative and regulatory changes.

A summary of the OEMP management review will be provided to the Project Company. Any required updates to the OEMP will be undertaken in accordance with Section 1.3 of this OEMP. Changes to the OEMP will be communicated by the Project Company Representative using either management meetings for non-critical updates or through formal communication (e.g. email, other transmittal) for critical and essential updates.

10.2 Records management

The O&M Contractor's QSE Manager will be responsible for all environmental records and information relating to this OEMP, including the resources and training needed to maintain:

- The OEMP and sub plans
- Monitoring data, inspections and corrective actions
- Audit reports and corrective actions
- Environmental incident reports and notifications

- Internal and external communications
- Training and induction records
- · Operations and maintenance activities
- Complaints Compliance tracking
- Subcontractor monitoring and performance

- Waste management records
- Greenhouse gas emissions
- Meeting minutes

- Monitoring environmental planning obligations
- Agency, regulatory, Governmental and Roads and Maritime correspondence.
- · Climate change and energy use records

All environmental management documents will be subject to ongoing review, revision and continual improvement. This includes changes to scheduled activities and legislative and licencing requirements.

Records will be held for 10 years. Roads and Maritime, the DPIE and key Government agencies will have access to all records upon request. Records will be managed in accordance with Project Company's record management system.

10.3 Document control

OEMP and sub plan preparation, distribution and review will be led by the O&M Contractor's QSE Manager. During the Asset's operation, the environmental documentation will be stored in the O&M Contractor's integrated management system.

A document control procedure will manage the flow of information between internal and external parties in line with the communication requirements in Section 7. This procedure will identify measures to ensure that documents are:

- Developed, reviewed and approved before being issued;
- Issued for use;
- Controlled and stored for 10 years, or the current prevailing legal requirements;
- Removed when superseded or updated.

A distribution list will identify the current version of each document, report and/or data.

Annexure A Compliance table for DIPNR, 2004

Guidelines for the preparation of Environmental Management Plans (DIPNR, 2004)

EMP guid	leline section	Document reference
Backgroui	nd	
	Introduction Location Operation and maintenance activities Timing and schedule	Section 1 Section 2.1; Figure 2-1 Section 3.1 Section 3.2
	Project description EMP context	Section 2 Section 1.2, Section 5.1
	EMP objectives Environmental Policy	Section 1.2 Section 5.2, Annexure AB
Environme	ental Management	Sections 5.4 to 5.9
	Environmental management structure and responsibility Approval and licensing requirements Reporting	Section 4 Sections 9.2 to 9.7
	Environmental training Emergency contacts and responses	Section 6 Section 8.2; Annexure F
Implemen		Coodin C.E., 7 unioxaro 1
	Risk assessment	Section 8.1, Annexure D
	Environmental management activities and controls	Issue-specific strategies and sub- plans
	Environmental control plans or maps	Annexure C
	Environmental schedules	Environmental schedules (e.g. site inspection checklists, environmental incident reports, waste register) will be included in issue-specific subplans, where appropriate, or will be retained on the project's document management system.
Monitor ar	nd review	
	Environmental monitoring	Section 9.2; issue-specific environmental strategies and subplans
	Environmental auditing	Section 9.3
	Corrective actions	Section 9.8
	EMP review	Section 10.1

Annexure B Environment and sustainability policy

Environmental Policy

Positive overall impact on our environment

Working together to protect and enhance our environment

We will:

- Seek to minimise our environmental footprint through innovation, energy and resourceefficient operations focused on reducing, reusing and recycling
- Meet or exceed all legal obligations applicable to our activities
- Recognise that environmental management encompasses diverse aspects including flora, fauna, heritage, water and community interests
- Identify impacts to the environment and implement effective controls
- Set objectives and targets to measure, manage and improve our performance
- Train our people to identify environmental risks and opportunities to help improve our performance
- Work closely with our subcontractors and suppliers to ensure they meet our expectations
- Drive continual improvement through the proactive use of environmental management systems

Our people will be environmental leaders by:

- Caring about the long term environmental impact of our activities
- Planning for and addressing all environmental risks and opportunities
- Pursuing innovative ways to improve our environmental performance

Tarmo Saar Director Michael Stephens Director

April 2016

Sustainability Policy

FHEOM is committed to being a successful and enduring infrastructure company

We will balance environmental, social and financial factors in our decision making:

People

- Create a workplace that puts the health, safety and wellbeing of our people first
- Build a performance culture based on leadership, great people and personal development
- Embed our REAL values and behaviours to empower our people to make sustainable decisions
- Value diversity and inclusivity

Planet

- Contribute towards and protect our natural environment
- Invest in a clean energy future that reduces our emissions and impact on the environment
- Promote products and services that use sustainable materials

Partnership

- Build long term relationships with our stakeholders by understanding their key priorities
- Work closely with our customers and suppliers to ensure our products and services are value-adding and industry leading
- Strengthen our community and indigenous relations by encouraging our people to connect and be part of the local community

Our people will be sustainability leaders by:

- Actively working towards minimising our environmental footprint
- Applying innovation, life cycle thinking and effective planning to drive performance across the business
- Sharing our sustainability journey with our partners and stakeholders

Tarmo Saar Director Michael Stephens Director

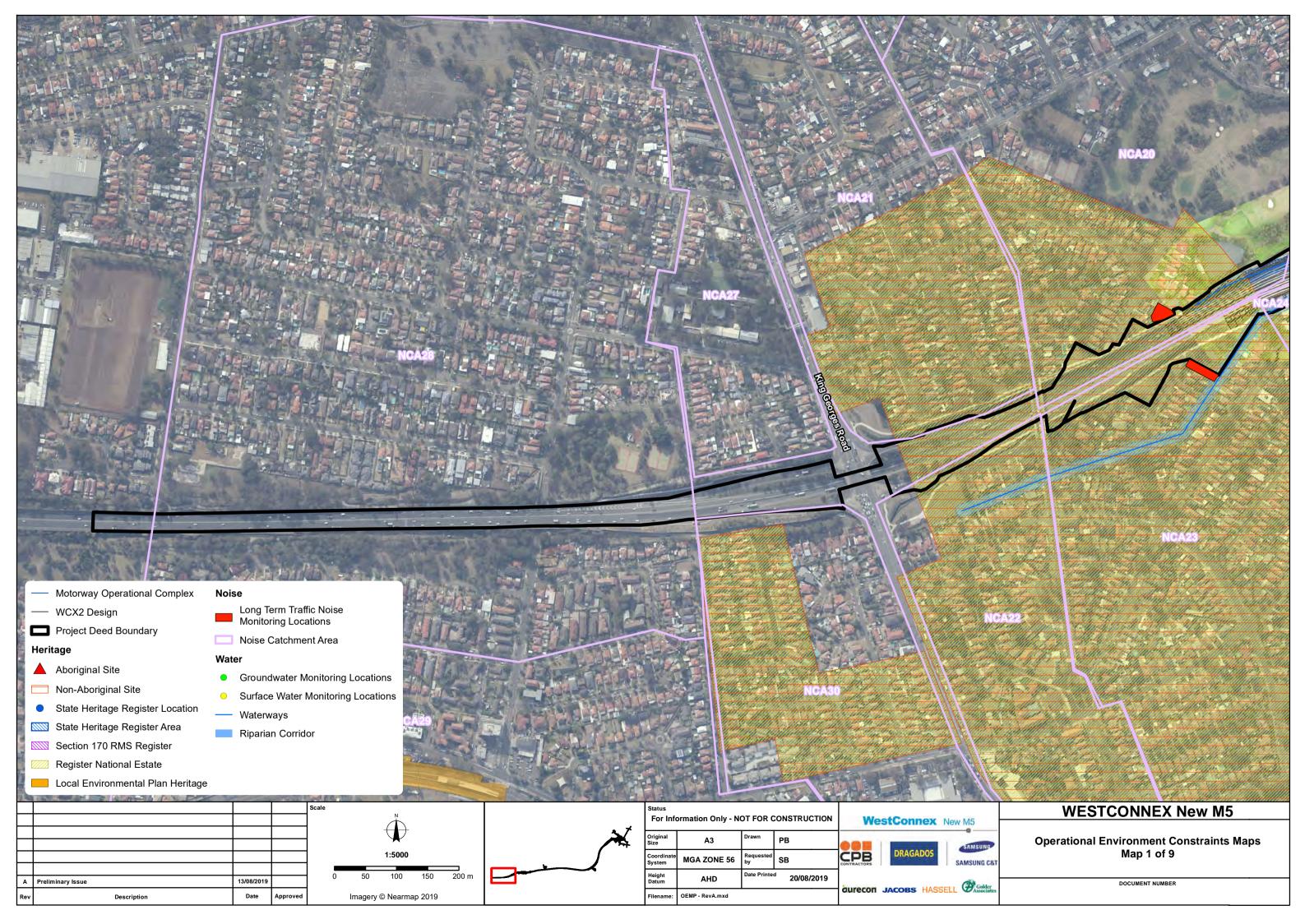
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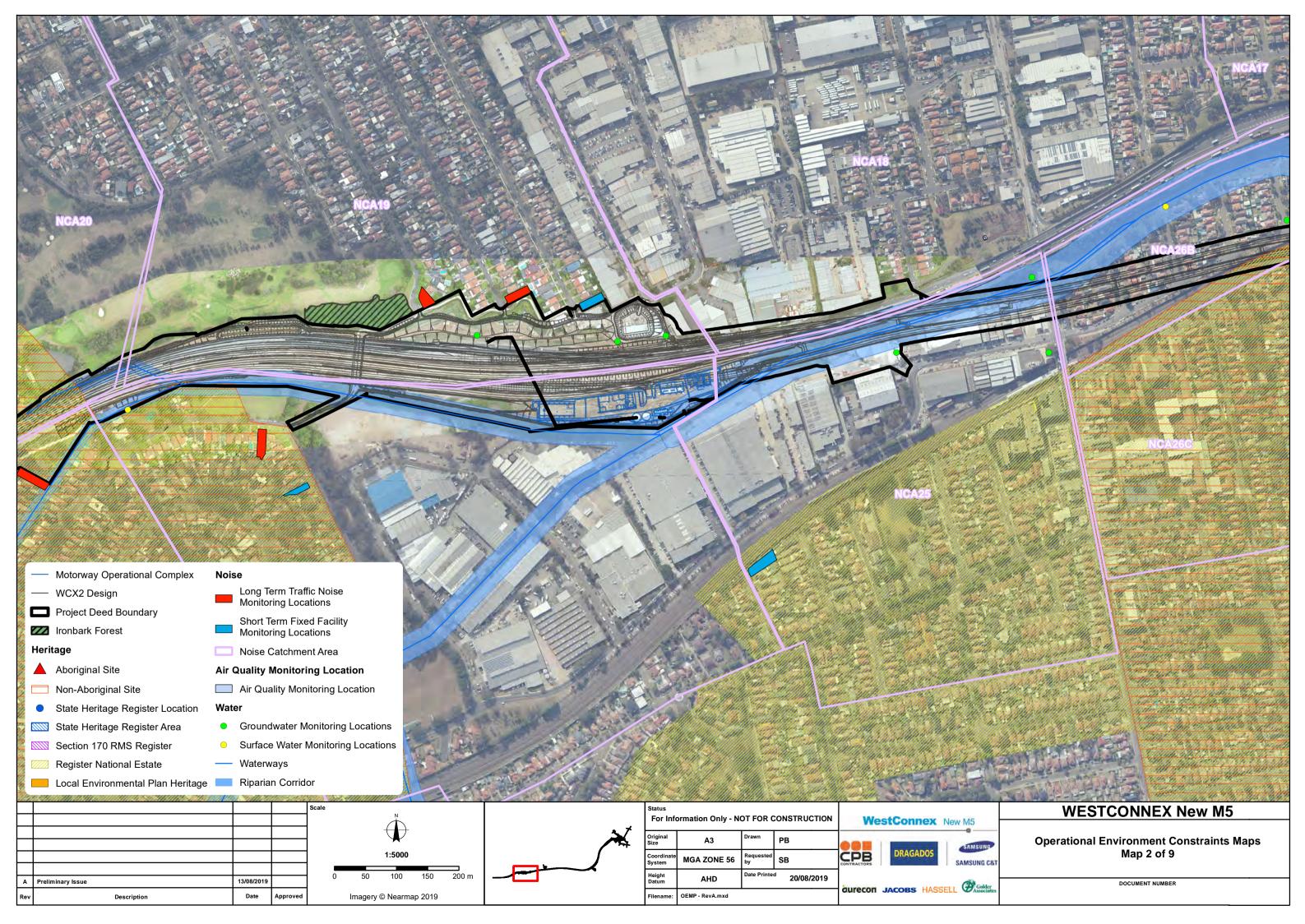


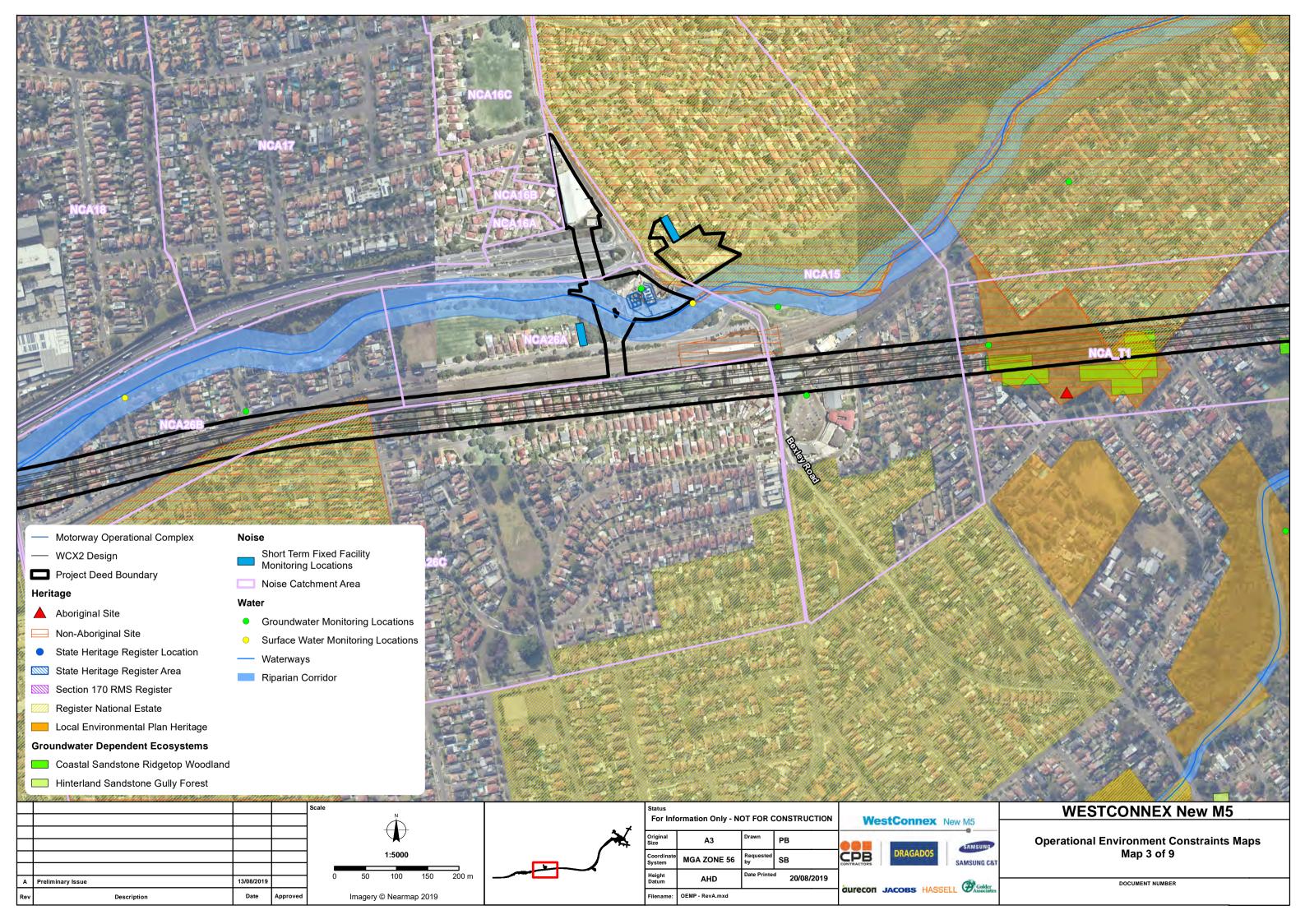


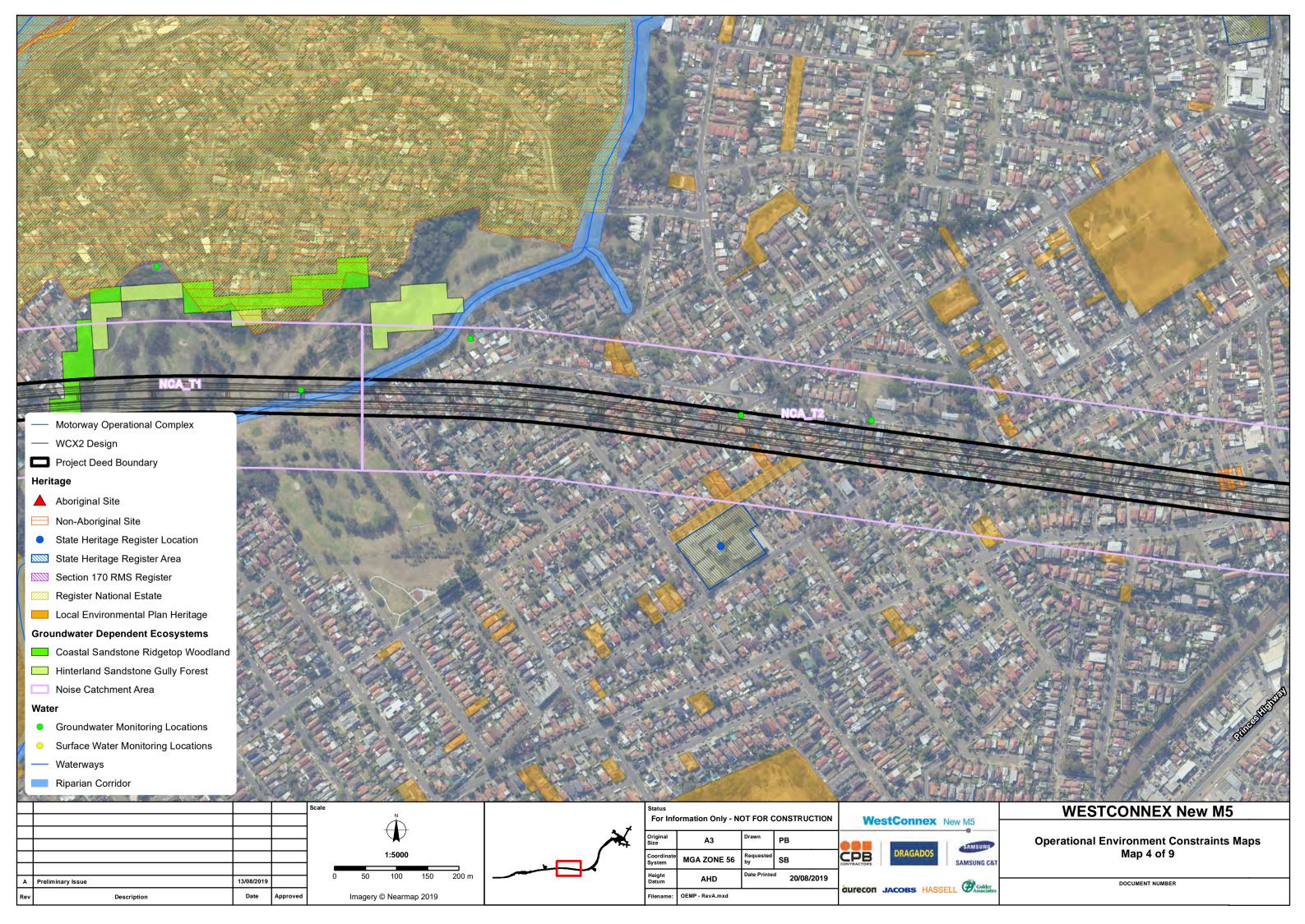
Annexure C Environmental control maps

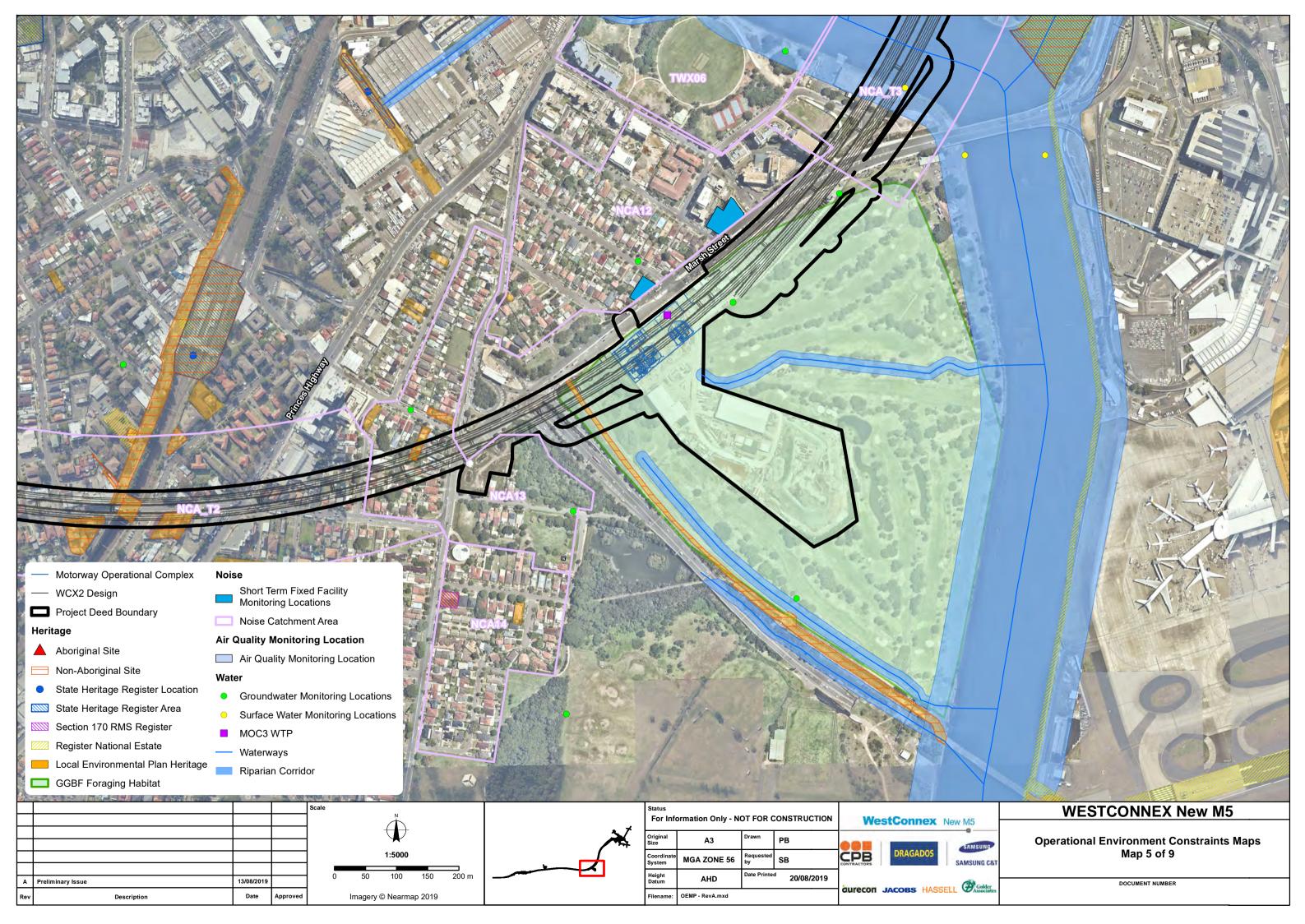
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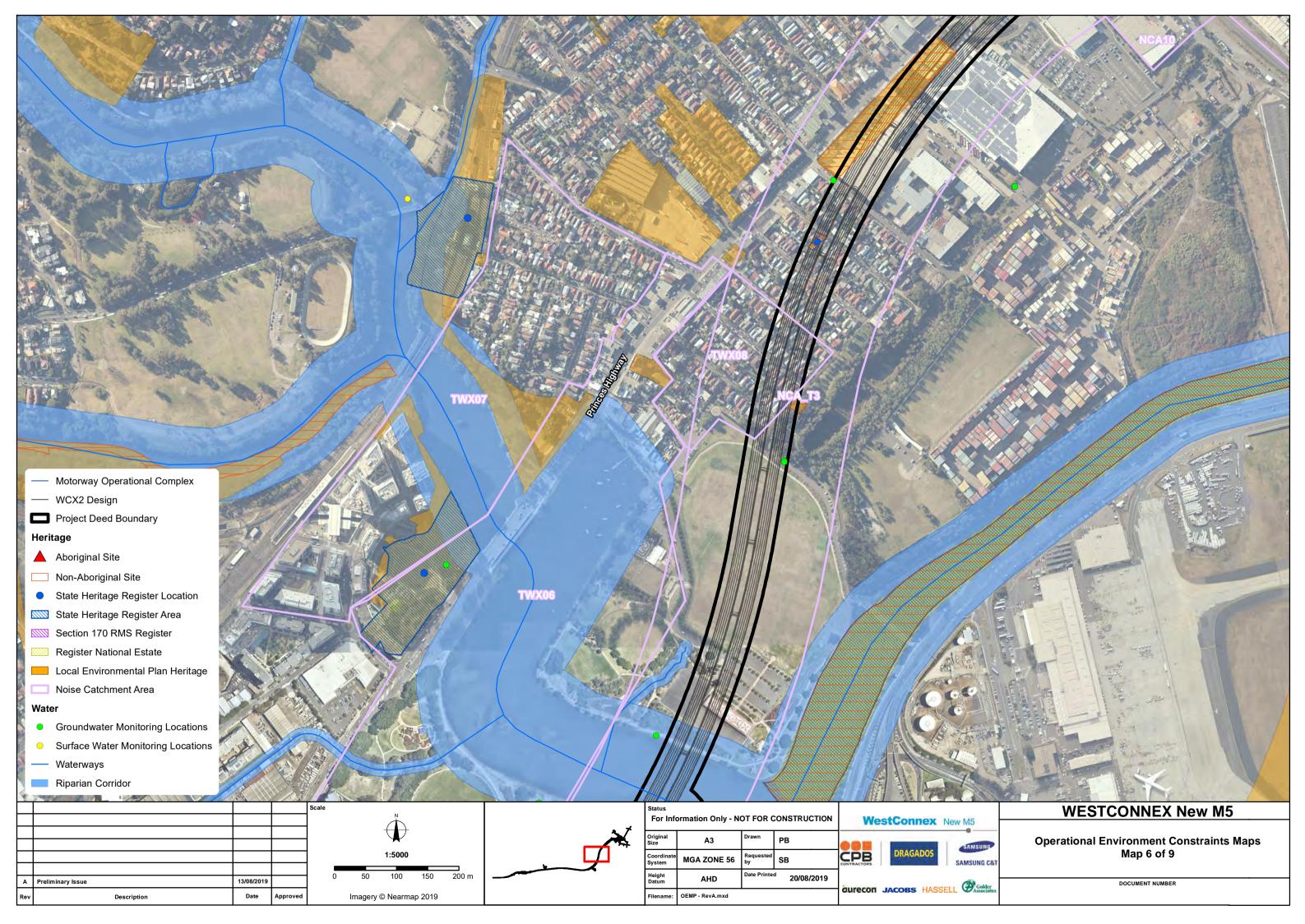


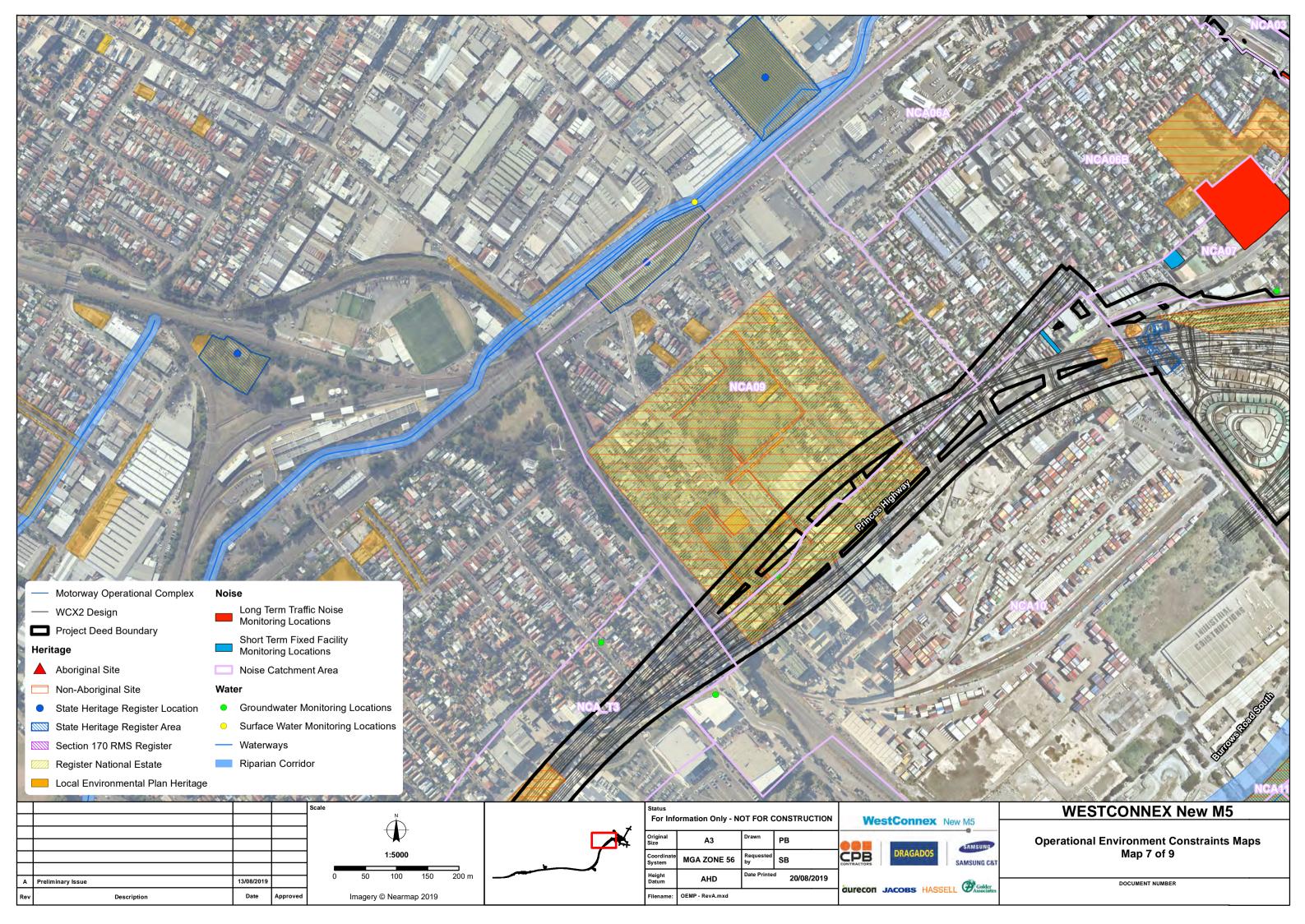


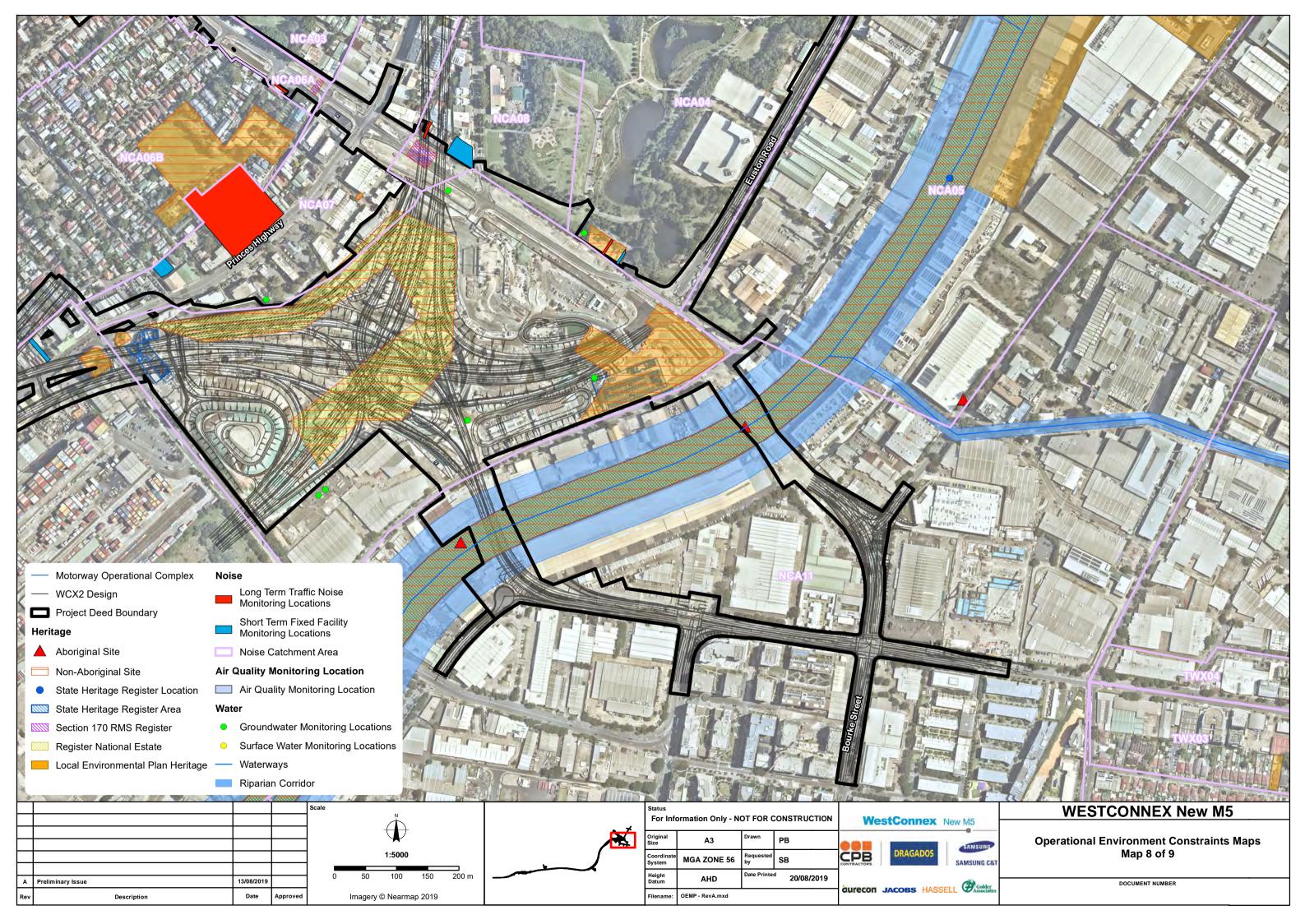


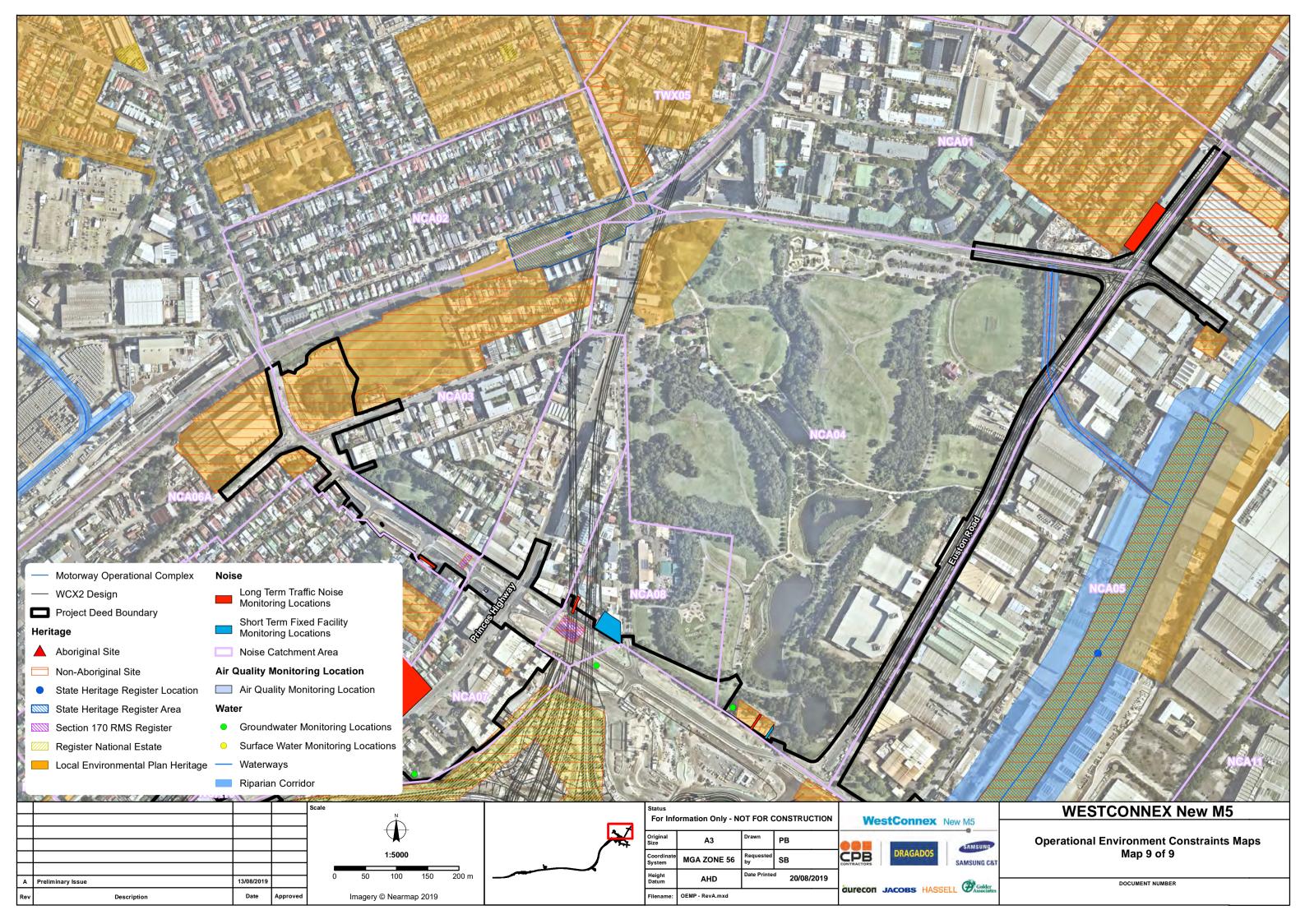












Annexure D Environmental risk register



	Pre (Control Risk (Before tre	atment)			Targ	get Control Risk (After t	reatment)
Description of Activity/ Environmental Risk	Consequence	Likelihood	Risk Rating	Proposed Control Measures, Treatment	Responsibility	Consequence (best case,	Likelihood (best	Risk Rating
Noise generally	(best/worst case)	(best/worst case)	·			treated)	case, treated)	
Noise and vibration from the regular maintenance activities such as:		Almost Certain		Inform residents in accordance with the Community Relations Plan about the planned works via the WestConnex website and/or other forms of communication. Such notification will be in advance of the maintenance works. Procure noise concious machine and plant	Stakeholder and Communications Manager			
 Grass mowing Vegetation trimming Street sweeping generates community complaints 	Significant		High 20	Inform the community before any programmed non construction hours work is undertaken by providing the following information - programmed times and locations of work, noise and vibration impact predictions, and noise and vibration mitigation measures being implemented.	Stakeholder and Communications Manager	Significant	Possible	Med 13
				Implement a hot line and complaints handling procedure for noise -related complaints.	Stakeholder and Communications Manager			
Use of noisy equipment during O&M Activities	Significant	Likely	High 17	Undertake regular maintenance of plant and equipment, to ensure that noise emissions do not increase over time. Procure noise concious machone and plant.	Maintenance Supervisor	Significant	Possible	Med 13
Regular maintenance activities								
Noise from reversing alarms and horns during general operations and maintenance activities affects sensitive receivers and generates community complaints	Significant	Likely	High 17	Plan and conduct works in a manner to minimise the reversing of vehicles with audible reversing alarms. Vehicle warning devices, such as horns, are not to be used as signalling devices. Use non tonal reverse alarms	Maintenance Supervisor (Civil)	Significant	Unlikely	Med 9
Replacement of fans at Ventilation outlets requires closure of nearby Road and establishment of 400t mobile crane in the middle of a residential area generates community complaints	Significant	Almost Certain	High 20	Extensive planning and community engagement activities SMC may need to offer respite accommodation to affected residents	Maintenance Manager Stakeholder and Communications Manager	Significant	Possible	Med 13
				Switch off equipment during maintenance works if not used for extensive periods of time	Maintenance Work Crews	Significant	Possible	Med 13
Noise and vibration from equipment used in regular maintenance activities such as: Grass mowing Vegetation trimming Street sweeping Cleaning of drainage and sedimentation basins generates community complaints				possible, the occurrence of consecutive works within the same locality, and coincidence of lant/equipment working close together (and adjacent to sensitive receivers) will be avoided or is minimised Maintenance Planner		Significant	Possible	Med 13
				Schedule maintenance works during normal construction hours (if possible). Where works must occur outside of normal construction hours, notify community in accordance with Community Relations Plan	Maintenance Planner Stakeholder & Community Manager	Significant	Unlikely	Med 9
	Significant	Almost Certain	High 20	Plan and conduct works in a manner to minimise the reversing of vehicles with audible reversing alarms. Use non tonal reverse alarms.	Maintenance Supervisor	Significant	Possible	Med 13
				Use two way radios at the minimum effective volume.	Maintenance Work Crews	Significant	Unlikely	Med 9
				Plant and equipment shall be task specific and if necessary fitted with less tonal alarms or warning devices. If noisy works will occur, and it is reasonably predicable that an exceedance may be possible the operator will conduct noise monitoring on that site.	Maintenance Superintendent	Significant	Possible	Med 13
				Unless required for technical reasons, undertake high noise generating work during the day, or early in the evening. If required to be undertaken at night; avoid short sharp sounds from impacts during night work to minimise sleep disturbance to neighbouring residents.	Maintenance Planner	Significant	Possible	Med 13
Noise and vibration from equipment used in regular maintenance activities such as: Grass mowing Vegetation trimming Street sweeping Cleaning of drainage and sedimentation basins affects local schools during exam periods	Significant	Likely	High 17	Consultation will be undertaken with affected education institutions during maintenance planning. Where feasible and reasonable, works will be planned to limit audible works undertaken during important events e.g. exams	Stakeholder and Communications Manager	Significant	Rare	Low 6
Loading of maintanance vahialse with waste effects consitive receivers and generates				Avoid metal-to-metal contact on equipment where feasible. Avoid dropping material from a height into unlined metal trays (line trays with soil or similar to reduce noise).	Maintenance Supervisor	Significant	Possible	Med 13
Loading of maintenance vehicles with waste affects sensitive receivers and generates community complaints	Significant	Likely	High 17	Loading and unloading to be carried out as far as practical away from sensitive receivers	Maintenance Supervisor	Significant	Possible	Med 13
				Locate plant and equipment to take advantage of barriers provided by existing site features and structures	Maintenance Supervisor	Significant	Possible	Med 13
Major maintenance/repair activities				Unless required for urgent maintenance activities, undertake high noise generating work during the				
Noise generated from: Replacement of signage damaged by vehicle incidents				day, or early in the evening. If required to be undertaken at night; avoid short sharp sounds from impacts during night work to minimise sleep disturbance to neighbouring residents.	Maintenance Superintendent	Significant	Possible	Med 13
Repairs to structures (ie, bridges and tunnel portals) damaged by vehicle incidents Paving affects sensitive receivers and generates community complaints	Significant	Almost Certain	High 20	Where possible, undertake works in continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block.	Maintenance Superintendent	Significant	Possible	Med 13
				Undertake programmed high noise impact activities (ie, paving, repair to structures such as guardrails, etc) only after community notifications	Maintenance Superintendent	Significant	Possible	Med 13
Replacement of fans at Ventilation Outlet(s) requires closure of nearby roads and establishment of 400t mobile crane in the middle of a residential area generates community complaints	Significant	Almost Certain	High 20	Extensive planning and community engagement activities SMC to offer respite accommodation to affected residents	SMC Maintenance Manager Stakeholder and Communications Manager	Significant	Possible	Med 13



	Pre (Control Risk (Before tre	eatment)			Target Control Risk (After treatment)		
Description of Activity/ Environmental Risk	Consequence (best/worst case)	Likelihood (best/worst case)	Risk Rating	Proposed Control Measures, Treatment	Responsibility	Consequence (best case,	Likelihood (best case, treated)	Risk Rating
Major incident may require replacement of shotcrete lining (generating noise that leads to community complaints)	Significant	Likely	High 17	Consider the amount of force on the machinery to mitigate noise and vibration Work to be done during normal hours (not after hours) Keep the community informed in accordance with the Community Relations Plan and via the WestConnex website	Maintenance Manager Stakeholder and Communications Manager	treated) Significant	Possible	Med 13
Light spill from flashing beacons generates community complaints doing maintenance works	Significant	Likely	High 17	Advise community of upcoming works as per Community Engagement Plan Also opportunity to demonstrate maintenance activities	Maintenance Manager Stakeholder and Communications Manager	Significant	Possible	Med 13
Noise generated from maintenance works undertaken out of construction hours affects sensitive receivers and generates community complaints	Significant	Almost Certain	High 20	Inform the community before any out of normal construction hours work is undertaken by providing the following information: programmed times and locations of work, noise and vibration impact predictions and vibration mitigation measures being implemented. Stakeholder and Communications Manager		Significant	Possible	Med 13
Incident response								
Noise generated from queueing traffic affects sensitive receivers and generates community complaints	Significant	Almost Certain	High 20	Use traffic controllers to minimise occurrences of vehicles queuing, idling or reversing near noise sensitive receivers as much as is practical.		Significant	Unlikely	Med 9
Operational traffic noise								
Noise generated from vehicles using the Motorway affects sensitive receivers and	Oinnife and	Almost Costsin	High 20	Undertake noise monitoring and report results to Project Trustee with recommendations (if feasible) to minimise impact, i.e. pavement surface refurbishment	QSE Manager Project Trustee	Significant	Likely	High 17
generates community complaints	Significant	Almost Certain	ertain High 20	Analyse complaints from sensitive receivers and report to Project Trustee with recommendations (if feasible) to minimise impact, i.e. recommend construction of additional noise barriers in response to regular complaints	QSE Manager Project Trustee	Significant	Possible	Med 13
Surface Water quality management Excess rainfall causes deposits build up on road surfaces and pavement areas during dry weather to be washed off and transported to local waterways	Major	Likely	High 21	As semi-permanent measure for heavy rainfall, temporary ground covers such as fabrics, mats or polymer sprays will be deployed in high risk areas. Areas of high risk to be identified during or after	Maintenance Supervisor	Major	Rare	Med 10
<u>·</u>				significant rainfall. Divert formation runoff into pits and the stormwater drainage system as soon as practical to reduce surface flow lengths.	Maintenance Supervisor	Significant	Unlikely	Med 9
Excess rainfall causes erosion	Significant	Possible	Med 13	Program regular landscape maintenance activities in accordance with the UDLP to maintain surface vegetation coverage	Maintenance Planner	Significant	Rare	Low 6
High rainfall causes minor flooding of tunnel	Major	Possible	High 18	Maintenance of drainage and sump pump in tunnels Operators understand capacity of drainage system Operators trained to reset the sump pump systems (through the OMCS) to automatic post maintenance activities Maintenance Manager Operations Manager		Major	Rare	Med 10
Mulching of vegetation trimmings causes: Contamination of surface water by tannins Negative impact on local waterways Reduced water quality in local waterways due to increased turbidity and sediment loading from unstabilised mulch stockpiles	Significant	Possible	Med 13	Manage vegetation stockpiles to minimise the impact of tannins leaching into the surrounding environment in accordance with RMS Environmental Direction – Management of Tannins from Vegetation Mulch (RMS, 2012) appended to OEMP.	Maintenance Manager	Significant	Rare	Low 6
Spills of hydrocarbons that occur during maintenance activities or vehicle incidents on Motorway	Significant	Possible	Med 13	All maintenance and incident response vehicles to contain a spill kit. Maintaining vehicles to high standard.	Maintenance Manager Operations Manager	Major	Rare	Med 10
Water quality risks associated with the runoff of pollutants from the road surface including: • Sediments from the paved surface from pavement wear and atmospheric deposition • Heavy metals such as lead, zinc, copper, cadmium, chromium and nickel attached to particles washed off the motorway pavement • Oil and grease and other hydrocarbon products • Rubber particles from wearing of tyres on the road pavement • Brake pad dust which could potentially include asbestos from older brake pads • Nutrients (N, P).	Significant	Almost Certain	High 20	Planned maintenance activities including: • Suction cleaning of drains, culverts and sedimentation basins (waste water sent to water treatment facility (potentially at Clyde) • Planned road sweeping Maintenance Manager		Significant	Possible	Med 13
Foam release in tunnel (accidentally or in response to an incident)	Significant	Possible	Med 13	Engage reputable subcontractor to pump out and remove (and provide documentation as part of EMP)	Maintenance Manager	Significant	Possible	Med 13
Fire in tunnel in combination with hydrocarbon release (i.e. truck in tunnel involved in incident) and heavy rain fills 970,000 litre tank	Major	Possible	High 18	Operators understand capacity of drainage system Deluge monitored together with heavy rain and NSW Fire & Rescue consulted to reduce deluge Implement Pollution Incident Response Plan Report to SMC for reporting to EPA Operations Manager QSE Manager		Major	Unlikely	High 18
Material deposited by motorists, such as non-biodegradable litter and food wastes impacts water quality, amenity and aquatic ecosystems if transported into receiving waterways.	Significant	Likely	High 17	Scheduled street sweeping, drainage cleaning (drains, culverts and sedimentation basins) and litter collection Daily inspections of motorway to identify litter requiring collection	Maintenance Planner Maintenance Manager	Significant	Unlikely	Med 9



Description of Activity	Pre C	Control Risk (Before tre	atment)			Targ	et Control Risk (After t	reatment)
Description of Activity/ Environmental Risk	Consequence (best/worst case)	Likelihood (best/worst case)	Risk Rating	Proposed Control Measures, Treatment	Responsibility	Consequence (best case, treated)	Likelihood (best case, treated)	Risk Rating
Litter from pedestrians on bridges over Motorway such as non-biodegradable litter and food wastes impacts water quality, amenity and aquatic ecosystems if transported into receiving waterways.	Significant	Likely	High 17	Provision of 24/7 hotline for motorists to advise FHEOM of any major dumping of litter on Motorway corridor	Stakeholder and Community Manager			
Culverts and drainage including sedimentation basins causes reduced water quality in local waterways due to increased turbidity and sediment loading through sediment- laden runoff	Significant	Likely	High 17	Regular programmed cleaning out of culverts and drains including sedimentation basins Reactive cleaning out of culverts and drains including sedimentation basins after heavy rainfall	Maintenance Planner Maintenance Manager	Significant	Rare	Low 6
Sediment-laden water from cleaning of drainage and sedimentation basins discharged	Significant i Possible Med 1.		Med 13	When necessary, sediment will be settled out of any water to be discharged using a flocculant (gypsum unless approved otherwise by SMC).	Maintenance Superintendent	Significant	Unlikely	Med 9
into waterways				Apply flocculant to settle sediments within 24 hours of the conclusion of the last rainfall event.	Maintenance Supervisor			
Fuel spills during repair of pavements causes contamination of surface water by hydrocarbons	Significant	Possible	Med 13	Maintain all equipment according to manufacturers' instructions	Maintenance Manager	Significant	Unlikely	Med 9
Fuel spills during refueling of O&M vehicles causes contamination of surface water by hydrocarbons	Significant	Possible	Med 13	All refueling of O&M vehicles to be undertaken out of the Maintenance Site at normal approved filling station.	Mantenance Manager	Significant	Unlikely	Med 9
Accidental spillage of fuel, chemicals or other hazardous liquids as a result of vehicle				Maintain spill kits and fire extinguishers at all times in all incident response and maintenance vehicles.	Maintenance Superintendent Incident Response Manager			
leakage or road accidents on the motorway causes reduced water quality in local waterways	Significant	Possible	Med 13	In the event of a spill, take corrective or remedial actions to render the area safe and avoid or minimise environmental harm.	Maintenance crews Incident Response team members	Significant	Rare	Low 6
				Promptly report all spills to the QSE Manager.	Maintenance Superintendent			
Stabilisation of disturbed areas				Program regular landscape maintenance activities in accordance with the UDLP. Only remove those approved under permit to clear and clearly marked vegitation.	Maintenance Planner			
Excessive clearing during O&M Activities cause erosion	Minor	Unlikely	Commence stabilisation of waterways, including their beds and banks, immediately after the completion of any O&M Activities within these areas Maintenance Superintendent Maintenance Supervisor		Minor	Rare	Low 3	
Erosion and sediment controls								
				Undertake post-construction monitoring to ensure successful establishment of landscaping and vegetation cover to minimise risk of erosion and sedimentation				
Vegetation cover dies causing erosion and sedimentation	Significant	Possible	Med 13	Undertake (or, during Defects Liability Period, arrange for D&C Contractor to undertake) remedial planting in locations where vegetation cover has not established or has only partially established to minimise risk of erosion and sedimentation	Mantenance Manager	Significant	Unlikely	Med 9
				Undertake landscape maintenance in accordance with the UDLP				
O&M Activities alongside waterways cause disturbance	Significant	Possible	Med 13	Immediately commence stabilisation of waterways, including their beds and banks, after the completion of any O&M Activities within these areas. All stabilised areas to mimic a naturalised creek system and the disturbed areas planted with native species.	Maintenance Supervisor	Significant	Unlikely	Med 9
Excessive clearing during O&M Activities cause erosion	Significant	Possible	Med 13	Use mulch bunds or straw bales as alternatives to sediment fencing where appropriate. Do not use mulch in concentrated flow areas or where it has the potential to result in tannin leachate into waterways. See RMS Environmental Direction No.25 Management of Tannins from Vegetation Mulch appended to OEMP. Working under approved clearing permit and approapriate tooling and effort relevant to the job.	QSE Manager Maintenance Superintendent Maintenance Supervisor	Significant	Rare	Low 6
Management of contaminated materials				relevant to the lob.				
Contamination is identified during landscape maintenance	Major	Unlikely	Med 14	In the event that contamination is identified, the contingency is to implement the Unexpected Discovery of Contaminated Material Procedure appended to the OEMP. Develop a remedial action plan if contamination is found to pose unacceptable risks to the	QSE Manager	Major	Rare	Med 10
Contamination in sedimentation basins from released sludge from WTP	Significant	Possible	Med 13	environment or human health. Undertake remediation works in consultation with the EPA. Engaging reputable subcontractor to remove and dispose of sludge (and provide documentation on	QSE Manager Maintenance Manager	Significant	Unlikely	Med 9
Acid Sulphate Soils are identified during landscape maintenance	Major	Unlikely	Med 14	disposal as per EMP) Prepare an ASSMP if required, to identify strategies to remove or reduce the risks associated with ASS.	QSE Manager	Major	Rare	Med 10
Management of other activities with potential water quality impacts				160.				
				Do not locate storage areas within 50 metres of natural surface drainage areas, storm drainage systems or poorly drained or flood prone areas or any area with a slope steeper than 10%.	Maintenance Superintendent	Major	Rare	Med 10
				Undertake storage and transport of liquid and dry chemicals (including pesticides, fuels and oils) in bunded areas and according to relevant Australian standards	Maintenance Supervisor	Major	Rare	Med 10
				Maintain the Safety Data Sheet (SDS) and Hazardous Products Register and copies of all SDS documents in the site office within a special SDS folder.	QSE Manager QSE & Training Coordinator	Major	Rare	Med 10
				Clearly label, use and handle liquid and dry chemicals (including pesticides, oils and fuels) in accordance with the instructions provided in its SDS document.	Maintenance Supervisor	Major	Rare	Med 10
Incorrect storage and handling of fuels and chemicals	Major	Possible	High 18	Keep liquid chemicals (including pesticides) and fuels in bunded storage areas or sheds that have the capacity to contain spills from leaky containers or from an incident involving a decanting activity. Ensure the bunded capacity is at least 120% of the total capacity of all containers stored inside the bunded area or shed.	Maintenance Superintendent	Major	Rare	Med 10



	Pre C	Control Risk (Before tr	eatment)			Targ	reatment)	
Description of Activity/ Environmental Risk	Consequence (best/worst case)	Likelihood (best/worst case)	Risk Rating	Proposed Control Measures, Treatment	Responsibility	Consequence (best case, treated)	Likelihood (best case, treated)	Risk Rating
				During site induction, advise all personnel of the following: • The location of bunded storage areas, liquid absorbent materials and other spill containment materials and kits. • Storage of large quantities of fuel for O&M vehicles and plant is not permitted. Licensed fuel trucks carrying emergency fuel spill kits must be used to service plant and equipment. All drums and decanted containers must be labelled and stored within bunded areas whenever they are not in use. Whenever practical, all unattended drums/containers must be returned to the bunded storage area.	QSE Manager QSE & Training Coordinator	Major	Rare	Med 10
Loss of native vegetation/ fauna habitat								
Maintenance of vegetation on Motorway verges Grass cutting Foliage trimming	Minor	Possible	Med 8	Maintain landscaping in accordance with the UDLP to ensure that local native species are used to stabilise the soil and enhance the area.	Maintenance Superintendent	Minor	Unlikely	Low 5
Maintenance around watercourses and aquatic environments • Excessive foliage trimming destabilises banks	Minor	Possible	Med 8	Stabilise tile soli altu etillarice tile area.				
Identification of EEC/threatened species								
Maintenance on Motorway Site generally	Significant	Unlikely	Med 9	In the event that an EEC/threatened species is identified during operations, incorporate any specific procedures to deal with that species (e.g. re-location, translocation and/or management and protection measures) is incorporated into OEMP	QSE Manager	Significant	Rare	Low 6
Terrestial fauna injury/mortality								
Maintenance vehicles Vehicles on M4 Motorway	Significant	Possible	Med 13	Where fauna is encountered that requires handling or rescue, follow the Fauna Handling and Rescue Procedure appended to the OEMP	Maintenance Manager QSE Manager	Significant	Unlikely	Med 9
Invasion of weeds								
During O&M Activities there is potential for weed seeds and plant material to be dispersed into adjoining areas where weed species do not currently occur associated with the movement of soil and attachment of seed to maintenance vehicles and equipment.	Minor	Possible	Med 8	Weed management and control will be undertaken in accordance with the Biodiversity Guidelines (RTA 2011)	Mantenance Supervisor (Civil)	Minor	Unlikely	Low 5
				Cleaning of maintenance vehicles and equipment regularly	Mantenance Supervisor (Civil)			
Use of pesticides								
Pesticides not used correctly causing loss of native vegetation and runoff into				Pesticide use will be undertaken in accordance with the Pesticide Use Procedure appended to the OEMP Maintain the Safety Data Sheet (SDS) and Hazardous Products Register and copies of all SDS documents in the MCC within a special SDS folder.	Maintanana Managar			
waterways	Significant	Possible	Med 13	Clearly label, use and handle pesticides in accordance with the instructions provided in its SDS document.	Maintenance Manager QSE Manager	Significant	Unlikely	Med 9
				Development of EWMS and training of all maintenance personnel				
Incorrect storage of pesticides leads to spills	Significant	Possible	Med 13	Keep pesticides in bunded storage areas that have the capacity to contain spills from leaky containers or from an incident involving a decanting activity. Ensure the bunded capacity is at least 120% of the total capacity of all containers stored inside the bunded area or shed. Do not locate storage areas within 50 meters of natural surface drainage areas, storm drainage	Maintenance Manager QSE Manager	Significant	Rare	Low 6
Air quality impacts				systems or poorly drained or flood prone areas or any area with a slope steeper than 10%.				
Air quality impacts Emissions from motor vehicles in tunnel Designed emissions from ventiation stacks are almost at maximum of CoA requirements	Significant	Likely	High 17	The tunnel ventilation system to be automatically controlled using real-time traffic data covering both traffic mix and speed, and feedback from air quality sensors in the tunnel to ensure in-tunnel conditions are managed effectively. Tunnel ventilation system to be regularly tested Put exhaust fans into overdrive to further disperse the emissions in the local environment (in agreement with SMC) Maintenance of ventilation stacks	Operations Manager Maintenance Manager	Significant	Possible	Med 13
Aquatic impacts Contamination of local waterways as a result of any pesticide spills or pesticides not being used correctly	Significant	Possible	Med 13	Pesticide use will be undertaken in accordance with the Pesticide Use Procedure iappended to OEMP Maintain the Safety Data Sheet (SDS) and Hazardous Products Register and copies of all SDS documents in the MCC within a special SDS folder. Clearly label, use and handle pesticides in accordance with the instructions provided in its SDS document.	Maintenance Manager QSE Manager	Significant	Rare	Low 6
	I	I		document.		ı l	l	



	Pre (Control Risk (Before tre	atment)			Tar	get Control Risk (After t	treatment)
Description of Activity/ Environmental Risk	Consequence (best/worst case)	Likelihood (best/worst case)	Risk Rating	Proposed Control Measures, Treatment	Responsibility	Consequence (best case,	Likelihood (best case, treated)	Risk Rating
				Development of EWMS and training of all maintenance personnel		treated)		
Increase in sediment and pollution loads in stormwater due to the removal of buffer vegetation, increase in road surface and increase in vehicular traffic impacting on water quality through road runoff containing suspended solids, nutrients from atmospheric fallout and other pollutants from vehicle, tyre and pavement wear	Significant	Possible	Med 13	Maintain landscaping in accordance with the UDLP to ensure that local native species are used to stabilise the soil and enhance the area.	Maintenance Manager	Significant	Unlikely	Med 9
Water treatment plant discharges untreated water into canal/Cooks RIver at Arncliffe	Catastrophic	Possible	High 22	Training of maintenance team and WTP operators in the WTP	QSE Manager	Significant	Possible	High 22
Deluge for two-hour duration will exceed the capacity of the sump (970,000 litres) while volume over 1,000,000 litres.	Major	Almost Certain	Extreme 23	Agreement with Fire & Rescue to turn off deluge earlier to reduce likelihood of tunnel flooding	Operations Manager	Major	Rare	Med 10
Dust								
Wind erosion of stockpiled mulch has an amenity impact to sensitive receivers where dust is deposited on surfaces resulting in community complaints	Significant	Possible	Med 13	Cover any mulch stockpiles Maintenance Superintendent		Significant	Rare	Low 6
Wind erosion of stockpiled mulch causes reduced water qualtiy in local waterways where dust is deposited	Significant	Possible	Med 13			Significant	Kale	Low o
				Maintain vegetation to eliminate bare land				
Dust generated during grass mowing and street sweeping affects sensitive receivers and generates community complaints	Significant	Possible	Med 13	Only use equipment with appropriate filters	Maintenance Superintendent	Significant	Rare	Low 6
and generates community complaints				Modify or stop dust-creating maintenance activities during periods of strong wind (in excess of 40km/h) and in response to strong wind weather forecasts. Record this in the Strong Wind Work Modification Record				
Dust generated during repair of structures damaged by traffic incidents, ie. Dry saw cutting of concrete affects sensitive receivers and generates community complaints	Significant	Possible	Med 13	WMS to be developed to mitigate impact of dust and noise QSE Manager Stakeholder & Community Manager		Significant	Unlikely	Med 9
Mud is tracked onto Motorway from maintenance vehicles engaged in motorway verge maintenance, e.g. grass cutting, vegetation trimming	Significant	Possible	Med 13	Remove mud spilt by O&M traffic from public roads as soon as it is identified/reported and at the end of each working day. Only travese wet/muddy areas as necessarily required, wait until area is dry before entering. Maintenance Supervisor (Civil)		Significant	Rare	Low 6
Dust from waste leaving the maintenance site affects sensitive receivers and generates community complaints	Significant	Possible	Med 13	Cover all loads that enter or leave the Maintenance Site.	Maintenance Crews	Significant	Rare	Low 6
Dust from bare earth affects sensitive receivers and generates community complaints	Significant	Possible	Med 13	Use temporary ground covers such as soil stabilisers or hydromulch as much as possible to stabilise batters, stockpiles and large surface areas.	Maintenance Superintendent	Significant	Rare	Low 6
				Maintain vegetation according to UDLP	Maintenance Manager			
Emissions								
Emissions from vehicular traffic on Motorway	Significant	Likely	High 17	Clear all traffic incidents as quickly as possible to enable free flowing traffic to resume	Operations Manager	Significant	Possible	Med 13
				Turn machinery and vehicles off when not in use.	Maintenance Crew]		
Emissions from O&M vehicles	Significant	Possible	Med 13	Maintain all vehicles and construction equipment in good working order to prevent excessive exhaust emissions in accordance with the manufacturer's specification to comply with all relevant legislation. Where possible, off road diesel equipment used must be compliant with Australian Design Rules 80 – Emission Control for Heavy Vehicles.	Maintenance Manager	Significant	Rare	Low 6
Heritage Unexpected cultural Aboriginal and non-Aboriginal heritage finds are encountered within								
Potential archeological objects identified within the Maintenance Area during O&M Activities	Major	Possible	High 18	Works should cease in the immediate area and the RMS Unexpected Archaeological Finds Procedure 2012 followed.	Maintenance Supervisor	Major	Unlikely	Med 14
Human skeletal remains found within the Maintenance Area during O&M Activities	Major	Unlikely	Med 14	Procedures will be developed for management of any possible human skeletal remains. In the event that possible human skeletal remains are revealed, work would cease in the affected area and the reported to the NSW Police and the Office of Environment and Heritage.		Major	Rare	Med 10
Waste								
Ongoing operation of MOC and maintenance facility leads to excessive packaging of	Minor	Possible	Med 8	Calculate precise estimates prior to placing orders	Maintenance Manager	Minor	Unlikely	Low 5



Description of Activity/	Pre (ontrol Risk (Before tre	atment)			Target Control Risk (After treatment)		
Environmental Risk	Consequence (best/worst case)	Likelihood (best/worst case)	Risk Rating	Proposed Control Measures, Treatment	Responsibility	Consequence (best case, treated)	Likelihood (best case, treated)	Risk Rating
products and supplies delivered	IVIIIIOI	i ossibio	IVICU U	Implement, where possible, agreements with suppliers to return excess packaging for future reuse.	Procurement Manager	IVIIIIOI	Offinery	LUVV J
Setup of MOC and maintenance facility leads to over-ordering of materials resulting in waste	Minor	Possible	Med 8	Calculate precise estimates prior to placing orders	Procurement Manager	Minor	Unlikely	Low 5
General office waste generated by personnel such as paper, cardboard, beverage containers and food waste at Motorway Control Centre and maintenance facility	Minor	Pussible	ivieu o	Encourage all staff to separate paper waste, aluminium, vegitation, general waste. Identify possible locations for a community garden. O&M Manager		Minor	Unlikely	Low 5
Excessive paper use and toner use at MCC and maintenance facility	Minor	Possible	Med 8	Provide paper recycling bins/boxes in MCC and maintenance facility offices. All paper waste to be sent to recycling facility. Set printers at the site office to default to double sided and black and white printing. Encourage all staff to minimise paper use through use of electronic media, re-use of paper etc. Refill or return printer cartridges for recycling	Office Manager	Minor	Unlikely	Low 5
High energy use in MCC due to 24/7 operation				Purchase low-energy equipment that has 'standby' mode Use low energy lighting	Procurement Manager			
Litter from motorists using Motorway enters stormwater system through drains leading to reduced water qualtiy in local waterways where litter is deposited	Significant	Possible	Med 13	Scheduled street sweeping, drainage cleaning (drains, culverts and sedimentation basins) and litter collection Daily inspections of motorway to identify litter requiring collection	Maintenance Supervisor (Civil)	Significant	Unlikely	Med 9
Litter from pedestrians on bridges over Motorway enters stormwater system through drains leading to reduced water quality in local waterways where litter is deposited	Significant	Possible	Med 13	24/7 hotline for motorists to advise FHEOM immediately of excessive litter on motorway	Maintenance expervisor (evil)	Oigimiodii.	Crimicoly	
Vehicle and plant maintenance leads to waste fuel, oil and chemical containers	- Minor	Possible	Med 8	Maintenance of O&M vehicles to be undertaken outside Maintenance Site	Maintenance Manager	Minor	Rare	Low 3
Vehicle and plant maintenance leads to cross contamination of waste								
Waste fuel, oil and chemical containers	Minor	Possible	Med 8	Collect and store waste oil in suitable containers and store in a bunded area until collected for recycling. All permanent bunded storage areas must be covered.	Maintenance Superintendent	Minor	Unlikely	Low 5
Use of hazardous materials during maintenance activities	Minor	Likely	Med 12	Where possible and practicable, give priority to non-hazardous products when ordering materials	Procurement Manager	Minor	Unlikely	Low 5
				Adopt and promote the waste hierarchy (reduce or avoid waste, reuse waste, recycle waste, recover energy, treat waste, dispose of waste).	QSE Manager Procurement Manager			
				Encourage everyone working on the delivery of the O&M Services to avoid and reduce waste, wherever possible, by for example, training staff on the identification, classification and appropriate waste handling as well as disposal practices as part of the site induction	QSE Manager			
				Establish a list of preferred suppliers for waste management services (e.g. – waste oil recyclers, metal recyclers, etc.).	Procurement Manager			
				Include in waste contractor subcontract agreements requirements to comply with statutory requirements, report quantities, types, dates and destination of material removed from site.	Procurement Manager			
Incorrect recycling/re-use of waste	Significant	Likely	High 17	Classify all wastes generated on the Maintenance Site during O&M Activities in accordance with the 2009 Waste Classification Guidelines prior to transporting waste off site.	QSE & Training Coordinator	Significant	Rare	Low 6
				Obtain and provide receipts/dockets for waste removed from site	QSE & Training Coordinator			
				Record all waste removed from Maintenance Site in the Waste Register.	QSE & Training Coordinator			
				When transporting waste to the premises other than EPA-licenced waste management facilities, ensure these premises can lawfully accept this waste; obtain a copy of the completed and signed 'Notice under Section 143' form to confirm this prior to transporting material to the premises.	QSE Manager			
Waste received on Maintenance Site	Significant	Unlikely	Med 9	No waste generated outside the site to be received at the Maintenance Site for storage, treatment, processing, reprocessing, or disposal on the Maintenance Site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste (CoA B10)	QSE Manager	Significant	Rare	Low 6
Excessive fuel used during O&M Activities	Minor	Possible	Med 8	Monitor fuel use consumption and investigate and implement minimisation practices where reasonable and practicable	Maintenance Manager	Minor	Unlikely	Low 5
Excessive trimming of plants on motorway verges leads to waste	Minor	Possible	Med 8	Reuse waste material generated onsite where possible, particularly mulch.	Maintenance Manager	Minor	Rare	Low 3



December of Astrictor	Pre Control Risk (Before treatment)					Target Control Risk (After treatment)		
Description of Activity/ Environmental Risk	Consequence (best/worst case)	Likelihood (best/worst case)	Risk Rating	Proposed Control Measures, Treatment	Responsibility	Consequence (best case, treated)	Likelihood (best case, treated)	Risk Rating
Ordering of products required for maintenance activities	Significant	Likely		Use recycled products in O&M Activities to reduce demand on resources, where the use of the material is cost and performance competitive and RMS' specifications allow it.	Maintenance Manager	Significant	Possible	Med 13
Dangerous Goods								
Handling of Dangerous Goods (MSDS)	Significant	Possible	Med 13	Appropirate work proceedures and SWMS and known locations of MSDS in emergency. Toolbox meetings and training	Maintenance Manager	Minor	Unlikely	Low 5

Annexure E Environmental incident procedure

Environmental Incident Procedure



Procedure Number: EMF-13-PR-0001 Environmental Incident Procedure

Effective Date: 19/07/2021 **Review Date:** 19/07/2023

1 Who is this document for?

All Ongoing / Temporary/ Seconded/Casual staff of TfNSW	YES
Transport Service Senior Managers and Executives	YES
Labour Hire, Consultants and Professional Service Contractors	YES
Delivery Partners / Contractors	YES

2 Purpose and Scope

2.1 Purpose

The purpose of this document (Procedure) is to set out the procedure to be followed if, during an activity being carried out by or on behalf of TfNSW, there is:

- a report-only event
- a non-compliance
- regulatory action received
- an environmental incident.

The Procedure sets out the steps for the:

- identification,
- classification and
- reporting

of report-only events, non-compliances, regulatory action and environmental incidents.

2.2 Scope

The Procedure sets out internal only reporting processes for environmental events and the additional process for 'notifiable events', which are environmental incidents that must be reported externally (see section 3.3).

The Procedure is applicable to all TfNSW activities where report-only events, non-compliances, regulatory action and environmental incidents may occur. The requirements of the Procedure must be communicated to all TfNSW employees and contractors (e.g. during inductions) who undertake those activities.

This includes (but is not limited to):

- Activities undertaken by contractors on behalf of TfNSW
- Temporary activities, such as preliminary investigations (e.g. geotechnical and environmental surveys)
- Construction and maintenance of TfNSW assets
- Activities at TfNSW properties and facilities (including TAHE)
- Maritime vessels operated by TfNSW.

The procedure does NOT cover report-only events, non-compliances, regulatory action and environmental incidents relating to:

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- Operating agencies embedded within TfNSW, such as Sydney Metro. At the time of release of the Procedure, there was a Corporate Functions Review underway, which sought to incorporate Sydney Trains and NSW TrainLink into TfNSW. The single operating model may involve the future amalgamation of environmental incident procedures. Regardless, it is noted that all agencies provide their incident data to Environment and Sustainability (E&S) Branch for the purposes of cluster reporting;
- Operational road and traffic activities of the general public (e.g. vehicle accidents, fires caused by discarded cigarette butts);
- Boating accidents (except those involving TfNSW Maritime vessels);
- Dumping of materials by members of the public on TfNSW managed land (except where hazardous materials are unexpectedly found during construction or maintenance activities);
- Marine oil and chemical spills covered by the National Plan for Maritime Environmental Emergencies (Australian Maritime Safety Authority, 2014).

The Procedure does not provide guidance on management responses or corrective actions required following environmental incidents and non-compliances, which are site specific and should be addressed by those with responsibility for the activity that caused the incident or non-compliance.

However, TfNSW E&S Branch is available to provide advice on appropriate responses and corrective actions in relation to individual incidents or non-compliances.

3 Requirements

3.1 Environmental incidents, report-only events, non-compliances and regulatory action

This Procedure is applicable to a range of environmental incidents, report-only events, non-compliances and regulatory action that may occur during activities undertaken by, or on behalf of, TfNSW. Each of these events and their reporting requirements are described in the following sections.

Personnel using this Procedure should consider the definitions of each of these events when reporting. Definitions are provided in Section 6.

Note that a set of circumstances may be both a non-compliance and an environmental incident. An environmental incident could also result in regulatory action.

3.1.1 Environmental incidents

Environmental incidents are defined in section 6. Reporting requirements are detailed in section 3.2.

The person responsible for operational management of the site/activity that caused the incident should assume responsibility for reporting in accordance with this Procedure, together with coordinating the response to the incident, including directing actions as necessary.

The TfNSW Environment Manager will classify reported incidents for the purposes of internal environmental performance reporting and analysis of environmental incident trends (as outlined in Figure 3.2.1).

Environmental incident classifications are described in Table 3.1.1, below. The classification system is aligned to the consequence levels (C6 – C1) from the <u>TfNSW Enterprise Risk</u> Management Standard and considers the key risk areas of:

Environment

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3

- Reputation and Integrity
- Regulations and Compliance.

The appropriate consequence level for each of the three key risk areas will be recorded for each incident, but only the highest recorded consequence level will be used as the incident classification for reporting purposes.

Note that not all criteria described for each consequence level in Table 3.1.1 need to be met in order to assign an incident classification – the most appropriate criteria should be considered when determining the consequence level for each key risk area for each incident.

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Table 3.1.1: Environmental Incident Classification

			Incident	Category		
Key risk area	C6 Insignificant	C5 Minor	C4 Moderate	C3 Major	C2 Severe	C1 Catastrophic
Environment	No appreciable changes to environment.	Change from existing conditions that can be rectified immediately (< 1 day) with available resources.	Short-term (< 1 year) and/or well-contained environmental impact. Minor remedial actions probably required.	Short to medium term (between 1 and <5 years) environmental impact. Considerable remedial actions probably required.	Medium-term (>5 years) environmental impact. Extensive remedial actions probably required.	Long-term (>10 years) large-scale environmental impact. Extensive and ongoing remedial actions probably required.
Reputation and integrity	Single negative article in local media. Limited social media commentary. Goodwill, confidence and trust retained. Confined to the Branch. Local council may want to discuss.	Series of negative articles in local media (District / electorate based adverse media). Some social media commentary. Confidence remains - minor loss of goodwill. Confined to Branch but requiring notification to Division. Council requires written explanation. Recoverable with little effort or cost. Some continuing scrutiny/attention.	Extended local media coverage with some broader Regional media coverage. Extended negative social media coverage. Confidence and trust of stakeholders dented (recoverable at modest cost within existing budget and resources). Division formal response needed to State Government/Regulator.	State media coverage, short term negative national media coverage. Widespread social media coverage Confidence/trust impaired. Project/activity credibility under question. TfNSW and/or Ministers Department requires update.	Sustained negative State media coverage. Regular 'talk-back' programs questioning credibility and capability. Confidence and trust are severely damaged. Widespread negative social media coverage. Regular updates demanded by Minister. Stakeholders withdraw their support recoverable at considerable cost, time and staff effort.	Sustained, high profile media attention at National level. Material change in the public perception of the Agency. Extensive negative social media coverage Confidence and trust non-existing. Government forced to reverse decision. Stakeholders are actively campaigning against the organisation.

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Table 3.1.1: Environmental Incident Classification

			Incident	Category		
Key risk area	C6 Insignificant	C5 Minor	C4 Moderate	C3 Major	C2 Severe	C1 Catastrophic
Regulations and compliance	Low-level/Technical non-compliance with legal and/or regulatory requirement or duty by individuals or TfNSW- not reportable. Minor non-compliance to a low impact contract clause – little or no interest by either party to pursue or rectify.	Non-compliance with whole or significant aspects of Government policy not reportable but requiring internal activity to put in place. Formal investigation and/or formal notification to regulator. Minor breach of contract by either party rectified through local management discussion.	Non-compliance with key Government policy - reportable and/or explanation required – need to put in place as soon as possible. Non-compliance – key obligation. Formal notification to regulator. Agency on notice. Breach of contract by either party rectified at Branch level management discussion. Small fine and no disruption to services.	Technical non- compliance with a minor Government Policy - not reportable. Low level non- compliance. Technical non- conformance. Minor non-compliance to a low impact contract clause – little or no interest by either party to pursue or rectify. Substantial fine and no disruption to services.	Non-compliance with high profile, outward facing Government policy or Ministerial decree - immediately reportable to Government body (e.g. Treasury) and action to put in place required immediately (high priority). Continuous breach resulting in prohibition notices. Breach of significant, key aspects of contract by either party leading to lodgement (threat) to sue and recompense at severe financial levels Cessation of contract may occur. Large fines as a result of non-compliance. Licence or accreditation restricted or conditional affecting ability to operate.	Non-compliance with high profile Government policy or Ministerial decree - immediately reportable to Ministerial level requiring actions to put in place immediately (high priority) and progress to be reported to the Minister on an agreed and appropriate schedule. Litigation and potentially imprisonment. Loss of Operating licenses. Continued breach cannot be tolerated. Major contract breach by either party leading to significant litigation and financial costs . Total breakdown and cessation of contract. Criminal prosecution as a result of non-compliance.

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3.1.2 Significant environmental incidents

Significant Incidents are environmental incidents that are serious in nature and have significant consequences warranting escalation to TfNSW senior management.

An environmental incident is to be defined and treated by the TfNSW Environment Manager as a potential Significant Incident if it meets one or both of the following:

- the severity of the incident is likely to be classified as C3, C2, or C1 in accordance with Section 3.1.1
- the history of the project, past performance and/or previous regulatory interest, indicate the project is likely to be the subject of a penalty notice or prosecution

Potential Significant Incidents are escalated by TfNSW to the Executive Director Environment and Sustainability, who will determine whether the incident is deemed to be a Significant Incident and require further escalation to the Secretary and other senior management, to ensure they are aware of the incident and can implement or authorise any required responses.

The Significant Incident escalation process is detailed in Appendix A and Figure 3.2.1.

3.1.3 Report-only events

Report-only events are defined in section 6. Reporting requirements are detailed in section 3.2. Examples of report-only events include:

- Environmental incidents caused by weather events that are beyond the design capacity
 of environmental controls and/or mitigation measures in accordance with project specific
 requirements;
- Environmental incidents caused by persons or entities not associated with an activity being undertaken by TfNSW;
- Pre-existing conditions not associated with an activity being undertaken by TfNSW;
- Unexpected finds that are managed in accordance with relevant procedures / guidelines. Despite these events being outside the scope of control of an activity, it is likely that a management response will be required to address them. As such, it is important that they are still reported (see section 3.2) to understand any resulting environmental impacts, inform trend analysis and any future activities in that location and allow any required management responses to be developed.

Report-only events can be considered to be unavoidable and so not reflecting the performance of a site, and will not be included in performance reporting. However, the response to a report-only event should be taken into account when considering site performance, as a deficient or inappropriate management response could result in a non-compliance and/or an environmental incident.

Where a report-only event relates to an unexpected find and the same issue can then reasonably expected to be found at the same location in future, additional finds from that location need not be reported.

3.1.4 Non-compliances

Non-compliance is defined in section 6. Reporting requirements are detailed in section 3.2. A non-compliance could also be an environmental incident.

3.1.5 Regulatory action

Regulatory action is defined in section 6. Reporting requirements are detailed in section 3.2.

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Regulatory action includes, but is not limited to:

- Prosecutions
- Penalty notices
- Clean up notices
- Prevention notices
- Official cautions
- Formal warnings
- EPA show cause notifications.

Copies of any regulatory action issued by an environmental regulator must be provided as part of the reporting that is undertaken in accordance with section 3.2.

3.2 Reporting process

3.2.1 Standard reporting process

The standard reporting process for all environmental incidents, significant environmental incidents, report-only events, non-compliances and regulatory action is detailed in Figure 3.2.1.

Where the reporting process requires submission of a written report to TfNSW, the person making the report must use the following formats and meet the information requirements detailed within each:

- Road based and maritime projects: Environmental Event Reporting Form (624/400)
- Rail based projects: INX reporting system

Information included in reporting must be factual and accurate.

For the initial 24-hour email notification for road projects, the following information must be provided:

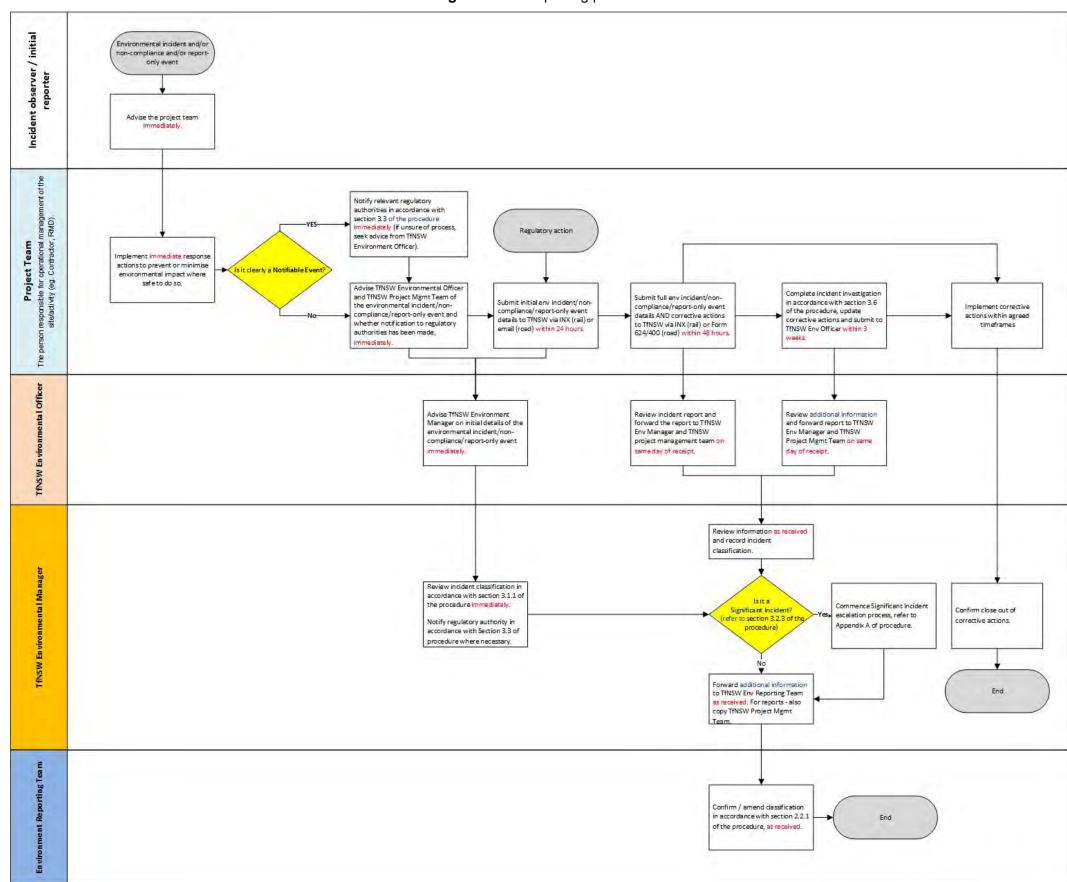
- Date of event
- Project / site name
- Type of event that has occurred (ie- environmental incident, incident and non-compliance, non-compliance, report-only or regulatory action)
- Description of the event
- Quantity / volume
- Immediate response actions that were implemented
- Notification/s undertaken.

In the case that regulatory action is received relating to a previously reported environmental incident, non-compliance or report-only event, reference to the relevant event must be made in the report for the regulatory action.

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Figure 3.2.1: Reporting process



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3.2.2 Other internal notifications

When reporting in accordance with Figure 3.2.1, TfNSW project management teams should also undertake the following internal notifications as appropriate:

- Corporate Communications / Media for any environmental incidents, report-only events, non-compliances and regulatory action that have potential for negative community or media attention;
- Legal Branch, for any environmental incidents, report-only events, non-compliances and regulatory action that could result in a (further, in the case of the latter) regulatory response against TfNSW. In these instances, limit written commentary on the incident by all staff, including emails;
- Safety Branch for any incidents that involve actual or potential risks to the health and safety of workers or the general public.

3.3 Notifiable events

A notifiable event is any environmental incident, report-only event or non-compliance (see section 3.1, above) that triggers a specific statutory requirement to notify an authority.

The key notification requirements are described below. Note each statutory requirement to notify may specify a particular person who is responsible to make the notification as well as the timing of when this must occur. The details of any notification conducted must be included in the reporting that is undertaken in accordance with section 3.2.

3.3.1 Material Harm pollution incidents

Under Part 5.7 of the POEO Act, there is a duty to immediately notify (i.e. promptly and without delay) each relevant authority (see section 3.3.2) of a pollution incident where material harm to the environment is caused or threatened.

The POEO Act states that a pollution incident should be considered Material Harm if:

- "(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
- (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000"

Material Harm only relates to pollution incidents. Other environmental incidents, such as conservation, heritage and planning breaches, are not included in the definition of a pollution incident.

3.3.2 Notification of Material Harm pollution incidents

The relevant authorities that must be notified for a Material Harm pollution incident are listed in tables 3.3.2a and 3.3.2b below. It is important to note the order of notification and phone numbers to use can vary depending on the nature of the pollution incident, as detailed in the two tables.

All of the authorities listed (whether considered relevant or not) <u>must</u> be contacted for each Material Harm pollution incident to satisfy POEO Act requirements. Serious penalties apply to both individuals and corporations for failing to notify Material Harm pollution incidents:

- Maximum penalty for individuals \$500,000
- Maximum penalty for corporations \$2,000,000.



Table 3.3.2a: Authorities to notify for Material Harm pollution incidents that present an immediate threat to human health or property Order Contact number **Authority** 1 Fire and Rescue NSW 000 2 NSW EPA environment line 131 555 Contact 1300 066 055 to be directed to the Ministry of Health (via the local Public local Public Health Unit, or visit the NSW 3 Health Unit)* **Health Website** SafeWork NSW 131 050 The Appropriate Regulatory Authority*, Local council - contact Office of Local being either: Government on 4428 4100, or visit the Office Local council of Local Government website 5 Western Lands Commissioner for the Western Division (except any Western Lands Commissioner – phone 6883 part of the Western Division within 5400 the area of a local council).

Table 3.3.2b: Authorities to notify for Material Harm pollution incidents that do NOT present an immediate threat to human health or property Order **Authority** Contact number NSW EPA environment line 1 131 555 The Appropriate Regulatory Authority*, Local council - contact Office of Local being either: Government on 4428 4100, or visit the Office Local council of Local Government website 2 Western Lands Commissioner for the Western Division (except any Western Lands Commissioner – phone 6883 part of the Western Division within 5400 the area of a local council). Contact 1300 066 055 to be directed to the Ministry of Health (via the local Public 3 local Public Health Unit, or visit the NSW Health Unit)* **Health Website** 4 SafeWork NSW 131 050 5

1300 729 579

When notifying authorities, do not speculate on the origin, causes or outcomes of a pollution incident. Rather, state very simply and concisely the following only:

a) The time, date, nature, duration and location of the incident

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Fire and Rescue NSW

^{*} The appropriate contact for the Appropriate Regulatory Authority and Public Health Unit will vary according to the geographic location of the activity. These contact numbers should be found in advance and stored for immediate access (e.g. in a project's Construction Environmental Management Plan and/or on site notice boards) should a pollution incident need to be notified.

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b) The location of the place where pollution is occurring or is likely to occur, the nature, the estimated quantity or volume and the concentration of any pollutants involved, if known

- c) The circumstances in which the incident occurred (including the cause of the incident, if known)
- d) The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

If further information becomes known after the initial notification, that information must immediately be notified to all authorities in accordance with Section 150 of the POEO Act. The verbal notification must be followed by written notification to each relevant authority within seven days of the date on which the incident occurred, setting out the above information.

3.3.3 Summary of other regulatory agency notification requirements

A summary of the other key statutory notification requirements that could arise from TfNSW environmental incidents, report-only events and non-compliances is provided in Table 3.3.3.

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	Т	able 3.3.3: Re	gulatory agency ı	notification requirements
Event type	Legislation	Part / section	Agency	Notification requirement
Discover Aboriginal object	National Parks and Wildlife Act 1974	Section 89A	Heritage NSW	Notify the Secretary of the Department of Planning, Industry and Environment in writing using the form approved by the Secretary (if any) within a reasonable time after becoming aware
Discover Aboriginal remains	Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984	Section 20	Commonwealth Department of Agriculture, Water and the Environment	Notify the Commonwealth Minister in writing as soon as practicable after becoming aware, giving particulars of the remains and their location
Discover non- Aboriginal relic	Heritage Act 1977	Section 146	Heritage NSW	Notify the Heritage Council in writing within a reasonable time after becoming aware
Fires	Rural Fires Act 1997	Section 64	NSW Rural Fire Services	Notify an appropriate fire officer of the inability to extinguish any fire burning during a bush fire danger period applicable to the land.
Land	Contaminated Land			Notify EPA in writing as soon as practicable after becoming aware of the contamination, where required as prescribed in the EPA
contamination	Management Act, 1997	Section 60(1)	EPA	'Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997'
Non-compliance	Various	N/A	Various	Requirements to notify the relevant regulatory authority when a non-compliance has occurred (eg- with a Condition of Approval issued under Division 5.2 of the EP&A Act)
Pollution incident (material harm)	Protection of the Environment Operations Act, 1997	Part 5.7	EPA	See section 3.3.2
Pollution incident in water supply catchment area	Various	N/A	N/A	Notify the relevant water supply authority if an environmental incident has the potential for unapproved impacts on a drinking water supply

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3.4 Requests for written reports from regulatory authorities

If TfNSW receives a request from an environment regulatory authority for a written report regarding an environmental incident, report-only event or non-compliance, the relevant Environment Manager must be immediately contacted for advice. No further correspondence (including email) about the event should be distributed either internally or externally until advice is received. E&S will then coordinate with Legal Branch to:

- assist in the investigation of the environmental incident, report-only event or noncompliance
- provide legal advice to the project
- co-ordinate the preparation of the written response to the regulatory authority.

3.5 Corrective actions

A key aspect of the TfNSW Environment and Sustainability Policy that is addressed through this procedure is being accountable for addressing and minimising the environmental impacts of TfNSW activities. This can be achieved by developing appropriate corrective actions and implementing them within a timely manner following an environmental incident, with the aim of avoiding a repeat of that incident.

There are a variety of scenarios in which an environmental event may occur on a TfNSW project. It is important that corrective actions are:

- specific to the incident that has occurred
- meaningfully address the root cause(s) of the incident
- designed to prevent incident reoccurrence.

Corrective actions could include (but are not limited to) the following:

- physical works to install, augment or rectify controls or a site issue
- testing and/or monitoring
- review and improvement of construction methods or work practices
- review and update of management plans, procedures or other tools
- communication, training and awareness initiatives for workers.

In most cases it will not be sufficient to simply notify workers of correct systems / procedures (e.g. via toolbox talk). A review should be undertaken by the project team following an incident or non-compliance to determine why the systems / procedures failed (or alternatively a formal investigation, when required by section 3.6), and necessary changes made to ensure they do not fail in future. Site staff should then be made aware of the changes and trained as necessary.

Immediate/short-term corrective actions including timeframes for completion must be clearly described in incident/non-compliance reporting. Updates about longer-term corrective actions including timeframes for completion can be provided to the TfNSW Environment Officer and TfNSW Project Management Team post submission of the incident/non-compliance report.

3.6 Investigations

Serious environmental incidents and non-compliances must be investigated to identify the causes, with the purpose of preventing a recurrence. A root cause analysis investigation must be completed by the project team for all environmental incidents with a classification of C1, C2 or C3, or any other environmental incidents or non-compliances as determined by TfNSW.

The scope of the investigation will be determined by the TfNSW Environment Officer or Environment Manager. The project team must provide TfNSW with a final investigation report

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within three weeks of the environmental incident or non-compliance being identified. The report must include the minimum information described in Table 3.6 (below).

	Table 3.6: Investigations							
Element	Description							
Sequence of events	The sequence of events that led to the incident or non-compliance							
Findings	Given the sequence of events, what are the key findings of the investigation (i.e. what are the main causes of the incident or non-compliance).							
Management methods	A record of the management methods to be changed and/or implemented to avoid the incident or non-compliance reoccurring.							
Key learnings	Describe the key learnings from the investigation into the incident or non-compliance. Detail which learnings may be relevant to other transport projects.							

4 Accountabilities

Table 4 details the key accountabilities for implementing this Procedure.

Table 4: Key accountabilities		
Requirement	Detail	
Environment Director	Oversee compliance with the procedure and make the final determination on the classification of all environmental incidents, report-only events and non-compliances	
Environment reporting team	Recording of all environmental incidents, report-only events, non-compliances and regulatory action, confirm / amend the classification of environmental incidents, report-only events and non-compliances in accordance with section 3.1 and monitor compliance with the Procedure	
Executive Director Environment and Sustainability	Make determinations on whether an environmental incident will be considered a Significant Incident (see section 3.1.2). Assume the role of Information Distributor when a Significant Incident has occurred (see Appendix A).	
Observer of environmental incident, report-only event, non-compliance or regulatory action	Immediately report in accordance with Figure 3.2.1	
Person/s responsible for environmental incident, report-only event, non-compliance or regulatory action	Report and respond in accordance with Figure 3.2.1	
Project Managers	Provide appropriate resources to respond to an environmental incident, report-only event, non-compliance or regulatory action in accordance with this Procedure	

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Table 4: Key accountabilities			
Requirement	Detail		
TfNSW Environment Manager	Report environmental incidents, report-only events, non-compliances or regulatory action in accordance with Figure 3.2.1, assign initial classification in accordance with section 3.1.1, monitor corrective actions, and actively promote compliance with this procedure at a program level. Assume the role of Information Controller when a Significant Incident has occurred (see Appendix A).		
TfNSW Environment Officer	Report environmental incidents, report-only events, non-compliances or regulatory action in accordance with Figure 3.2.1, monitor corrective actions and actively promote compliance with this procedure at a project level		

5 Related policy, systems and documents

The following documents and systems are available on agency intranets and the internet:

- Environmental Event Report Form (for use by road and maritime sites and projects)
- INX system (for use by rail and light rail sites and projects)
- Environment and Sustainability Policy
- Unexpected finds procedures refer to relevant guideline/procedure

6 Definitions and acronyms

All terminology in this Procedure is taken to mean the generally accepted or dictionary definition with the exception of the following terms which have a specifically defined meaning:

- Significant incident an environmental incident that is likely to receive a classification
 of C3, C2 or C1, OR the history of the project, past performance and/or previous
 regulatory interest, indicate the project is likely to receive a penalty notice or be subject
 to prosecution, and therefore requires escalation to the Secretary and other TfNSW
 senior management
- **DPIE** Department of Planning, Industry and Environment
- **Environment Director** consists of Associate Director Environmental Management; Director Environment Motorways; Director Environment Regions; Director Environment Sydney
- **Environment Manager** consists of Environment Manager or Senior Manager Environment from Environment and Sustainability Branch
- Environment Officer consists of Environment Officer and Environment and Planning Manager from Environment and Sustainability Branch
- Environment Reporting team consists of those in Environment and Sustainability Branch responsible for administering and maintaining the EnvOps mailbox and INX reporting system (for environment entries)
- **Environmental event** a report-only event, non-compliance, regulatory action or environmental incident
- Environmental incident An environmental incident is an event or set of
 circumstances, as a consequence of which pollution (air, water, noise, or land) or an
 adverse environmental impact has occurred, is occurring, or is likely to occur. Adverse
 environmental impact includes contamination, harm to flora and fauna (either individual

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species or communities), damage to heritage items and adverse community impacts. An unexpected find that is not managed in accordance with relevant procedures / guidelines is also considered an environmental incident

- EPA NSW Environment Protection Authority
- **EPL** Environment Protection Licence (issued by EPA)
- **E&S** (Safety, Environment and Regulation) Environment and Sustainability Branch
- **Investigation** The process by which the cause(s) of an environmental incident is examined and identified.
- **INX reporting system** the online system used to record and track environmental incidents, report-only events, non-compliances and regulatory action relating to rail projects and premises.
- Non-compliance a failure to comply with any condition of approval, environmental
 assessment safeguard / mitigation measure, licence condition, permit or any other
 statutory approval relevant to the activity and/or area where the activity occurs;
- **Notifiable event** Any environmental incident, report-only event or non-compliance that triggers a specific statutory requirement to notify a regulatory authority.
- **POEO Act** Protection of the Environment Operations Act 1997
- **Pollution** Pollution (including air pollution, water pollution, noise pollution and land pollution) as defined in the dictionary to the POEO Act.
- **Pollution incident** Has the same meaning as defined in the dictionary to the POEO Act.
- **Regulatory action** any formal regulatory response from an environmental regulator including but not limited to penalty notices, clean-up notices, prevention notices, official cautions, show cause notices and formal warnings.
- **Report-only event** An environmental incident or unexpected find resulting from circumstances outside the scope of controls and of an activity.
- **RMS** Roads and Maritime Services
- TfNSW Transport for NSW (excludes the operating agencies: Sydney Trains; Sydney Metro; State Transit Authority; NSW TrainLink)
- Transport Cluster all TfNSW divisions and operating agencies (includes the operating agencies: Sydney Trains; Sydney Metro; State Transit Authority; NSW TrainLink)
- **Unexpected find** An unexpected discovery such as a heritage item, threatened species, contamination, asbestos or hazardous substance.
- WHS Work Health and Safety

7 Document control

7.1 Superseded documents

This Procedure replaces the following documents:

- Roads and Maritime Services Environmental Incident Classification and Reporting Procedure (RMS 17.374)
- Transport for NSW Environmental Incident Classification and Reporting (PR-105)

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7.2 Document history

Date & Procedure No	Document owner	Approved by	Amendment notes
19/07/2021 EMF-13/PR- 0001	Environment Manager Performance Improvement	Executive Director Environment and Sustainability	N/A

7.3 Feedback and help

For advice on using this Procedure please contact:

Environment Manager Performance Improvement

Email: envops@rms.nsw.gov.au

Phone: (02) 8849 2586.



Appendix A: Significant Incident escalation process

A1 Confirmation of a Significant Incident

Where an Environment Manager believes that a Significant Incident has occurred (see section 3.1.2 and Figure 3.2.1), they must immediately phone the relevant Environment Director. The Environment Director will consult with the Executive Director Environment and Sustainability, who will determine whether the incident will be considered a Significant Incident. Once a Significant Incident has been determined, the escalation process will commence in accordance with sections A2 and A3, below.

A2 Significant Incident information management

Following determination of a Significant Incident (see section A1, above), it is essential that there is fast, consistent and accurate reporting of information to the TfNSW senior management. As such, clear roles and responsibilities must be established in two key areas, as described in Table A2.

Table A2: Roles and responsibilities during a Significant Incident				
Role	Who	Responsibilities		
Information Controller	Environment Manager (or relevant Environment Officer in their absence)	 Liaise between the on-site TfNSW project management team and the Information Distributor (below) Be the single point of contact to provide information and updates about the status of the Significant Incident to the Information Distributor 		
Information Distributor	Executive Director Environment and Sustainability (or relevant Environment Director in their absence)	 Identify the relevant members of the Executive and other senior management that will form the distribution group to be informed about the Significant Incident (see Table A3) Consolidate information from the Information Controller, and distribute it to the distribution group Provide key ongoing updates to the distribution group as it becomes available Respond to enquiries from the distribution group, ensuring all members of the distribution group are copied into every response 		

A3 Parties to be notified

As described in Table A2, the Information Distributor must identify relevant TfNSW senior management from delivery and client divisions that will form the distribution group to be informed about the Significant Incident, including ongoing updates. Table A3 provides the key positions that must be included (at a minimum), depending on who is undertaking the activity. Depending on the type and location of the activity, there may be other areas of TfNSW that should be included in the distribution group – see section 3.2.2.



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The distribution group should all be notified concurrently in a single email that a Significant Incident has occurred. The email should be sent by the Information Distributor within five minutes of making the determination of the Significant Incident.

Table A3: TfNSW distribution group to be notified during a Significant Incident			
Greater Sydney (Client)		Regional & Outer Metropolitan (Client)	
Transport exec notification	Secretary	Secretary	
SER exec notification	 Deputy Secretary, Safety Environment and Regulation 	 Deputy Secretary, Safety Environment and Regulation 	
Client exec notification	 Deputy Secretary, Client Division Executive Director, Community and Place Relevant City Director (Harbour/River/Parkland) 	 Deputy Secretary, Client Division Executive Director, Community and Place Relevant Regional Director 	
Delivery exec notification	 Deputy Secretary, relevant Delivery Area Executive Director (or equivalent) of relevant Delivery Area (e.g. Head of Sydney Project Delivery, Head of Rail Delivery, Chief Operations Officer, Executive Director Planning and Programs) Director of relevant Delivery Area (e.g. WSPO, GSPO, Parramatta Light Rail, Rail Infrastructure Delivery, Sydney Maintenance, Easing Sydney's Congestions etc.) 	 Deputy Secretary, relevant Delivery Area Executive Director (or equivalent) of relevant Delivery Area (e.g. Head of Regional Project Delivery, Executive Director Network and Assets) Director of relevant Delivery Area (e.g. Regional Maintenance, NPO, SaWPO) 	
Project Team notification	 Project Director (or equivalent) of relevant Delivery Area Senior Project Manager Project Manager Environment Manager 	 Project Director (or equivalent) of relevant Delivery Area Senior Project Manager Project Manager Environment Manager 	

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Annexure F Environmental contacts

Emergency contacts will be available to be contacted by the EPA and Project Company on a 24 hour basis.

Title	Name	Phone number		
O&M Contractor project representatives				
Operation and Maintenance Manager	To be provided prior to commencement of operation	To be provided prior to commencement of operation		
QSE/ICMS Manager	To be provided prior to commencement of operation	To be provided prior to commencement of operation		
Motorway Control Centre	Motorway Controller on duty	To be provided prior to commencement of operation		
Project Company representatives				
Project Company Project Representative	TBC			
External parties				
Fire and Rescue NSW	N/A	000 (emergency)		
		1300 729 579 (non-emergency)		
EPA	N/A	(02) 9995 5000		
		131 555		
Ministry of Health / Camperdown Public Health Unit	N/A	Business hours: (02) 9515 9420 After hours: (02) 9515 6111 (ask		
		for Public Health Officer on call)		
SafeWork NSW	N/A	131 050		
City of Sydney	N/A	(02) 9265 9333		
Inner West Council	N/A	(02) 9392 5000		
Bayside Council	N/A	1300 581 299		
Canterbury Bankstown Council	N/A	(02) 9709 9000		
George River Council	N/A	(02) 9330 6400		
Transport Management Centre	Operations Controller	131 700		

Annexure G Traffic Management Strategy

Revision Date 4 April 2021

Operational Environmental Management Plan - Traffic Management Strategy

Annexure G Traffic Management Strategy

Traffic management strategy

Purpose / Objectives

Operation and maintenance of the asset has the potential to cause:

- · impacts to the network functionality and operational impacts to the overall Sydney traffic network
- impacts to or restrictions upon the movements of heavy vehicles and transportation vehicles (e.g. buses)
- · impacts upon emergency vehicle access and/or diversion points.

The objectives of this Traffic Management Strategy are to:

- · manage operation and maintenance activities such that the operational network performance is not impacted
- maintain traffic management control infrastructure
- operate and maintain site vehicles to reduce their amenity impacts on adjacent residents, road users and other sensitive receivers.

This Traffic Management Strategy has been developed to satisfy **CoA E31(h)(iii)**. For further information regarding the environmental obligations, refer to Section 2 of the OEMP.

Management measures		
re	e Motorway Control Centre (MCC) Operatorhas the authority and responsibility for issues ating to traffic management, including liaison with the Transport Management Centre (TMC) d Sydney Coordination Office (SCO), during operation and maintenance of the Asset.	O&M Contractor
the Oc	or to commencement of works, undertake consultation with Transport Management Centre, Sydney Coordination Office, and/or relevant Council and where required, obtain Road scupancy Licence (ROL) under section 138 of the NSW <i>Roads Act 1993</i> and fulfil other quired legislative requirements.	O&M Contractor
Ur	dertake works in accordance with Road Occupancy Licences (ROLs).	O&M Contractor
co pro 20	evelop a specific Traffic Control Plan (TCP) or Traffic Management Plan (TMP), as required, vering controls relevant to the location and O&M activity taking place. The TCP or TMP will be expared in accordance with the Traffic Control and Work Site Manual (Roads and Maritime, 10) and quality assurance specification G10: Control of Traffic (Road and Maritime, 2010). The MP will include:	O&M Contractor
•	Overview of the proposed construction and/or maintenance activities.	
•	Layout of plant, any required exclusion zones, loading areas and circulation requirements.	
•	Site arrival and pre-notification plans.	
•	Traffic volume estimates including vehicle type, frequency and timing of arrival to and departure from site.	
•	Traffic control plans showing access arrangements and the details of signs and devices.	
•	Temporary works drawings to illustrate the proposed staging to be implemented during the construction works, specifically to outline the basic construction methodology, identify the need for temporary works; specify any particular traffic management measures / controls required.	
•	Vehicle management and movement plan showing entry and exit points.	
•	Controls to prevent traffic queuing on public roads.	
•	Pedestrian and cyclist management plans including diversions and temporary provisions to guide people through work areas.	
•	Measures to manage other road users including lane closures, diversions, and temporary speed restrictions. Specified work hours, including restrictions on queuing on the motorway and/or in the local area.	
•	Response plans to any incident or emergency.	
•	Communication and notification plans.	
•	Details of external stakeholder consultations and/or notifications.	
•	Any localised changes to existing traffic management arrangements.	
	tify road users and the local community two weeks prior to implementing traffic management ntrols for planned maintenance.	O&M Contractor
Br	ef drivers working onsite about: relevant aspects of this Traffic Management Strategy, the	O&M Contractor

Project New M5 - Design and Construct

Operational Environmental Management Plan – Traffic Management Strategy

Traffic management strategy	
traffic management controls; TCP or TMP requirements; site entry, exit and circulation; and other safety measures. Toolbox talks may be used to reinforce issues related to specific risks during work packages (e.g. traffic switches, pavement maintenance, tunnel washing).	
Maintain access and operational arrangements, where reasonable and feasible. Provide adequate alternative access and/or operational arrangements as necessary.	O&M Contractor
Ensure safe sight and stopping distances are provided to any work site to allow traffic to safely leave and join the road network.	O&M Contractor
Ensure all surfaces are properly maintained and in good condition post the construction works and the roads wearing course is adequate for traffic requirements.	O&M Contractor
Determine any placards or warning devices to be installed on heavy vehicles used for non-tunnel related operational or maintenance activities.	O&M Contractor
O&M vehicles to carry spill kits to manage minor environmental spills.	O&M Contractor
Material delivery / removal trucks with potential dust-generating material will be covered prior to arriving / leaving the asset site.	O&M Contractor
Where feasible, limit O&M heavy vehicles or O&M related traffic movements through residential streets.	O&M Contractor
Truck drivers of heavy vehicles (e.g. deliveries) must be informed of the transport and delivery routes and site operation hours prior to arrival at the worksite.	O&M Contractor
On maintenance sites that are closed to public traffic, site traffic to maintain the defined speed limit identified in the relevant Vehicle Movement Plan prepared for the nominated works.	O&M Contractor
Works will be planned to cause the least possible disruption to traffic. All necessary approvals from the relevant Authorities for the temporary traffic arrangements will be obtained as required.	O&M Contractor
A safe and convenient passage will be provided for vehicles and pedestrians to and from side roads and property connecting to the roadway.	O&M Contractor
Ensure works strictly adhere to the standard hours of operation permitted under the Road Occupancy Licence.	O&M Contractor
Monitoring	
Continuously monitor traffic conditions. Intelligent transport systems allow for the partial adjustment of traffic conditions on the motorway such as variable speed limits, ramp metering controls and use of the hard shoulder. These measures help promote and maintain operational traffic performance.	O&M Contractor
Conduct inspections of the temporary traffic controls (both short and long term) during the works, focusing on monitoring compliance against the Traffic Control Plan and the associated TMP to identify safety hazards and enable the appropriate implementation of corrective solutions.	O&M Contractor
Auditing and review	
Prepare a Road Network Performance Review Plan in accordance with CoA E40 at both 12 months and 5 years after the commencement of operation of the asset. Submit the plan to the Secretary, Transport for NSW (in relation to impacts on bus services) and to relevant councils within 60 days of this completion, and make the plan publicly available. This review will also satisfy the requirements of REMM OpTT1.	RMS / Project Company
Implement any mitigation measures identified in the Road Network Performance Review Plan, and update this Traffic Management Strategy if required.	RMS
Any additional mitigation measures that require occupying, modifying or affecting any roads, which are open to the public, will first require approval from RMS and the relevant Authority.	O&M Contractor / Project Company
All environmental auditing of the asset will be undertaken in accordance with Section 8.3 of the OEMP.	Project Company / O&M Contractor
Notification and reporting	
A road traffic environmental incident includes any unplanned and/or undesired event that results in potential to result in, environmental impairment, such as fuel spills, toxic chemical spills, problems incidents involving water contamination.	
Develop an Incident Response Plan (IRP) and relevant procedures to deal with road traffic incidents. Ensure the IRP/procedures include:	O&M Contractor

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Operational Environmental Management Plan - Traffic Management Strategy

Traffic management strategy

- First response measures to ensure motorist and road user safety including road and lane closures, use of variable message warning signs and contacting the emergency services.
- Response measures to manage environmental risks associated with incidents.
- Training for O&M contractor personnel in dealing with potential environmental impacts (refer to Section 5 of the OEMP).
- Regular exercises on the implementation of the procedure and plans.
- Traffic management control procedures for a minor, moderate and major road traffic accident, including ongoing traffic management controls, safety provisions, environmental controls and notification requirements.
- Sets out other reporting and escalation processes.
- Protocol and authorisations to reinstating normal traffic operations on the motorway.
- Protocol for delivering environmental protection, including site clean-up, pollution control and abatement, with appropriate links to the controls in OEMP Annexure L Operational Water Management Plan.
- Subsequent reporting processes, including lessons learnt, corrective actions and revisions to the IRP and associated procedures.
- Provision for an annual drill in emergency and incident response.

Refer to the Incident Response Plan (described in Section 8.2.3 of the OEMP) for traffic management measures to be implemented during an emergency, where appropriate, to minimise the potential for escalation of the emergency (in accordance with CoA E39b).

O&M Contractor

After identifying a major (significant) incident or emergency, contact the relevant external agency as soon as practicable. Refer to Section 8.2.4 of the OEMP for information regarding notifications and Annexure F of the OEMP for relevant environmental contacts. Roles relating to road traffic environmental incident response and management are identified below.

O&M contractor

Relevant stakeholder	Role and responsibility
Transport for NSW Transport Management Centre (TMC)	 Provision of Traffic and Transport arrangement for coordination and escalation Where appropriate, making adjustments to network traffic and transport arrangements to facilitate prompt access by emergency services when required to respond to environmental incidents. Provision of relevant outer cordon traffic and traveller information. Providing reports to the media including details on the incident situations and response arrangements.
Fire and Rescue NSW	Fire and Rescue NSW is the responsible agency for managing environmental incidents involving: A major smoke, fire or explosion event Major flammable liquids Major natural disasters A major fuel, chemical or toxic spill event.
NSW Police	NSW Police is the responsible agency for managing all other incidents/emergencies including on site, control and coordination of traffic and pedestrians during major environmental incidents
NSW Ambulance	NSW Ambulance will attend the incident site when requested, and provide emergency response to injured persons, including initial patient care and specialised transport services.
NSW Environment Protection Authority (NSW EPA)	NSW EPA personnel will become involved when incidents impact on environmental matters, such as fuel spills, toxic chemical spills, problems with air quality or incidents involving water contamination or when requested by the incident lead agency.
Other agencies	Other agencies that may be involved in an environmental incident include: State Emergency Services (SES) Department of Planning and Environment Local Emergency Management Committee (LEMC).

Project New M5 - Design and Construct

Operational Environmental Management Plan - Waste and Resource Management Strategy

Annexure H Waste and Resource Management Strategy

Waste and resource management strategy

Purpose / Objectives

Operation and maintenance of the Asset has the potential to cause:

- generation of waste such as green waste from landscaping activities and bitumen and concrete waste from road works to collection road litter and orphan waste
- unnecessary generation of waste products such as over-ordering of materials to excessive packaging materials
- resource consumption.

The objectives of this Waste and Resource Management Strategy are to:

- ensure all waste generated for the Asset is handled and disposed of in an environmentally sound manner
- adopt and promote the waste hierarchy (reduce or avoid waste, reuse waste, recycle waste, recover energy, treat waste, dispose of waste)
- ensure measures are identified and implemented to minimise waste, manage waste and conserve energy throughout operation and maintenance of the Asset.

This Waste and Resource Management Strategy has been developed to satisfy **CoA E31h(iv)**. For further information regarding the environmental obligations, refer to Section 4 of the OEMP.

Approach to waste management

Waste management hierarchy

During operation and maintenance of the Asset, waste will be prioritised according to the principles of a resource management hierarchy:



Resource recovery orders and exemptions

The NSW Environment Protection Authority (EPA) may issue resource recovery orders and resource recovery exemptions under the Protection of the Environmental Operations (Waste) Regulation 2014 (2014 Waste Regulation). Resource recovery orders apply to generators and processors of waste. Resource recovery exemptions apply to consumers of the resource. Both contain conditions that must be met to satisfy the order/exemption and may include specifications, requirements on how to re-use or apply the waste, record keeping, reporting and other requirements.

The general orders and exemptions that may be applicable to the project are listed in Table 1 below. In addition to these, a specific exemption may be granted where an application is made to the EPA.

Operational Environmental Management Plan - Waste and Resource Management Strategy

Waste and resource management strategy

Table 1: General resource recovery orders and exemptions that may apply to operation and maintenance of the Asset

Order / Exemption	General conditions
Excavated natural material	The chemical concentration or other attributes of the excavated natural material listed in the order must not be exceeded. The excavated natural material can only be applied to land as engineering fill or used in earthworks. ENM handling, processing and testing requirements are outlined in detail in the order.
Excavated public road material	The excavated public road material can only be stored within the road corridor at the site where it is to be applied to land. The excavated public road material can only be applied to land within the road corridor for public road related activities including road construction, maintenance and installation of road infrastructure facilities. This order does not apply to the land application of excavated public road material on any land outside the road corridor. The excavated public road material cannot be applied on private land.
Raw mulch	The raw mulch can only be applied to land for the purposes of filtration or as a soil amendment material or used either singularly or in any combination as input material(s) to a composting process.
Reclaimed asphalt pavement	The reclaimed asphalt pavement can only be: Applied to land for road related activities including road construction or road maintenance activities, being: a. Use as a road base and sub base, b. Applied as a surface layer on road shoulders and unsealed roads c. Use as engineering fill material. Used as an alternative raw material in the manufacture of asphalt.
Recovered aggregate	The chemical concentration or other attribute of the recovered aggregate listed in the order must be met. The recovered aggregate can only be applied to land for road making activities, building, landscaping and construction works. This approval does not apply to any of the following applications: Construction of dams or related water storage infrastructure, Mine site rehabilitation, Quarry rehabilitation, Sand dredge pond rehabilitation, Back-filling of quarry voids, Raising or reshaping of land used for agricultural purposes, and Construction of roads on private land unless: a. the relevant waste is applied to land to the minimum extent necessary for the construction of a road, and b. a development consent for the development has been granted under the relevant Environmental Planning Instrument (EPI), or c. it is to provide access (temporary or permanent) to a development approved by a Council, or d. the works undertaken are either exempt or complying development.
Stormwater	Stormwater can be applied to land by: Spraying, spreading or depositing on the land, Ploughing, injecting or mixing into the land, Filling, raising, reclaiming or contouring the land.

Management measures	Responsibility
General	
No waste generated outside the Site to be received at the Site for storage, treatment, processing, reprocessing, or disposal on the Site, except as expressly permitted by a licence under the <i>Protection of the Environment Operations Act 1997</i> , if such a licence is required in relation to that waste (CoA B52).	O&M Contractor
Classification	
Classify all waste (liquid and/or non-liquid) in accordance with the Waste Classification Guidelines (EPA, 2014) or any superseding documents.	O&M Contractor
Waste storage: general provisions	
Store stockpile-collected spoil, topsoil or mulch onsite in allocated areas, and where required, implement dust control and stockpile management measures.	O&M Contractor

Operational Environmental Management Plan – Waste and Resource Management Strategy

Waste and resource management strategy	08M Camtur - 1-
Store liquid waste in appropriate containers in bunded areas in the maintenance depot until hey can be transported offsite. Ensure the bunded areas have the capacity to carry 110 per cent of the bulk storage or 120 per cent of the volume of the largest contained for smaller backaged storage.	O&M Contractor
Store other recyclable or non-recyclable materials in appropriately covered bins and skips. Store these materials in appropriate locations onsite. Commission a licensed contractor to regularly empty the bins and skips to an approved disposal or recycling facility.	O&M Contractor
Waste transportation	_
Frucks to transport waste to appropriately licensed waste facilities or facilities lawfully permitted to accept such waste.	O&M Contractor
Naste truck loads to be covered and tailgates secured before leaving site.	O&M Contractor
Controlled wastes to be transported under a consignment number and waste data forms to be completed.	O&M Contractor
Waste disposal	
Once classified, dispose of the waste to a nearby appropriately licensed waste facility or preferentially, allow for its reuse or recycling.	O&M Contractor
Remove all orphan waste (e.g. illegally dumped materials) encountered within the Asset ootprint to a licensed contractor.	O&M Contractor
All waste materials removed from the site shall only be directed to a waste facility or premises lawfully permitted to accept the materials. Any off-site reuse of waste must comply with relevant EPA resource recovery orders and exemptions.	O&M Contractor
The relevant licences of waste facilities utilised for the disposal of project waste will be obtained (on a regular basis if necessary) to ensure they are legally able to accept that waste.	O&M Contractor
Record the types, volumes and destinations of all waste on a waste register.	O&M Contractor
Obtain and retain a completed and signed notice under section 143(3A) of the POEO Act ("s.143 Notice") prior to transporting wastes to a place that is not owned by RMS and is not a icensed waste facility (the "Waste Site"). This includes waste transported for reuse, recycling, disposal or stockpiling.	O&M Contractor
Sustainability initiatives	
An Initiatives and Opportunities Register (or equivalent) will be maintained to identify potential sustainability opportunities and opportunities to reduce carbon emissions and energy use. The register will include assigned responsibilities to investigate or implement nominated nitiatives / opportunities.	O&M Contractor
Tunnel lighting system utilises LED light banks, with long-life expectancy and fewer total	Note
number of fittings, resulting in decreased operational power demand and associated carbon cootprint for lighting compared to fluorescent and high-pressure sodium (HPS) light systems.	NOIG
A portion of electricity consumption utilised during operation and maintenance of the Asset will be renewable either through onsite renewables or purchase of accredited GreenPower, where reasonable and feasible.	Project Company
The O&M Contractor will consider the Australian Government's Green Vehicle Guide https://www.greenvehicleguide.gov.au/) for light utility vehicles that will be purchased or eased for the operation and maintenance of the Asset.	O&M Contractor
Campaigns to encourage O&M personnel to switch off lights, air conditioners and other whitegoods and vehicles when not in use and appropriate to do so.	O&M Contractor
Where feasible and reasonable, resources (e.g. mulch for garden beds) will be sourced from ocal suppliers and/or from within the Sydney region.	O&M Contractor
	O&M Contractor

Operational Environmental Management Plan – Waste and Resource Management Strategy

Waste and resource management strategy	
Monitoring	
Periodic site inspections, as described in Section 9 of the OEMP, will also be used to review environmental performance as will periodic inspections in the event that there is a concern about implementation or performance.	O&M Contractor
Monitoring of waste generation, recycling, reuse and disposal will be conducted by tracking of waste sent off-site. Records maintained include waste transfer dockets and the maintenance of the M5 Motorway Waste Register.	O&M Contractor
Operational energy use and greenhouse gas emissions will be monitored and recorded during operation and maintenance of the Asset.	O&M Contractor
Undertake monthly inspections to ensure all waste documentation is being completed and is correct, and that all waste is being appropriately classified, stored, transported and disposed.	O&M Contractor
Auditing and review	
The Initiatives and Opportunities Register (or equivalent) will be reviewed and updated on an annual basis. The review will consider potential sustainability initiatives, and opportunities to reduce carbon emissions and energy use.	O&M Contractor
All environmental auditing of the Asset will be undertaken in accordance with Section 9.3 of the OEMP.	O&M Contractor, Project Company
Notification and reporting	
Sustainability reporting	
Reporting to be undertaken throughout operation of the Asset will include: Monthly Sustainability Reports to Project Company Annual Sustainability Reports to project Company An annual GHG Initiatives Report (as required by CoA B75).	O&M Contractor
National Greenhouse and Energy Reporting (NGER)	
The NGER scheme, established by the National Greenhouse and Energy Reporting Act 2007 (NGER Act), is a single national framework for reporting and disseminating company information about greenhouse gas (GHG) emissions, energy production, energy consumption and other information specified under NGER legislation. Energy consumption and Scope 1 and Scope 2 emissions associated with operation and maintenance of the Asset (excluding vehicles utilising the Asset) will be monitored and reported throughout operation of the Asset. Records will be managed in accordance with M5 AT's ISO: 9001 accredited quality management system.	O&M Contractor

Operational Environmental Management Plan - Visual Amenity and Landscape Management Strategy

Annexure I Visual Amenity and Landscape Management Strategy

Visual amenity and landscape management strategy

Purpose / Objectives

Operation and maintenance of the Asset has the potential to cause:

- · vegetation removal and potential damage to flora and fauna
- amenity impacts on adjacent residents, roads users and sensitive receivers.

The objectives of this Visual Amenity and Landscape Management Strategy are to:

- manage the general appearance, tidiness, condition and urban design of the Asset to be consistent with its objectives as described in the WestConnex New M5 Project EIS
- monitor remedial vegetated areas post upgrade to check that they provide the intended screening, aesthetic, ecological, and amenity function
- introduce further remedial measures to support struggling vegetation
- manage light spill
- undertake routine site inspections to ensure that weeds are identified and managed.

This Visual Amenity and Landscape Management Strategy has been developed to satisfy **CoA E31h(v)**. For further information regarding the environmental obligations, refer to Section 4 of the OEMP.

Management measures	Responsibility
General maintenance and repair work	
Asset boundary and security fencing are inspected once every quarter (or more often if needed) to deter illegal dumping and trespass.	O&M Contractor
Undertake any boundary and security repairs within 24-hours of being notified of a breach or following an inspection.	O&M Contractor
Maintain the general tidiness and appearance of the Asset on a routine proactive schedule. This is to ensure litter and waste is removed as part of the inspection process and managed in accordance with the Waste and Resource Management Strategy.	O&M Contractor
Inspect the amenity (general appearance, accident damage, vandalism, graffiti, etc.) of the built Asset daily via visual / drive by inspection. Pedestrian walkways to be inspected fortnightly for accident damage, vandalism and/or graffiti.	O&M Contractor
Graffiti removal and wash down is undertaken within the timeframes identified in Roads and Maritime Services Specification M3 – Routine Services and in accordance with the relevant provisions of the Operational Water Management Plan.	O&M Contractor
Repairs and improvements to the general amenity (i.e. painting, welding, vegetation management, signage visibility) are undertaken within contracted timeframes following an inspection.	
Use the complaints handling procedure described in Section 7.3.6 of the OEMP to respond to comments about the appearance and amenity of the Asset within 24-hours.	O&M Contractor
Remedial actions are implemented within one week, where feasible and reasonable, otherwise scheduled for maintenance and/or repair in as reasonable timeframe as possible. Report back on the outcome of the complaint once the remedial action is complete.	
Tunnel walls and portals	
Undertake regular tunnel wall washing (approximately quarterly, dependent on traffic volumes) as part of the Planned Maintenance Schedule.	O&M Contractor
Vegetation and landscape management	
Develop relevant environmental procedures and EWMSs for vegetation and landscape management including the provisions and actions of the urban design and landscape plan. These documents will include:	O&M Contractor
 training provisions developed in accordance with Section 6 of the OEMP that focus on: 	

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Operational Environmental Management Plan - Visual Amenity and Landscape Management Strategy

Visual amenity and landscape management strategy

- dust and noise management when undertaking work
- environmentally sensitive areas (e.g. contamination, acid sulfate soils, heritage values)
- erosion and sediment control as per Operational Water Management Plan
- waste management and reuse as per Waste Management Strategy
- water and energy conservation as per Operational Water Management Plan.
- work plans including schedules, timings (including timing restrictions), and notification and advertisement requirements
- exclusion provisions including site set-up, demarcation and provision of no-go areas, including entry and exit points and any vehicular access limitations. Note: this includes exclusion provisions covering weed-infested areas
- marking out provisions and clearing limits consistent with G40: Clearing and Grubbing (Roads and Maritime, 2016)
- pre-clearance ecological surveys and checks of sensitive areas or written approval from the Project Company Environmental Manager before clearing and management starts
- incident management in accordance with the provisions in Section 8.2 of the OEMP
- complaints handling and management in accordance with the provisions in Section 7.3.6 of the OEMP
- general site management working practices relating to:
 - risks to public safety
 - tracking mud onto public roads
 - erosion and sedimentation issues for soil exposure
 - dust management and air quality management
 - noise and vibration management as per Operational Noise Management Plan
 - materials management and handling as per Waste and Resource Management Strategy
 - managing potential contamination as per the Operational Water Management Plan.
- waste management and handling as per Waste and Resource Management Strategy
- vegetation and tree management (including removal, branch trimming and pruning)
- protection of endangered communities and habitat
- potential risk of damage to other flora and fauna, including increased spread of invasive seeds (weeds)

seeds (weeds).	
Undertake landscape maintenance identified in Section 10.2 of the New M5 Urban Design and Landscape Plan and included in this Visual Amenity and Landscape Management Strategy.	O&M Contractor
Further vegetation and landscapes restoration	
Inspect the rehabilitated and revegetated areas within the New M5 Motorway site that provide screening and amenity and prevent erosion once every month for the first year of operation. If there is evidence of poor establishment (e.g. plants under stress and wilting) replace with suitable plant species.	O&M Contractor
Continue inspections after one-year in locations where there is evidence of poor establishment in the first year until a point in time where the area is established.	
Adopt the immediate above control where land will be cleared in the future when operating, maintaining and repairing the Asset. This will secure the effectiveness of any associated landscaping and vegetation cover introduced to remediate the cleared area.	O&M Contractor
Management of light spill	
Asset lighting is on an active maintenance schedule.	O&M Contractor
Maintenance schedule to also cover light spill, flare, up lighting (light pollution), backscatter, driver safety, and light levels to adjacent receivers.	O&M Contractor
Review the provision of light control in maintaining, repairing and upgrading the Asset to cover:	O&M Contractor
improvements in directional lighting	
use of back plates and flat lamps	
use of LED lights	
Programme Company Comp	

Project New M5 - Design and Construct

application of energy efficient lighting.

Operational Environmental Management Plan – Visual Amenity and Landscape Management Strategy

/isual amenity and landscape management strategy	
The Asset is managed, and site work is undertaken, to prevent light spill in accordance with the imits set out in Australian Standard AS 4282: 1997 Control of Obtrusive Effects of Outdoor Lighting (Australian Standards, 1997).	O&M Contractor
Use the complaints handling procedure described in Section 7.3.6 of the OEMP (and the O&M Contractor's Community Relations Plan) to respond to comments about light spill and light collution within 24-hours. Any remedial actions are to be implemented within one week, where easible, otherwise scheduled for maintenance and/or repair in as reasonable timeframe as possible.	O&M Contractor
Report back on the outcome of the complaint once the remedial action is complete.	
Need and pest management	
Develop environmental procedures for weed management accounting for the provisions of the NSW Noxious Weed Act 1993 and the Pesticides Act 1999 and in accordance with the Biodiversity Guidelines (RTA 2011) and RMS Specification M321. These documents will nclude:	O&M Contractor
weed removal practices that include:	
 weed spread potential environmental harm to vegetation, threatened species, flora and fauna, and heritage items 	
- weed disposal	
notification requirements for Class 1 weeds. weed control (spraying) practices that cover:	
 weed control (spraying) practices that cover: annual program of herbicide application (e.g. targeting invasive spp.) 	
seed stock and weed removal from topsoil	
poor spraying outcomes	
 impacts to water quality from herbicides (weed killer application). 	
ongoing weed management practices that cover:	
 prevention of weed spread and propagation. 	
Regular site inspections will include awareness of pests and vermin on site. Maintenance of a idy Asset will discourage vermin.	O&M Contractor
Trees gardens, streetscapes, parks and landscape areas under Tree Preservation Orders o	r with heritage
Safeguard trees, gardens, streetscapes, parks and landscape areas that are heritage items or are associated with the heritage significance of heritage items or heritage conservation areas (in particular, avoid or minimise impacts to street trees in the vicinity of the Green Link (The Waugh and Josephson Industrial Buildings, Camdenville Park as part of the Goodsell Estate Heritage Conservation Area, May Street Terrace Houses, St Peters Public School, Group of Terraces, 2-34 Campbell Road, Town and Coun t Hotel, Terrace House – 82 Campbell Street, Group of Terraces – 28-44 Campbell Road, Rudders Bond Store Warehouse – 53-57 Campbell Road) or are under Tree Preservation Orders. Examples of safeguards may include tree protection plans and established No Go Areas.	O&M Contractor
Asset transfer	
Urban design and landscaping items to be maintained to the design standards established in the Urban Design and Landscape Plan until satisfactory arrangements have been put in place for the transfer of the asset to the relevant authority, as required by CoA E43.	Project Company O&M Contractor
Monitoring	
Periodic site inspections, as described in Section 9.1 of the OEMP, will also be used to review environmental performance of landscaping. Additional periodic inspections will be undertaken in he event that there is a concern about implementation or performance of landscaping.	O&M Contractor
Auditing and review	
Auditing and review All environmental auditing of the Asset will be undertaken in accordance with Section 9.3 of the DEMP.	Project Company O&M Contractor
All environmental auditing of the Asset will be undertaken in accordance with Section 9.3 of the	

Project New M5 – Design and Construct

Operational Environmental Management Plan – Visual Amenity and Landscape Management Strategy

Visual amenity and landscape management strategy	
Reporting to DP&E to be managed in accordance with OEMP Section 9.6	O&M Contractor

Project New M5 – Design and Construct

Operational Environmental Management Plan – Visual Amenity and Landscape Management Strategy

Excerpt from Section 11 of the New M5 Urban Design and Landscape Plan

Maintenance actions	Tasks	Time fram	es / Frequency	
		Weekly Monthly	Seasonal	As required As Specified Be
		4	Sum Aut Win Spr	
All Areas				
Pruning of vegetation for safety	Maintaining driver sightlines			
	Pruning trees over carriageways, roads, paths and cycleways.			
2. Management of non-frangible vegetation	Remove woody "non-frangible" vegetation in setbacks			Once per year
3. Noxious weed control	Treat noxious weeds according to control category			
Rubbish removai	Remove all roadside litter and debris.	1000		And prior to movin
e stantaniana artic	Maintain a 2m wide mown strip to the edge of all road surfaces	-		When growth exce
5. Mowing verge areas	Mow grass to a maximum height of 50mm			100mm tilgti
6. Auditing and reporting	Audit and report on maintenance and additional works			Montrey
Mulched massed planting an 1. Watering	Water hydromulched areas as required to germinate seed and maintain	C.		
	healthy growth	_		
	first 8 weeks after planting - 20 litres per plant	1		Text to see the second
	 thereafter to 26 weeks after planting – 10 litres per plant At 14 day intervals 			At 14 day intervals
2. Weeding	Weed planting areas (manual or herbicide) before weed seed set.			
	Replace landscape planting damaged or killed by herbicide			
3. Mulching	Reapply mulich to maintain to a depth of 10cm			
Removal of dead / dying plant material	Remove dead or dying planting material and replace.			
5. Replacement plantings	Replace failed plantings with specified species and densities.			
	Water replacement plantings as listed in item 1			As Ilsted in item 1
6. Tree guards and stakes	Replace damaged tree guards and stakes during establishment			
	Remove tree guards and stakes.			12 months after planting is establish as regulfed to mail nealitry condition
7. Horticultural maintenance	Fertilise all plantings at specified rates.			
	Prune all plantings in specified manner:			
	Canopy trees			
	Sub-canopy trees / large shrubs			1 1
	Low strubs			Annually after flow
	- Climbers			Annually
	Grasses and ground covers		100	After Rowering Every 4 years

Operational Environmental Management Plan – Visual Amenity and Landscape Management Strategy

Maintenance actions	Tasks	Time frame	es / Fr	equency		
		Weekly Monthly	S	easonal	As required	As Specified Below
			Sum A	ut Win Spr		
Tree plantings						
1, Watering	Water plants to maintain adequate soli moisture availability during establishment and to prevent plants from drying out:					
	first 8 weeks after planting - 20 litres per plant					
	 thereafter to 25 weeks after planting – 10 litres per plant At 14 day intervals 					At 14 day Intervels
Z. Weeding	Weed mulch pads to spot plantings (manual or herbicide) before weed seed set.					
	Replace landscape plants damaged or killed by herbicide.					
3, Mulching	Reapply mulch to maintain to a depth of 10cm to an area 1.0m in diamet around each plant	er				Every 2 years
4. Removal of dead / dying plant material	Remove dead or dying planting material and replace.				1	
5, Replacement plantings	Replace failed plantings with specified species and densities.					
	Water replacement plantings as listed in Item 1					As listed in term 1
6, Tree guards and stakes	Replace damaged tree guards and stakes during establishment.					
	Remove tree guards and stakes.					12 months after planting
7. Horticultural maintenance	Fertilise all plantings at specified rates.					As required to maintain beauthy condition
	Prune all plantings in specified manner.					
	Canopy trees				0.00	
	Sub-canopy trees / large shrubs					
Turfed Areas						
1. Walering	Water turf to maintain adequate soil moisture availability during					
	establishment and to prevent turf from drying out First 2 weeks after planting					Bally
	- Thereafter					As required until furt has taken root and is making healthy growth
2. Mowing	Mow grass to a maximum height of 50min When growth					When growth exceeds 75mm
Replace damaged furf	Remove damaged areas of turf and replace with new turf				1	
4. Weed control	Control weeds in turf areas using selective herbicide					

Operation Environmental Management Plan

Annexure J Operational Air Quality Management Plan

Operation Air Quality Management Plan

Project: New M5 – Design and Construct	
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Glossary of terms

Term / acronym	Definition	
AQCCC	Air Quality Community Consultative Committee, described in more detail in the OEMP, Section 7.4.	
Asset	The New M5 Motorway between the existing M5 East corridor at Beverly Hills via tunnel to St Peters	
СО	Carbon monoxide	
CoA	Minister's Conditions of Approval	
CRP	Community Relations Plan	
DP&E	NSW Department of Planning and Environment	
DOAS	Differential optical absorption spectroscopy	
EIS	New M5 Environmental Impact Statement	
EP&A Act	Environmental Planning and Assessment Act 1979	
EPA	NSW Environment Protection Authority	
EPL	Environment protection licence	
FID	Flame ionisation detection	
NATA	National Association of Testing Authorities, Australia	
NDIR	Non-dispersive infrared	
NO	Nitric oxide	
NO ₂	Nitrogen dioxide	
NOx	Nitrogen oxides	
O&M	Operation & Maintenance	
O&M Contractor	Fulton Hogan Egis O&M Pty Ltd – the contractor engaged to deliver the operations and maintenance contract for the New M5 project.	
OAQMP	Operation Air Quality Management Plan	
OEMP	Operation Environment Management Plan	
OMCS	Operations maintenance and controls system	
PM _{2.5}	Particulate matter 2.5 micrometres or less in diameter	
PM ₁₀	Particulate matter 10 micrometres or less in diameter	
PMCS	Plant monitoring and control system	
POEO Act	Protection of the Environment Operations Act 1997	
POEO (Clean Air) Regulation 2010	Protection of the Environment Operations (Clean Air) Regulation 2010	
Project	WestConnex New M5 Project, SSI-6788	
Project Company	WCXM5 PT Pty Ltd in its capacity as trustee of the WCXM5 Project Trust or its successor in title or assigns	
QA	Quality assurance	
QC	Quality control	
REMM	Revised environmental management measure (from the New M5 Submissions Report)	
Roads and Maritime, RMS	Roads and Maritime Services, the Proponent	
RTD	Resistance temperature detector	

Operation Air Quality Management Plan

Term / acronym	Definition	
RX	Receiver head of the in-tunnel air monitor (Tunnel Sensors Viconex 5 Air Quality Monitor)	
Secretary, the	The Secretary of the NSW Department of Planning and Environment	
SMC	Sydney Motorway Corporation Pty Limited (SMC) (ABN 601 507 591) is a special purpose entity that has been created by the NSW Government to manage the delivery of WestConnex. For the purposes this New M5 Motorway Operational Environmental Management Plan (OEMP), WCX M5 PT Pty Ltd will act on behalf of Sydney Motorway Corporation Pty Limited (SMC).	
SSI	State Significant Infrastructure	
TX	Transmitter head of the in-tunnel air monitor (Tunnel Sensors Viconex 5 Air Quality Monitor)	
WCX	WestConnex	

1 Introduction

1.1 Purpose and application

This Operation Air Quality Management Plan (OAQMP) forms part of the Asset Operation Environment Management Plan (OEMP). The plan applies to all activities associated with the operation and maintenance of the Asset. The management of air quality impacts in accordance with the Conditions of Approval are identified within this plan.

This plan will be reviewed and updated in accordance with the OEMP. Environmental auditing of the Asset will be in accordance with the OEMP, except where specifically relevant to the management of air quality as identified in this OAQMP.

1.2 Objectives

The OAQMP's objectives are:

- Manage impacts of the New M5's operation and maintenance with respect to maintaining tunnel and ventilation outlet emissions within acceptable limits
- Notify and report any exceedance in air quality criteria in accordance with the conditions of approval.

1.3 Operation and maintenance activities

Operation and maintenance activities of the Asset that are relevant to air quality are identified in Table 1-1.

Table 1-1: Activities relevant to air quality

Activity

Routine operation:

- Traffic operations and monitoring
- Equipment and systems management including operation of the ventilation system
- Exhaust emissions from plant/equipment used in permanent operations (such as generators, pumps as required)
- Exhaust emissions from use of O&M vehicles

Routine maintenance / repair work:

- Vegetation clearing and landscape management
- Stockpile management
- Transport of materials for routine maintenance / repair works
- Road infrastructure maintenance and repair
- Pavement renewal and resurfacing

Non-routine operation:

- Road traffic accidents and incidents
- Emergency smoke extraction
- Road maintenance plant and machinery

Non-routine maintenance and repair:

- Major spill including clean-up
- Equipment failure leading to damage, spill or an uncontrolled outcome

1.4 Potential impacts

Potential impacts to air quality associated with the operation and maintenance of the Asset include:

- In-tunnel emissions including NO₂, CO, PM₁₀ and PM_{2.5}
- Exceedance of in-tunnel, ventilation outlet or ambient air quality criteria due to emergency situations (e.g. fire or system failure) or non-performance of ventilation system
- Transport or disturbance of dust and dirt by heavy vehicles from the Asset to the public road networks, where it may be deposited and then re-suspended by other vehicles using the network
- Exhaust emissions from transport-related operations (such as transportation of materials, movement of maintenance vehicles, employee travel and waste removal).

2 Environmental obligations

2.1 Legislation

Legislation relevant to air quality management for the operation and maintenance of the Asset is included in Table 2-1.

Table 2-1: Legislation relevant to air quality management

Legislation	Relevance
Protection of the Environment Operations Act 1997	Pollution management
Protection of the Environment (Clean Air) Regulation 2010	Prohibition of burning
National Greenhouse and Energy Reporting Act 2007	Minimisation of greenhouse gas generation
Protection of the Environment Operations (Waste) Regulation 2014	Waste classification, management, storage, transportation and disposal
Protection of the Environment Operations Act 1997 Waste Avoidance and Resource Recovery Act 2001	Waste hierarchy: reduction, in preference to reuse and recycling Littering
	Reduction of resource consumption
	Minimisation of transport impacts

2.2 Guidelines and relevant documents

The environmental policies, guidelines and principles relevant to the management of air quality during the operation and maintenance of the Asset is identified in Table 2-2.

Table 2-2: Environmental policies, guidelines and principles

Ро	licies, guidelines and principles	Relevance
•	G36: Environmental Protection (Roads and Maritime, 2017)	Environmental protection
•	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC, 2007)	Management of air quality and dust
•	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA, 2016)	
•	9TP-SD-107/2.0 Air Quality Management Guideline (Transport for NSW, 2016)	
•	Australian Standard: AS3580.8 Methods for sampling and analysis of ambient air (Standards Australia, 2008)	
•	Australian Standard: AS/NZS3580.9 Methods for sampling and analysis of ambient air (Standards Australia, 2013)	
•	Australian Standard: AS 5334 Climate Change Adaptation for Settlements and Infrastructure (Standards Australia, 2013)	Climate change adaptation
•	Climate Change Impacts and Risk Management: A Guide for Business and Government (Department of the Environment and Heritage, Australian Greenhouse Office, 2006)	
•	Environmental Sustainability Strategy 2015-2019 (Roads and Maritime, 2016).	

Po	licies, guidelines and principles	Relevance
•	The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (World Council for Sustainable Business Development and World Resources Institute, 2004)	Minimisation of greenhouse gas generation
•	Greenhouse Gas Assessment Workbook for Road projects (Transport Authorities Greenhouse Group, 2013)	
•	National Greenhouse Accounts Factors (Department of Environment and Energy, 2017)	
•	Waste Reduction and Purchasing Plan (Roads and Maritime, 2010	Reduction of resource consumption

2.3 Conditions of Approval

Conditions of Approval (CoA) that are relevant to air quality and greenhouse gas emissions management during operation and maintenance activities are provided in Table 2-3. A cross-reference is included to indicate where each condition is addressed in this OAQMP or other project management documents.

Table 2-3: Conditions of Approval

CoA	Relevant requirement	Reference
B4	The tunnel ventilation system must be designed, constructed and operated to release emissions from the ventilation outlets referred to in condition B2, and to avoid emissions from the portals and/or the emergency smoke extraction facilities at Bexley and Arncliffe. Emissions from the emergency smoke extraction facilities are excepted for emergency smoke management purposed in the event of a fire in the tunnel and periodic testing of the system as defined in the Operation Environmental Management Plan E31(g).	The tunnel ventilation system will be operated to release emissions from the ventilation outlets at Kingsgrove, Arncliffe and St Peters, and to avoid emissions from the portals and at the tunnel support facility at Bexley, except during emergency smoke management and periodic testing as addressed in Section 3.2.4. Emissions are dispersed from Arncliffe only during periods of high tunnel patronage in the eastbound tunnel. The definition of an 'emergency' as it applies to this condition is included in Section 8.2 of the OEMP. Periodic testing of the system is addressed in Section 3.2.4 of this OAQMP.
B7	Prior to operation, the Proponent must prepare and implement a Tunnel Ventilation, Incident Response and Traffic Management Systems Integration Protocol in consultation with the Transport Management Centre. The Tunnel Ventilation, Incident Response and Traffic Management Systems Integration Protocol must be reviewed by a suitably qualified and experienced independent ventilation specialist to confirm that, before the tunnel is open to traffic, the ventilation/traffic management systems would operate together to ensure that the conditions of this approval are met. The Protocol should include a commissioning procedure to be completed before the tunnel is opened to traffic. The Protocal must be submitted to the Secretary for approval at least six months prior to the operation of the SSI Note: Tunnel ventilation design and operation, incident response triggers and procedures, and traffic management, should be fully integrated in accordance with the primary objective of ensuring the safety of motorists in the tunnel.	A Tunnel Ventilation, Incident Response and Traffic Management Systems Integration Protocol will be prepared in consultation with Transport Management Centre for the approval of the Secretary, separate to this OAQMP. Information regarding the tunnel ventilation system and integration with the traffic management control system is summarised in Section 3.2.1 and Section 3.2.2, respectively.

CoA	Relevant red	quirement			Reference
E2	obtaining res the tunnel frequencies operation of on the first da The Propone	ults by analy using the specified in the SSI. Moreover, and of the specified in the SSI was also been the specified the specified in the speci	ysis) the poll e methodo Table 4 th onitoring mus on of the SS se the samp d sample at t	roughout the st commence I. Uling method, the frequency	Monitoring of pollutants within the tunnel will be undertaken as identified in Section 4.2.
E3	inside the turn accurate canditions Everified in approved by EPA, prior minimum mothe entry por	nnel must be lculation, p 4, E5 and E accordance the Secreta to the oper pritoring stattals, the bas amp junction	e determined er the request, and be in e with a ry in consulta- tation of the tions must be e of he venti	oring stations I to permit an uirements of independently methodology ation with the e SSI. As a e installed at lation outlets, e emergency	The number and siting of in-tunnel monitoring stations is described in Section 4.2, and Figure 1. The number and siting of monitoring stations will be independently verified. The verification method must be approved by the Secretary in consultation with EPA. The locations of the in-tunnel monitoring stations are shown in Figure 1.
	All sampling points and visibility monitoring points established under this condition must be audited prior to commencing monitorin, for compliance with the requirmeents set out in Table 4. Verification and compliance auditing is to be undertaken by an independent person(s) or organisation(s) approved by the Secretary.				Sampling and visibility monitoring points will be audited prior to commencement of monitoring, as described in Section 4.2. Verification and compliance auditing will be undertaken by Sam Wong (Air Noise Environment Pty Ltd) who was approved by the Secretary on 29 March 2019.
		e as possi	ble, under	le in as close the website 24.	Availability of monitoring data is discussed in Section 4.6.
	Table 4 In Tu	ınnel monito	ring method	ology	Refer Section 4.2.
	Pollutant/ parameter	Units of measure	Frequency	Method ¹	
	СО	ppm	Continuous	Special Method 1 ¹	
	NO ₂	ppm	Continuous	Special Method 1 ¹	
	Visibility	m ⁻¹	Continuous	Special Method 1 ¹	
	Note:			annua sa di t	
	Special Meth the Secretary			approved by EPA.	

CoA	Relevant	requireme	ent			Reference
E4	The Prop	onent mu tions of Con of the	st ensur O and No tunnel, o	O ₂ , ca do no	the average Iculated along t exceed the at pollutant in	The tunnel ventilation system will be operated to meet the required criteria as identified in Section 3.1.1. Monitoring of the relevant pollutants is discussed further in Section
	Table 5 - In-	Tunnel Air C	Quality – Lin	nits		
	Pollutant Concen tration Limit					
	СО	87	ppm		Rolling 15- minute	
	СО	50	ppm		Rolling 30- minute	
	NO ₂	0.5	ppm		Rolling 15- minute	
E5	of CO as r must not for that p (including	neasured a	at any sing e concent Table 6 d condition	gle poin tration under ns).	concentration nt in the tunnel limit specified all conditions	required criteria as identified in Section 3.1.1. Monitoring of the relevant pollutants is discussed further in Section
	Polluta nt	Concen tration Limit	Units of measur ement	Avera	ging period	
	СО	200	ppm	Rolling 3-minute		
E6	and opera	ted so that d the level	the visibi specified	lity in th in Tab		The tunnel ventilation system will be operated to meet the required criteria as identified in Section 3.1.1. Monitoring of the relevant pollutants is discussed further in Section 4.2.
		-tunnel visibi			-	
	Paramet er	Average extinction co-efficient Limit	n meas	sure	Averaging period	
	Visibility	0.005	m-1		Rolling 15– minute	
E7	An independent person or organisation approved by the Secretary must: (a) verify that compliance with in-tunnel limits				n-tunnel limits	be undertaken in accordance with this condition, as discussed in Section 4.1.
	i. sup the pre	oplement/r predictos esented ir	not preclu ed air n the d	ıde co qualit	Table 7, will: mpliance with ty outcomes ents listed in	undertaken 6-monthly during the 6-monthly audits discussed in Section 5.1.
	ii. not		air quality the do		ts greater than nts listed in	
	optim	ised, takir ements an	ng into c	onside	tem has been eration energy eacts for tunnel	
	(c) valida	ite recorde			ata and certify r quality limits	
		nation req			ndition will be equest.	Noted.

CoA	Relevant requirement	Reference
E8	In addition to the general reporting requirements specified in condition E23, the Proponent must, within 24 hours, notify the Secretary, EPA and NSW Health of any recordings above the limits specified in conditions E4, E5 and E6. The notification must detail the nature of the event, the concentration or visibility levels that occurred, the duration of the event, and the measures employed to minimise the concentration levels and/or improve the visibility levels. Upon receipt of this notification, the Secretary must consider the circumstances of the event, including: (a) the nature of the event, including any details relating to the cause; (b) the duration of the event; (c) the extent and severity of the event; (d) the measures employed to minimise the concentration levels, and measures to improve the visibility levels in the event that visibility levels were above the specified limit; and (e) the frequency of the event, including whether an event with the same or similar circumstances has occurred previously. Based on consideration of the circumstances of the event, the Secretary may request the Proponent to prepare a Tunnel Air Quality Management Systems Effectiveness Report, in accordance with condition E9.	Notification in relation to exceedance of the criteria specified in conditions E4, E5 and E6 is addressed in Section 6.2.
E9	Within 20 working days of any request by the Secretary under condition E8 the Proponent must prepare and submit to the Secretary a Tunnel Air Quality Management Systems Effectiveness Report on the overall system performance and cause and major contributor of any exceedances, including: (a) the overall performance and concentration levels in the tunnel for the preceding six month period (or since commencement of operation, where the SSI has operated for under six months), including average and maximum levels and time periods; (b) details of any instances throughout the operation of the SSI where pollutant concentration levels in the tunnel have exceeded the limits specified in conditions E4, E5 and E6; and (c) consideration of improvements to the tunnel air quality management system. The Tunnel Air Quality Management Systems Effectiveness Report is to be prepared by the Proponent and reviewed by a suitably qualified and experienced independent specialist(s). The Secretary must approve the independent specialist /organisation. The Proponent must comply with any requirements arising from the Secretary's review of the Tunnel Air Quality Management Systems Effectiveness Report.	Notification in relation to exceedance of the criteria specified in conditions E4, E5 and E6 is addressed in Section 6.2. The Tunnel Air Quality Management Systems Effectiveness Report is to be reviewed by an independent specialist / organisation. The independent specialist / organisation will be approved by the Secretary. Ronan Kellaghan (EMM Pty Ltd) was submitted to the Secretary as an experienced independent specialist to satisfy CoA E9 and approved on the 29 March 2019.

CoA Relevant requirement Reference E10 The Proponent must monitor (by sampling and Monitoring of the pollutants will be undertaken as obtaining results by analysis) the pollutants and identified in Section 4.4. parameters specified in Table 8 at the following The location of the ambient air quality monitoring stations locations as a minimum: is identified in Section 4.4. (a) two ground level receptors near the Kingsgrove ventilation outlet, at locations suitable for detecting any impact on air quality from the outlet; (b) two ground level receptors near the Arncliffe ventilation outlet, at locations suitable for detecting any impact on air quality from the outlet; (c) two ground level receptors near the St Peters ventilation outlet, at locations suitable for detecting any impact on air quality from the outlet; (d) one location within the vicinity of the St Peters Interchange, as a location suitable for detecting any impact on air quality within surrounding residential receptors; and (e) one location, away from any of the locations at (a) to (d), suitable for providing background ambient air quality reference data for the project area. Refer to Section 4.4. AM-12 AM-12 AM-12 AS3580.9 8-2008² AS3580.9 13-2013² or as otherwise agreed by the Secretary in consultation with the Continuous 1-hour.8-Method¹ Wind Speed @ AM-2 & AM-4 Continuous 10 m Wind Direction AM-2 & AM-4 1-hour Continuous @ 10 m Sigma Theta @ AM-2 & AM-4 1-hour Continuous 10 m Temperature @ 1-hour AM-4 Continuous 2m Temperature @ AM-4 1-hour Continuous Method Frequency NA AM-1 8 AM-4 Siting Notes: Refer to Section 4.4. 1. Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (EPA, 2007) or as otherwise agreed to in writing by the Secretary in consultation with the EPA. 2. AS3580.9.8-2008, Methods for the Sampling and Analysis of Ambient Air - Determination of Suspended Particulate Matter - PM10 Continuous Direct Mass Method using Tapered Element Oscillating Microbalance Analyser (Standards Australia, 2008). 3. AS 3580.9.13-2013, Methods for the Sampling and Analysis of Ambient Air - Determination of Suspended Particulate Matter - PM2.5 Continuous Direct Mass Method using a Tapered Element Oscillating Microbalance Analyser (Standards Australia, 2013). 4. TBD – location for meteorological monitoring station(s) to be representative of weather conditions likely to occur in the vicinity of the Kingsgrove, Arncliffe and St Peters ventilation outlets. 5. Appropriately modified to include size selective inlet for PM2.5 or as otherwise approved by the Secretary.

CoA	Relevant requirement	Reference
E11	The monitoring locations must be selected with the objective of achieving like-to-like comparison of monitoring results with available pre-construction data. The locations must also allow for the independent team of experts to review the accuracy of predicted environmental outcomes discussed in the documents referred to in conditions A2(b) and A2(c) as part of the environmental audit required under condition E51.	Consideration was given to the location of preconstruction air quality monitoring locations. Refer to Section 4.4 for additional detail.
	All monitoring stations must be established in locations agreed to by the AQCC and subject to the land owners' and occupier's agreement	The location of ambient air quality monitoring stations were determined in consultation with the Air Quality Community Consultative Committee (AQCCC) (refer to OEMP Section 7.4 for additional information). Refer to Section 4.4 of this OAQMP for ambient air quality monitoring locations.
	The establishment and operation of the stations is to be undertaken in accordance with recognised Australian standards and undertaken by an organisation accredited by NATA for this purpose and approved by the Secretary in consultation with the EPA and the AQCCC. The quality of the monitoring results must be assured through a NATA accredited process prior to the data being considered as a basis for compliance/auditing purposes.	Ambient air quality monitoring stations have been established and are being operated by Ecotech Pty Ltd. Ecotech Pty Ltd were approved by the Secretary on 07 November 2018, in consultation with the EPA and AQCCC. The ambient air quality monitoring stations were the subject of a preliminary siting audit to assess for compliance with AS/NZS 3580.1:2016, the Australian standard for siting of air quality monitoring stations. Refer to Section 4.4.
E12	Monitoring results must be made publicly available and must be subject to an independent audit at sixmonthly intervals (or at a longer interval, if approved by the Secretary). The auditor must be approved by the Secretary in consultation with EPA and the AQCCC, and the auditors report must be directly provided to the Proponent and the AQCCC.	Monitoring results will be made publicly available, as identified in Section 4.6. Monitoring results will be independently audited at sixmonthly intervals as identified in Section 5.1. Audits of ambient air quality monitoring results will commence approximately 6 months prior to commencement of operation. Samuel Wong (Air Noise Environment Pty Ltd) was submitted to the Secretary as an appropriate independent auditor to satisfy CoA E12 and approved on the 29 th March 2019.
E13	The Proponent must commence monitoring for at least twelve continuous months prior to operation and continue monitoring for at least two years following the commencement of operation. At the conclusion of the two year operational monitoring period, the Proponent must review the need for the commencement of the continuation of the ambient monitoring stations in consultation with the AQCCC. Any recommendation to close any or all of the stations will require the approval of the Secretary in consultation with the EPA.	Ambient air quality monitoring at the established monitoring stations commenced in December 2018. The location of ambient air quality monitoring stations were determined in consultation with the Air Quality Community Consultative Committee (AQCCC) (refer to OEMP Section 7.4 for additional information). Refer to Section 4.4 of this OAQMP for ambient air quality monitoring locations.
E14	Should ambient monitoring of air pollutants exceed the following goals, the provisions of conditions E10, E11 and E12 will apply: (a) CO – 8 hour rolling average of 9.0 ppm (NEPM); (b) NO ₂ – One hour average of 0.12 ppm (245 μg/m³) (NEPM); (c) PM ₁₀ – 24 hour average of 50 μg/m³ (NEPM); (d) PM _{2.5} – 24 hour average of 25 μg/m³ (NEPM); (e) PM ₁₀ – annual average of 25 μg/m³ (NEPM); and (f) PM _{2.5} – annual average of 8 μg/m³ (NEPM).	The tunnel ventilation system will be operated to meet the required ambient air quality criteria as identified in Section 3.1.3. In the event of an exceedance of this criteria, the provisions of conditions E10, E11 and E12 will apply, as identified in Section 6.4 and Annexure A.

CoA	Relevant requirement	Reference
E15	In addition to the general reporting requirements specified in condition E23, the Proponent must prepare a Ambient Air Quality Goal Protocol for the evaluation of a potential measurement that exceeds the goals. The Ambient Air Quality Goal Protocol must be developed by the Proponent in consultation with the AQCCC and submitted to the Secretary for approval at least 12 months prior to the commencement of operation of the SSI. The Ambient Air Quality Goal Protocol must include: (a) the form of and process for providing a Notification of Above-Goal Recording, subject to condition E16; (b) the form and contents of a Report on Above-Goal Recording, subject to condition E17; and (c) a process for appointing an independent person/organisation to prepare the Report on Above-Goal Recording. The process must include - (i) approval of the independent person/organisation by the Secretary prior to preparation of the report, and (ii) the appointment of the independent person/organisation at least one month prior to the commencement of operation, or at some other time prior to preparation of the report with the agreement of the Secretary.	An Ambient Air Quality Goal Protocol has been developed to satisfy this condition. Refer to Annexure A. Also refer to Section 6.4.
E16	The Ambient Air Quality Goal Protocol must provide a Notification of Above-Goal Recording if ambient monitoring of air pollutants records an exceedance of the goals in condition E14. The Notification of Above-Goal Recording is to be submitted within 24 hours of the recording, to the Secretary, EPA and NSW Health. The Notification of Above-Goal Recording must detail: (a) the nature of the event; (b) the concentration level that occurred; (c) the duration of the event; (d) the measures employed to minimise the concentration levels; and (e) the Proponent's commitment to prepare and submit a Report on Above-Goal Recording in accordance with condition E17.	An Ambient Air Quality Goal Protocol has been developed to satisfy this condition for any recordings above the limits specified in CoA E14 (CoA E4, E5 and E6, as specified in this condition, are relevant to in-tunnel criteria). Refer to Section 6.4 and Annexure A.

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Abore	cove-Goal epare and sove-Goal Rajor contributions availal there the open significant coal Recording raprovements anagement of the ambienited to instanagement of the ambienited for an epare proponent is an epare proponer monitor pobliutant monitor pobliutant monitor ampling and	Recording the Recording submit to Recording the Recording to preparation of contributing, the recording the Record	ing, the to the Second the excrevent reconfithe turn of the excrevent reconfit the turn of the turn of the excrevent reconfit the turn of the excrevent on the excrevent on the excrevent on the turn on the excrevent of the excreven	nel is identified to be e recorded above- t on Above-Goal consideration of nnel air quality achieve compliance Is, including but not dditional ventilation for under condition hose improvements th any requirements iew of the Report on	A Report on Above-Goal Recording will be prepared in accordance with this condition, where required, as described in Section 6.4 and Annexure A. Installation of monitoring equipment and monitoring of
to r Pol san be for 9 a thro	monitor po ollutant moni ampling and	llutants		onitoring equipment	
auc	The Proponent must install monitoring equipment to monitor pollutants from the ventilation outlets. Pollutant monitoring from the ventilation outlets (by sampling and obtaining results by analysis) must be accordance with the methods and frequencies for the pollutants and parameters specified in Table 9 and be undertaken at commencement of and throughout the operation of the SSI.			entilation outlets (by s by analysis) must ds and frequencies rs specified in Table mencement of and	pollutants within the ventilation outlets will be undertaken as identified in Section 4.3. Monitoring of pollutants within the ventilation outlets will be undertaken using the sampling method, units of measure and frequency nominated in this condition, as described in Section 4.3.
Tab org	idited prior t r complianc able 9.	to the co e with The in s) must b	ommence the requindependent be approve	st be independently ement of monitoring irement set out in nt person(s) or ed by the Secretary	The monitoring equipment installed for this condition will be independently audited prior to the commencement of monitoring, as described in Section 4.3. Auditing of the installation of monitoring equipment will be undertaken in accordance with this condition. Samuel Wong (Air Noise Environment Pty Ltd) was approved as an appropriate independent person by the Secretary on 29 March 2019.
	le 9 — Ventilation Out	let Emission M Units of	Monitoring Method	dologies Method¹	Refer to Section 4.3.
Soli	iolid particles	measure mg/m ³	Continuous	Special Method 14	The project is seeking approval of the method to monitor
PM	Mio	mg/m ³	Quarterly Quarterly	TM-15 OM-5	solid particles and an alternative method for the selection
PM; NO:		mg/m ³	Quarterly Continuous	CEM-2	of sampling locations. Consultation with the EPA is
NO:	IO ₂ equivalent	mg/m ³	Continuous	CEM-2	ongoing.
CO	0	mg/m ²	Continuous	CEM-4 CEM-8	
Spe	peciated VOC	mg/m ¹	Annual	TM-34	
Spe	peciated AH3	hg/m ₃	Annual	OM-6	
	arameter	Units of measure	Frequency	Method [†]	
	elocity	m/s	Continuous	CEM-6	
	folumetric flow rate foisture	m³/s.	Continuous Continuous	CEM-6 TM-22	
Ten	emperature	°C	Continuous	TM-2 Method [†]	
	other	Units of measure	Frequency	15,200	
Sek		N/A	N/A	TM-1	

CoA	Relevant	require	ement			Reference
	Notes:					Refer to Section 4.3.
	Air Polluta	nts in N metho	lew South d approve	Sampling and A Wales (EPA 20 ed by the Sec	07) or an	
	2. Must ind Xylenes, Acetaldehy	1,3-B	t not be lim utadiene,	nited to: Benzene Formaldehyd		
	PAHs, Benz(a)an Anthracen Acenaphth Dibenz(a,h	namely; thracene e, C ene, F a)anthrac	Napht , Benzo(a hrysene, luoranthen ene,	ted to; 16 USEF halene, Pher a)pyrene, Acena Indeno(1,2,3-cie, Benzo(b)fluo Fluorene, (g,h,i)perylene.	nanthrene, apthylene, cd)pyrene,	
	4. Special Secretary			a method approv the EPA.	red by the	
E19	The concentration of a pollutant discharged from the ventilation outlets referred to must not exceed the respective limits specified for that pollutant in Table 10.					The tunnel ventilation system will be operated to meet the required ventilation outlet criteria as identified in Section 3.1.2. Monitoring of the relevant pollutants is discussed further in Section 4.3.
	Table 10 — Ventilation Outlet Mass Pollutant Concentrations Pollutant				conditions	Refer to Section 3.1.2.
	Solid particles	1.1	mg/m³	1 hour, or the minimum sampling period specified in the relevant test method, whichever is the greater	Dry, 273K, 101.3kPa	
	NO ₂ or NO or both, as NO ₂ equivalent NO ₂	20	mg/m ²	1 hour block	Dry, 273K, 101.3kPa Dry, 273K,	
	co	40	mg/m ⁵	1 hour rolling	101.3kPa Dry, 273K, 101.3kPa	
	VOC (as propane)	4.0	mg/m³	1 hour rolling	Dry, 273K, 101.3kPa	
E20	An independent person or organisation approved by the Secretary must: (a) verify that compliance with ventilation outlet limits detailed in Table 10 will: (i) supplement/not preclude compliance with the predicted air quality outcomes presented in the documents listed in conditions A2(b) and A2(c), and (ii) not result in air quality impacts greater than predicted in the documents listed in conditions A2(b) and A2(c); (b) assess how ventilation outlet discharge velocities have been optimised taking into consideration energy requirements and air				on outlet mpliance quality in the ons A2(b) impacts in the ons A2(b) discharge king into and air	Verification and optimisation of ventilation outlet monitoring will be undertaken in accordance with this condition, as discussed in Section 4.1. Validation of recorded monitoring data and certification of compliance with ventilation outlet limits will be undertaken 6-monthly during the 6-monthly audits discussed in Section 5.1. Gary Graham (Northstar Pty Ltd) was submitted to the Secretary as an appropriate independent person to satisfy CoA E20 and approved on the 29 March 2019.
	quality impacts and all sensitive receivers; and (c) validate recorded monitoring data and certify compliance with the ventilation outlet limits					
				in this condition retary on reque		Noted.
	must be in commend be lowered sustainable improvem	reviewe ement ed (i.e. r ility a nents ir it is dire	d on a fiv of operat nade mor ssessmer vehicle ected to	ts detailed in re-yearly basis ion of the SSI e stringent), sunt and there fleet emission do so by the Sthe EPA.	following and may bject to a being is, if the	Ventilation outlet limits will be reviewed as described in Section 5.2.

CoA	Relevant requirement	Reference
E21	Should the results of monitoring show that any of the ventilation outlet limits specified in conditions E19 have been exceeded, the Proponent must immediately notify the Secretary, EPA and NSW Health. The notification must be followed up with a detailed report within 20 working days, which must be prepared by the Proponent, reviewed by a suitably qualified and experienced independent specialist(s), and submitted to the Secretary, on the cause and major contributor of the exceedance and the options available to prevent recurrence. The Secretary must approve the independent person/organisation prior to the commencement of operation, or at some other time prior to preparation of the report.	Notification in the event of an exceedance of the nominated criteria for ventilation outlets would be undertaken in accordance with Section 6.3. Ronan Kellaghan from EMM Pty Ltd was submitted to the Secretary as the independent expert to satisfy CoA E21 and approved on 29 March 2019.
	Where the operation of the tunnel is identified to be a significant contributor to the recorded exceedance, this report must include consideration of improvements to the tunnel air quality management system so as to achieve compliance with the ambient air quality goals, including but not limited to the installation of the additional ventilation management facilities allowed for under condition B5, and discussion of whether those improvements are feasible and reasonable.	Reporting in the event of an exceedance of the nominated criteria for ventilation outlets would be undertaken in accordance with Section 6.3.
	The Proponent must comply with any requirements arising from the Secretary's review of the Report.	Requirements resulting from the Secretary's review of the exceedance report will be implemented during operation of the Asset, as described in Section 6.3.
E22	Conditions E4, E5, E6, E14 and E19 do not apply in an emergency, as defined in the OEMP required by condition E31(g). The Proponent must, as soon as reasonably practicable, notify the Secretary and the EPA of any such discharge.	Refer to Section 3.1.4.
E23	The Proponent must develop and implement a reporting system for in-tunnel, ambient and ventilation outlet limits in consultation with the EPA. The reporting system must be approved by the Secretary and fully implemented and operational prior to operation. Minimum analytical reporting requirements for air pollution monitoring stations must be as specified in the Approved Methods of Modelling and Assessment of Air Pollutants in NSW (EPA 2007, or as updated).	A reporting system for in-tunnel, ventilation outlet and ambient air quality limits has been developed. Refer to Annexure B for a summary of the system. Consultation is ongoing with the EPA and approval from the Secretary will be obtained.
E24	Results of hourly updated real-time ambient monitoring of PM ₁₀ , PM _{2.5} , NO ₂ , and CO at the approved monitoring stations, in-tunnel visibility and CO/NO ₂ and ventilation outlet measurements, and relevant meteorological data, must be provided on a website and made publicly available each month in hard copy format in an easy to interpret format. This data must be preliminary until a quality assurance check has been undertaken by a person or organisation accredited by NATA for this purpose. The availability of this data must be conveyed to the local community by way of newsletter (including translation into common community languages in the area) and newspaper advertisement at least one month prior to the commencement of operation.	Nominated monitoring data will be made available on the Asset website as identified in Section 4.6.

CoA	Relevant requirement	Reference
E25	The provision, operation and maintenance (including all auditing and validation of data) of all air quality monitoring and reporting must be funded by the Proponent.	Noted.
E26	All continuous emissions monitoring systems installed and operated as a requirement of condition E18 must undergo relative accuracy test audits at an interval not exceeding 12 months, or as otherwise agreed to by the Secretary in consultation with the EPA.	Refer Section 5.2.
E27	The Proponent must appoint an external auditor to conduct an audit of the air quality monitoring (in tunnel and external) at six-monthly intervals or at any longer interval if approved by the Secretary. Air quality audits must commence six months from commencement of operation. The auditor must ensure that the operating procedures and equipment to acquire air monitoring, meteorological data and emission monitoring data and monitoring reporting comply with NATA (or equivalent) requirements and sound laboratory practice. The Proponent must document the results of the audit and make available all audit data for inspection by the Secretary upon request. A copy of the audit report must also be issued to the Proponent and AQCCC. The auditor must be approved by the Secretary in consultation with the EPA and the AQCCC, and the auditor's report must be directly provided to the Proponent and the AQCCC.	Six-monthly air quality monitoring audits will be undertaken in accordance with this condition, as described in Section 5.1. Air quality audits for ambient air quality monitoring (CoA E10) will commence approximately 6 months prior to commencement of operation. Air quality audits for all other monitoring will commence six months from the commencement of operation, as required by this condition.
E28	The Proponent must undertake appropriate quality assurance (QA) and quality control (QC) measures for air quality and ventilation outlet emission monitoring data. This must include, but not be limited to: accreditation/quality systems, staff qualifications and training, auditing, monitoring procedures, service and maintenance, equipment or system malfunction and records/reporting. The QA/QC measures must be approved by an independent expert approved by the Secretary prior to monitoring of air quality and ventilation outlet emissions as appropriate.	QA and QC measures to be implemented during the operation and maintenance of the Asset will be approved by an independent expert, as described in Section 4.5. Ronan Kellaghan from EMM Pty Ltd was submitted to the Secretary as the independent expert to satisfy CoA E28 and approved on 29 March 2019.
E31	Prior to the commencement of operation, or as otherwise agreed by the Secretary, the Proponent must prepare and implement an Operation Environmental Management Plan (OEMP) for the SSI. The OEMP must include, but not be limited to:	The OEMP has been prepared to satisfy this condition.
	(f) details of periodic testing of the tunnel ventilation system;	Periodic testing of the tunnel ventilation system is discussed in Section 3.2.4.

CoA	Relevant requirement	Reference
	 (h) details of how environmental performance would be managed and monitored to meet acceptable outcomes, including what actions will be taken to address identified potential adverse environmental impacts, including those safeguards and mitigation measures detailed in Section 8 the document referred to in condition A2 (and any impacts arising from the staging of the construction of the SSI). In particular, the following environmental performance issues must be addressed in the OEMP: (i) air quality; 	 This OAQMP has been prepared to satisfy this condition, specifically: Environmental performance (air quality) will be managed through the implementation of the overarching OEMP and this OAQMP and the controls, monitoring, audits and reviews described within these plans. Monitoring and measurement of air quality criteria identified in Section 3.1 is addressed in Section 4 of this OAQMP. Potential adverse impacts will be notified / reported as required as identified in Section 6 and Annexure B. Information regarding non-conformity, corrective and preventative actions is described in Section 9.7 of the OEMP. Safeguards and mitigation measures detailed in Section 8 of the document referred to in condition A2 are identified in Section 2.4 No impacts are expected as a result of any staging of the construction of the SSI.

2.4 Revised environmental management measures

The revised environmental management measures (REMMs) identify safeguards and mitigation measures included in the New M5 Submissions and Preferred Infrastructure Report (Section 8 of the document referred to in CoA A2(c)). No management measures are relevant to the management of air quality during the operations and maintenance of the Asset.

2.5 Environment protection licence

An Environment Protection Licence (EPL) issued by the NSW Environment Protection Authority (EPA) is required for operation and maintenance of the Asset. Road tunnel emissions from the ventilation outlets for the tunnels is defined as a scheduled activity (35A) under the Protection of the Environment Operations Act 1997.

3 Air quality control measures

3.1 Goals and limits

The air quality criteria for various parameters, as defined by the Infrastructure Approval for SSI 6788 are identified in the following sections. The caption of each table includes the applicable CoA reference.

3.1.1 In-tunnel

In-tunnel air quality criteria is identified in Table 3-1, Table 3-2, and Table 3-3.

Table 3-1: In-tunnel average limits along length of tunnel (CoA E4)

Pollutant / parameter	Concentration limit	Units of measure	Averaging period
CO	87	ppm	Rolling 15-minute
CO	50	ppm	Rolling 30-minute
NO ₂	0.5	ppm	Rolling 15-minute

Table 3-2: In-tunnel single point exposure limits (CoA E5)

Pollutant	Concentration limit	Units of measure	Averaging period
CO	200	ppm	Rolling 3-minute

Table 3-3: In-tunnel visibility limits along length of tunnel (CoA E6)

Parameter	Average extinction co- efficient limit	Units of measure	Averaging period
Visibility	0.005	m ⁻¹	Rolling 15-minute

3.1.2 Ventilation outlet

Ventilation outlet air quality criteria is identified in Table 3-4.

Table 3-4: Ventilation outlet mass pollutant concentrations (CoA E19)

Pollutant	100 percentile limit	Units of measure	Averaging period	Reference conditions
Solid particles	1.1	mg/m ³	1 hour, or the minimum sampling period specified in the relevant test method, whichever is the greater	Dry, 273K, 101.3kPa
NO ₂ or NO or both, as NO ₂ equivalent	20	mg/m ³	1 hour block	Dry, 273K, 101.3kPa
NO ₂	2.0	mg/m³	1 hour block	Dry, 273K, 101.3kPa
СО	40	mg/m ³	1 hour rolling	Dry, 273K, 101.3kPa
VOC (as propane)	4.0	mg/m ³	1 hour rolling	Dry, 273K, 101.3kPa

3.1.3 Ambient

Ambient air quality criteria is identified in Table 3-5.

Table 3-5: Ambient air quality criteria (CoA E14)

Parameter	Concentration limit	Units of measure	Averaging period	Source
CO	9.0	ppm	Rolling 8-hour	NEPM
NO ₂	0.12 (245)	ppm (µg/m³)	1 hour	NEPM
PM ₁₀	50	μg/m³	24 hour	NEPM
PM _{2.5}	25	μg/m³	24 hour	NEPM
PM ₁₀	25	μg/m³	1 year	NEPM
PM _{2.5}	8	μg/m³	1 year	NEPM

3.1.4 Emergency discharge

The air quality criteria identified in Table 3-1 to Table 3-5 (CoA E4, E5, E6, E19 and E14) do not apply in an emergency situation. An 'emergency' has been defined in Section 8.2 of the OEMP.

In the event of an emergency situation that results in discharge(s) that exceed the nominated criteria, the Secretary and the EPA would be notified (refer to Section 6).

3.2 Control mechanisms

3.2.1 Ventilation overview

Tunnel ventilation is required to enable the tunnel to operate with acceptable air quality at all times. The tunnel ventilation system is part of the overall Plant Monitoring and Control System (PMCS) and consists of:

- Exhaust fans
- Supply fans
- Jet fans mounted throughout the tunnel and ramps
- Shutoff and balancing dampers
- · Air-flow, pollution and thermal measurement equipment both within the tunnel and at the outlets
- Plant control system
- Kingsgrove Ventilation Facility within the M5 Motorway corridor at MOC1 the facility serves the westbound traffic within the project tunnel
- Bexley Ventilation Building between Wolli Creek and the New M5 Motorway at MOC2 the building
 provides supply or exhaust in emergency conditions (refer to Section 8.2 of the OEMP regarding
 'emergency' conditions and management)
- Arncliffe Ventilation Building at the Kogarah Golf Course at MOC3 the facility provides supply and/or exhaust in normal and emergency conditions (refer to Section 8.2 of the OEMP regarding 'emergency' conditions and management)
- St Peters Ventilation Facility within the St Peters interchange at MOC4 the facility provides supply and/or exhaust from the mainline eastbound tunnel and exhaust from the St Peters interchange (tunnels and off ramps) for normal and emergency operation.

The operating conditions for the tunnel can be divided into the following categories:

- normal operation traffic is free flowing
- congested operation traffic is slow moving due to vehicle build up
- incident operation traffic is slow moving or stopped (due to an accident, breakdown, etc.) in or beyond the tunnel
- fire operations operations that require the intervention of the Fire Services (e.g. a vehicle fire).

The tunnel must be operated so as not to exceed the pollutant limits in CoA E4, E5 and E6 (refer to Section 3.1.1), except in the event of an emergency (in accordance with CoA E22, refer to Section 8.2 of the OEMP).

The ventilation control system software module has the ability to control the required level of ventilation to be operated (including corresponding numbers of supply, exhaust and jet fans within the tunnel) depending on in-tunnel air quality results in order to comply with the minimum air-quality limits under normal operation.

The O&M Contractor may manually adjust the operation of the ventilation system, in anticipation of a traffic impact on ventilation. This adjustment is associated with the incident and will be cleared when the incident is cleared by the Operator. With the nominated ventilation system capacity, the ventilation system alone is capable of meeting incident conditions.

3.2.2 Ventilation and traffic management integration

The traffic management control system (TMCS) monitors traffic speed and flow through the tunnel and activates the operation of traffic control and driver advisory devices in and around the Asset. The TMCS devices are designed to be operated manually and/or automatically and can be used as a means of limiting or stopping vehicles entering the tunnel (e.g. avoiding congestion) which, if required, could be used to control air quality.

While the PMCS and TMCS are stand-alone to guarantee a high level of redundancy, in practice, data is transmitted between the systems to permit an integrated system design approach. Although the ventilation system alone is capable of meeting incident conditions, the best outcome in terms of motorist experience and fire and life safety is achieved by an integrated response using both ventilation and traffic management systems.

The tunnel ventilation system operates together with the TMCS to ensure CoA E4, E5 and E6 requirements are met for all normal, congested, incident and fire conditions (except during an emergency, as identified in CoA E22). Maintaining these limits will, in turn, ensure the criteria identified in CoA E14 and E19 are not exceeded (except as permitted in those same conditions).

The ventilation control system software module considers CO, visibility, air flow and NO₂ levels from sensors located in the tunnel and traffic flow, traffic speed and traffic incident offset (from the traffic management control system). The software determines the required level of ventilation to be operated to avoid emission discharge to the portals and to avoid exceedance of the pollutant limits.

3.2.3 Ventilation intake and extraction

In accordance with CoA B4, the tunnel ventilation system will be operated to release emissions from the ventilation outlets only, and to avoid emissions from the portals and/or the emergency smoke extraction facilities at Bexley (MOC2) and Arncliffe (MOC3), except for emergency smoke management purposes (refer to Section 8.2 of the OEMP for 'emergency') and during periodic testing of the system (refer to Section 3.2.4 of this plan).

3.2.4 Periodic testing

In accordance with CoA B4, the tunnel ventilation system is required to be operated to avoid emissions of tunnel air from the portals and/or the emergency smoke extraction facilities at Bexley and Arncliffe. Portal emissions are not permitted, except in the following circumstances:

- Emergency smoke management purposes in the event of a fire in the tunnel
- Periodic testing.

Periodic testing may include, but not be limited to testing during commissioning; replacement, repair and testing of faulty ventilation equipment; and routine testing and maintenance periods of:

- tunnel ventilation equipment,
 - where one or both carriageways are closed to traffic including maintenance of jet fans in the tunnel
 - in the ventilation facilities including axial fans, dampers and sound attenuators, and within the internal outlet
- tunnel ventilation support systems (e.g. substations)
- fire and life safety systems.

Relevant conditions, and how they relate to possible emissions from the portals and/or the tunnel support facility, are included in Table 3-6.

Table 3-6: Instances of periodic testing

CoA	Requirement	Potential for emissions			
E45	Fire simulation and hot smoke testing must be undertaken as part of the simulated emergency response exercise to be staged prior to opening of the project to traffic as required in condition E44(e). The Proponent must respond in writing to any recommendations made by FRNSW as a result of the	Emissions from the portal and/or the emergency smoke extraction facilities at Bexley and Arncliffe are expected during the simulated emergency response exercise undertaken at least one prior to opening the tunnels to traffic, in accordance with CoA E44(e).			
	exercise. Any outstanding concerns are to be resolved between FRNSW and the Proponent.	The Tunnel Emergency and Evacuation Plan (part of the suite of documents to satisfy the CoA E44 requirement for an Emergency Response Plan) identifies that emergency /evacuation exercises will be undertaken annually post the Date of Opening Completion. Portal and/or tunnel support facility emissions may result during these exercises.			
E49	A detailed maintenance-testing program outlining the methods of testing the fire and life safety systems and schedule for implementation must be developed in consultation with FRNSW prior to opening of the project to traffic. The Proponent must respond in writing to any recommendations made by FRNSW. Any outstanding concerns are to be resolved between FRNSW and the Proponent.	The detailed maintenance-testing program will be included in the O&M Manual. Maintenance-testing of the fire and life safety systems that may result in emissions from the portal / support facility may include but not be limited to the deluge system, foam generation system, fire pumps, water tanks, hydrant systems, tunnel fire detection and indication systems, fire indicator panels, fire alarms warning devices, fire doors, fire hose reels and fire extinguishers.			

CoA	Requirement	Potential for emissions
E50	Maintenance testing of fire and life safety systems must be undertaken at least annually, or any other interval as required by the design engineer and to the satisfaction of FRNSW.	Maintenance testing of the fire and life safety systems will be undertaken a least annually as identified in the maintenance-testing program (CoA E49) included in the O&M Manual.
	Results of maintenance testing must be made available to FRNSW for review, and the Proponent must respond in writing to any recommendations from FRNSW to ensure the reliability of the fire and life safety systems. Any outstanding concerns are to be resolved between FRNSW and the Proponent.	During these events, emissions from the portal and/or the emergency smoke extraction facilities at Bexley and Arncliffe.

3.2.5 Monitoring equipment

In-tunnel

The Tunnel Sensors Viconox 5 Air Quality Monitors have been selected to provide direct in-situ measurements of NO₂, NO_x, CO, visibility and temperature. The Tunnel Sensors Viconox consists of a transmitter head (TX) and a receiver head (RX) that are mounted between 5 m and 12 m apart, with a single interconnecting cable that carries the power between the two heads.

These air quality sensors will be linked to the Plant Monitoring and Control System (PMCS) interface panel located in LV Switch rooms or the Electrical Equipment Room.

Ventilation Outlet Monitoring

A number of instruments are required to monitor the parameters in CoA E14. All instruments and ancillary equipment for each facility are housed in air-conditioned cabinets to provide stable temperature and protection from dust and moisture.

For the Kingsgrove ventilation facility, monitoring will occur in the ducting for Fan 1 and Fan 3. There will be two particulate monitoring enclosures, each containing identical equipment and a single gas monitoring system that will switch between Fan 1 and Fan 3 as required. The following equipment has been selected to monitor ventilation emissions:

- 2 x Serinus® 40 Oxides of Nitrogen Analyser will utilise chemiluminescence to determine NO, NO₂ and NO_X.
- 2 x FIDAS 200E Particulate Analyser will be used for the measurement of particulate matter
- 2 x Serinus® 30 Carbon Monoxide Analyser will utilise non-dispersive infrared (NDIR) for the measurement of CO
- 2 x Series 9000 MNME Methane / Total Hydrocarbon Analyzer utilising flame ionisation detection (FID)
 will be used for the measurement of VOC
- 5 x Sets of Teledyne Instruments Ultraflow 150 ultrasonic air velocity / flow meter where each ventilation outlet will utilise 2 devices in an X path time of flight Doppler (ultrasonic) flow meter for the measurement of velocity
- Volumetric flow rate will be calculated from the velocity measurement and ventilation outlet dimensions, corrected based on concurrent temperature and pressure measurements
- 5 x HMT330 Series Humidity and Temperature Transmitters will utilise heated dew point hygrometer for the humidity measurements
- 5 x UNIK 5000 Absolute Pressure Sensors will be used for pressure measurements

For the St Peters and Arncliffe ventilation facility, there will be one particulate monitoring enclosure and a gas monitoring system. The following equipment will be included:

- 1 x Serinus® 40 Oxides of Nitrogen Analyser will utilise chemiluminescence to determine NO, NO₂ and NO_X.
- 1 x FIDAS 200E Particulate Analyser will be used for the measurement of particulate matter
- 1 x Serinus® 30 Carbon Monoxide Analyser will utilise non-dispersive infrared (NDIR) for the measurement of CO
- 1 x Series 9000 MNME Methane / Total Hydrocarbon Analyzer utilising flame ionisation detection (FID)
 will be used for the measurement of VOC
- 4 x Sets of Teledyne Instruments Ultraflow 150 ultrasonic air velocity / flow meter will utilise:
 - 2 devices in an X path time of flight Doppler (ultrasonic) flow meter for the measurement of velocity at Arncliffe Vent Facility

- 1 device in an diagonal path time of flight Doppler (ultrasonic) flow meter for the measurement of velocity at St Peters Vent Facility
- Volumetric flow rate will be calculated from the velocity measurement and ventilation outlet dimensions, corrected based on concurrent temperature and pressure measurements
- 4 x HMT330 Series Humidity and Temperature Transmitters will utilise heated dew point hygrometer for the humidity measurements
- 4 x UNIK 5000 Absolute Pressure Sensors will be used for pressure measurements

Manual outlet measurements will also be conducted in accordance with CoA E18. Measurements will be conducted by a specialist contractor, using their own equipment.

Ambient

The ambient air quality monitoring stations contain instruments to monitor the parameters identified in Section 3.1.3 (CoA E14). The relevant instrument (and elevation) for each parameter is identified in Table 3-7.

Table 3-7: Ambient air quality instrumentation

Parameter Measured	Instrument and Measurement Technique	Elevation
CO	Ecotech Serinus 30 – NDIR gas filter correlation infrared photometry	2m
NO, NO ₂ , NO _x	Ecotech Serinus 40 – gas phase chemiluminescence	2m
PM10	Thermo Scientific TEOM 1400ab – Tapered Element Oscillation	2m
PM2.5	Met One BAM 1020 – Beta Ray attenuation	2m
Differential temperature (elevation 2m)	Met One 062MP	2m
Differential temperature (elevation 10m)	Met One 062MP	10m
Wind speed (horizontal, elevation 10m)	Gill Windsonic Op3	10m
Wind direction (elevation 10m)	Gill Windsonic Op3	10m
Sigma	Calculation	N/A

3.2.6 Equipment maintenance

In-tunnel monitors and ventilation outlet monitors will be connected to the Operations Maintenance and Controls System (OMCS), which will result in an alarm if an instrument is not functioning correctly. Maintenance and any necessary repair or replacement of monitors will be addressed in the O&M Manual.

All monitoring equipment (including in-tunnel, ventilation outlet and ambient air monitors) will be calibrated or verified in accordance with the manufacturer's recommendations. Equipment will be used and maintained, as appropriate. Calibration and maintenance records will be maintained for all monitoring equipment.

4 Monitoring and measurement

4.1 Verification and optimisation

Verification and optimisation of in-tunnel air quality monitoring and ventilation outlet air quality monitoring would be undertaken prior to commencement of operation.

In-tunnel

In accordance with CoA E7, an independent person or organisation, who must be approved by the Secretary, will be engaged to:

- verify that compliance with in-tunnel limits detailed in CoA E4, E5 and E6 will:
 - supplement / not preclude compliance with the predicted air quality outcomes presented in the documents listed in CoA A2, and
 - not result in air quality impacts greater than predicted in the documents listed in CoA A2;
- undertake an appropriate assessment to indicate how the ventilation system has been optimised in consideration of energy requirement and air quality impacts for tunnel users.

The information required above will be made available to the Secretary on request.

Ventilation outlets

In accordance with CoA E20, an independent person or organisation will be engaged to:

- verify that compliance with ventilation outlet limits detailed in CoA E19 will:
 - supplement/not preclude compliance with the predicted air quality outcomes presented in the documents listed in conditions A2(b) and A2(c), and
 - not result in air quality impacts greater than predicted in the documents listed in conditions A2(b) and A2(c);
- undertake an appropriate assessment to indicate how ventilation outlet discharge velocities have been
 optimised in consideration of energy requirements and air quality impacts at all sensitive receivers.

Gary Graham from Northstar Pty Ltd was approved by the Secretary as the independent person / organisation to undertake verification in accordance with CoA E20 on 29 March 2019. Information required above will be made available to the Secretary on request.

4.2 In-tunnel monitoring

The O&M Contractor must monitor the pollutants within the tunnel, using the sampling method, units of measures and frequency specified in Table 4-1. A summary of the monitoring requirements, frequency and responsibilities is provided in Annexure C.

Table 4-1: In-tunnel monitoring methodology (CoA E2)

Pollutant / parameter	Units of measure	Frequency	Method
СО	ppm	Continuous	Special Method 1 ¹ – Infrared spectroscopy technique
NO ₂	ppm	Continuous	Special Method 1 ¹ – Differential absorption

Pollutant / parameter	Units of measure	Frequency	Method
Visibility	m ⁻¹	Continuous	Special Method 1 ¹ – Light transmission opacity technique

Note: 1. Special Method 1 means a method approved by the Secretary in consultation with the EPA.

Combined air-quality monitors for CO, NO₂ and visibility will be installed for the tunnel. Direct optical measurement of NO₂ is carried out using differential absorption. Visibility measurements are done using light transmission opacity technique. NO and CO are measured using an infrared spectroscopy technique. As the unit measures temperature, all measurements are compensated to ensure stable reading across all conditions. Monitoring methods have been approved by the Secretary in consultation with the EPA.

A total of 10 air quality monitors will be installed for the eastbound tunnel and ramps and 10 for the westbound tunnel and ramps, for a total of 20 air quality monitors. Monitors have been located at portals, junctions and supply/exhaust points (for normal operation) to enable a representative measurement of the nominated pollutants across the length of the tunnel. The location of in-tunnel air quality monitors are identified in Figure 1.

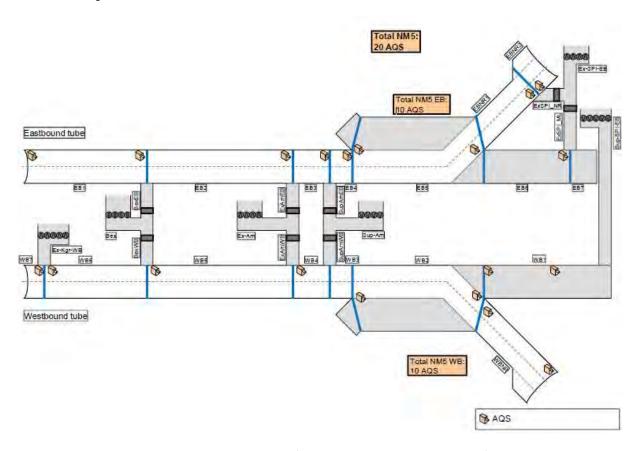


Figure 1: In-tunnel air quality monitoring locations (source: Tunnel Ventilation Report)

ANE has developed a method for the auditing the devices in the in-tunnel monitoring system. This methodology for verification has been approved by the Secretary in consultation with the EPA as per condition E2. The number and siting of the monitoring stations inside the tunnel will then be independently verified by Samuel Wong (Air Noise Environment Pty Ltd). Samuel Wong has been approved by the Secretary to undertake the verification of the monitoring stations in accordance with condition E3.

Once established, the sampling and visibility monitoring points will be audited prior to the commencement of monitoring for compliance against the requirements identified in Table 4-1.

4.3 Ventilation outlet monitoring

The O&M Contractor must monitor pollutants within the ventilation outlets, using the sampling method, units of measures and frequency specified in Table 4-2. A summary of the monitoring requirements, frequency and responsibilities is provided in Annexure C.

Table 4-2: Ventilation outlet emission monitoring methodologies (CoA E18)

Pollutant	Units of measure	Frequency	Method ¹
Solid particles	mg/m ³	Continuous	Special Method 1 ⁴ – Continuous Emission Monitoring System Design
Solid particles	mg/m ³	Quarterly	TM-15
PM ₁₀	mg/m³	Quarterly	OM-5
PM _{2.5}	mg/m³	Quarterly	OM-5
NO ₂ or NO or both, as NO ₂ equivalent	mg/m ³	Continuous	CEM-2
NO ₂	mg/m ³	Continuous	CEM-2
CO	mg/m ³	Continuous	CEM-4
VOC ²	mg/m ³	Continuous	CEM-8
Speciated VOC	mg/m ³	Annual	TM-34
Speciated PAH ³	μg/m ³	Annual	OM-6
Parameter	Units of measure	Frequency	Method ¹
Velocity	m/s	Continuous	CEM-6
Volumetric flow rate	m ³ /s	Continuous	CEM-6
Moisture	%	Continuous	TM-22
Temperature	°C	Continuous	TM-2
Other	Units of measure	Frequency	Method1
Selection of sampling locations	N/A	N/A	TM-1 ⁵

TABLE NOTES

- Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (EPA 2007) or an alternative method approved by the Secretary in consultation with the EPA.
- 2. Must include, but not be limited to: Benzene, Toluene, Xylenes, 1,3-Butadiene, Formaldehyde and Acetaldehyde.
- 3. Must include, but not limited to; 16 USEPA priority PAHs, namely; Naphthalene, Phenanthrene, Benz(a)anthracene, Benzo(a)pyrene, Acenapthylene, Anthracene, Chrysene, Indeno(1,2,3-cd)pyrene, Acenaphthene, Fluoranthene, Benzo(b)fluoranthene, Dibenz(a,h)anthracene, Fluorene, Pyrene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene.
- 4. Special Method 1 means a method approved by the Secretary in consultation with the EPA. This method is currently being reviewed by the Secretary for approval, in consultation with the EPA.
- Alternate sampling plane location for ventilation outlet monitoring is currently being reviewed by the Secretary for approval, in consultation with the EPA.

Monitors are located within air-conditioned enclosures within the Kingsgrove, Arncliffe and St Peters ventilation facilities.

Real time data from the stack air quality monitoring will be sent to the PMCS which considers the emissions monitoring values in the selection of ventilation levels and exhaust rates. Alerts and warnings will be raised as the emissions levels approach the limits set out in the MCoA.

The installation of the monitoring equipment will be audited prior to commencement of monitoring for compliance with the requirements identified in Table 9 of CoA E18. EMM Pty Ltd was approved as an appropriate independent organisation by the Secretary on 29 March .2019 to undertake the audit.

4.4 Ambient air quality

The O&M Contractor must monitor the pollutants and parameters, using the sampling method, units of measures and frequency specified in Table 4-3. A summary of the monitoring requirements, frequency and responsibilities is provided in Annexure C.

Table 4-3: Ambient air quality monitoring methodology (CoA E10)

Pollutant	Units of measure	Averaging period	Frequency	Method ¹
NO	pphm	1-hour	Continuous	AM-12
NO ₂	pphm	1-hour	Continuous	AM-12
NOx	pphm	1-hour	Continuous	AM-12
PM ₁₀	μg/m³	24-hour	Continuous	AS3580.9.8-2008 ²
PM _{2.5} ⁵	μg/m³	24-hour	Continuous	AS3580.9.12:2013 ³
СО	ppm	1-hour, 8-hour	Continuous	AM-6
Parameter ⁴	Units of measure	Averaging period	Frequency	Method ¹
Wind speed @10 m	m/s	1-hour	Continuous	AM-2 & AM-4
Wind direction @ 10 m	0	1-hour	Continuous	AM-2 & AM-4
Sigma Theta @ 10 m	۰	1-hour	Continuous	AM-2 & AM-4
Temperature @ 2 m	K	1-hour	Continuous	AM-4
Temperature @ 10 m	К	1-hour	Continuous	AM-4
Other	Units of measure	Averaging period	Frequency	Method ¹
Siting	N/A	N/A	N/A	AM-1 & AM-4

TABLE NOTES

- Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (EPA, 2007) or as otherwise agreed to in writing by the Secretary in consultation with the EPA.
- AS3580.9.8-2008, Methods for the Sampling and Analysis of Ambient Air Determination of Suspended Particulate Matter PM10 Continuous Direct Mass Method using Tapered Element Oscillating Microbalance Analyser (Standards Australia, 2008).
- AS3580.9.12:2013, Methods for sampling and analysis of ambient air Determination of suspended particulate matter PM_{2.5}
 beta attenuation monitors. This alternate methodology was approved by the Secretary on 7 November 2018 in consultation
 with the EPA.
- TBD location for meteorological monitoring station(s) to be representative of weather conditions likely to occur in the vicinity of the Kingsgrove, Arncliffe and St Peters ventilation outlets.
- 5. Appropriately modified to include size selective inlet for PM2.5 or as otherwise approved by the Secretary.
- 6. Use of tapered element oscillating microbalance monitor was approved by the Secretary on 7 November 2018 in consultation with the EPA.

Prior to the engagement of the principle contractor, significant air quality monitoring had been undertaken by the RMS and other representatives in the areas surrounding the WestConnex project. These data are available in the EIS Volume 2C Appendix H – Air Quality. The EIS is currently available at http://majorprojects.planning.nsw.gov.au/.

The locations of the ambient air quality monitoring locations were selected based on the requirements of CoA E10 and E11 and in consultation with the Air Quality Community Consultative Committee (AQCCC, refer to OEMP Section 7.5 for additional information).

The final eight (8) were agreed to by the AQCCC as required by CoAE11, which are described in Table 4-4 and shown in Figure 2 (St Peters), Figure 3 (Arncliffe & background) and Figure 4 (Kingsgrove). If possible, monitoring locations used for pre-construction data were selected again in order to produce like-for-like comparison as suggested by E11..

Operation Air Quality Management Plan

Table 4-4: Ambient air quality monitoring locations

No.	AQCCC No.	CoA E10 criteria	Location	Landowner in agreement with installation of monitoring station
1	Kingsgrove 1	a. near Kingsgrove ventilation outlet	Kingsgrove motorway operations complex (MOC1), Kingsgrove	Roads and Maritime Services
2	Kingsgrove 2	a. near Kingsgrove ventilation outlet	Kingsgrove Road, Kingsgrove	Roads and Maritime Services
3	Arncliffe 1	b. near Arncliffe ventilation outlet	49 West Botany Street, Arncliffe	Roads and Maritime Services
4	Arncliffe 2	b. near Arncliffe ventilation outlet	13 Eve Street, Arncliffe	Roads and Maritime Services
5	St Peters 1	c. near the St Peters ventilation outlet	Princes Highway, adjacent to Campbell Street, St Peters	Roads and Maritime Services
6	St Peters 2	c. near the St Peters ventilation outlet	St Peters Interchange, east of Burrows Road motorway operations complex (MOC5), St Peters	Roads and Maritime Services
7	St Peters 3	d. vicinity of the St Peters interchange (residential)	St Peters Street, St Peters	Department of Education
8	Barton Park	e. background ambient air quality reference data	Vacant lot within Barton Park, Rockdale	Roads and Maritime Services

Operation Air Quality Management Plan



Figure 2: Ambient air quality monitoring stations near St Peters ventilation outlet and residential areas

Operation Air Quality Management Plan

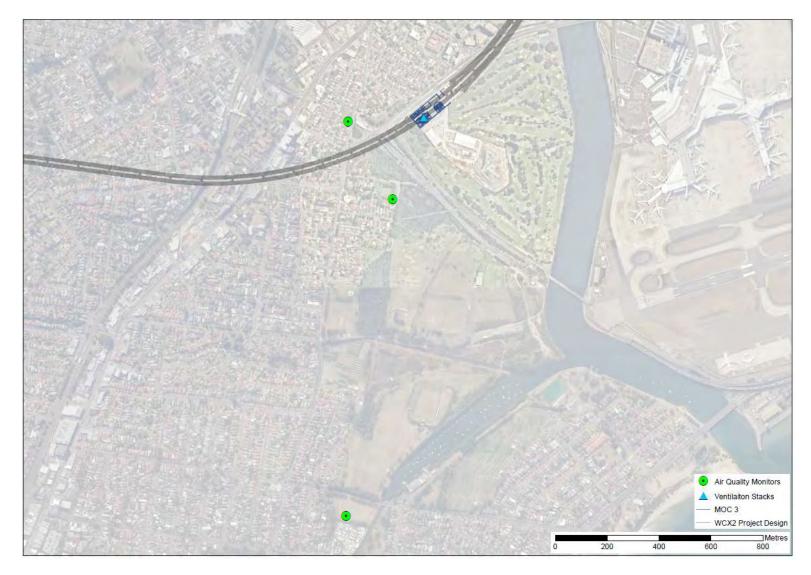


Figure 3: Air quality monitoring stations near Arncliffe ventilation outlet and background

Operation Air Quality Management Plan



Figure 4: Air quality monitoring stations near the Kingsgrove ventilation outlet

The ambient air quality monitoring stations were established and are operated by Ecotech Pty Ltd. Ecotech Pty Ltd were approved by the Secretary on 7 November 2018 (after satisfactory consultation with the EPA and AQCCC) as being an organisation sufficiently skilled and accredited by the National Association of Testing Authorities Australia to supply and monitor the air quality monitoring station as required under CoA E10 and E11.

4.5 Quality assurance / quality control

The air monitoring (and air sampling, if required) will be carried out by a qualified and NATA accredited technician. Air sampling analysis will be carried out in accordance with ISO17025 at a NATA accredited laboratory under the quality assurance and quality control (QA/QC) protocol requirements at the time of air monitoring (and sampling). The QA/QC measures for air quality and ventilation outlet emission monitoring data will be undertaken, including, but not limited to:

- quality systems;
- staff qualifications and training;
- auditing;
- up-to-date Standard Operating Procedures;
- calibration, service and maintenance of all monitoring instruments;
- equipment or system malfunction;
- records / reporting.

The QA/QC measures to be implemented during the operation of the Asset will be approved by an independent expert as required by CoA E28, who is approved by the Secretary prior to monitoring of air quality and ventilation outlet emissions. Ronan Kellaghan (EMM Pty Ltd) was approved by the Secretary as the independent expert to satisfy CoA E28 on 29 March 2019.

4.6 Availability of monitoring data

Information regarding the air quality monitoring required during operation of the Asset will be made available on the WestConnex website. Information will include:

- hourly updated real-time ambient monitoring of PM₁₀, PM_{2.5}, visibility, NO, NO₂, NO_x and CO at the
 approved monitoring stations (CoA E10, E24). This data is preliminary until the monthly audit reports are
 issued:
- monthly audited ambient monitoring reports of PM10, PM2.5, visibility, NO, NO2, NOx and CO at the approved monitoring stations (CoA E10, E24)
- in-tunnel CO, NO₂ and visibility (CoA E2);
- ventilation outlet measurements (CoA E18);
- relevant meteorological data (CoA E10, E24).

At least one month prior to the commencement of operation of the Asset, the local community will be notified (by way of newsletter and newspaper advertisement) of the availability of this information on the WestConnex website (https://www.westconnex.com.au/). A hard copy of the monitoring results will be available on request.

5 Auditing and review

5.1 Six-monthly audits

The O&M Contractor will appoint an external auditor to conduct an audit of the air quality monitoring (in tunnel and external) at six-monthly intervals, or at any longer interval if approved by the Secretary. The auditor must be approved by the Secretary, in consultation with the EPA and the AQCCC. Audits will commence six months after the commencement of operation (except for those audits of the ambient air quality monitoring, described below).

The audit will review the operating procedures and equipment to acquire air monitoring, meteorological data and emission monitoring data and monitoring reporting complies with NATA (or equivalent) requirements and sound laboratory practice.

The audit will also satisfy:

- CoA E7 requirement to validate recorded monitoring data and certify compliance with the in-tunnel air quality limits;
- CoA E12 requirement to undertake 6-monthly audits of the ambient air quality monitoring results (audits
 in accordance with CoA E12 will commence approximately 6 months prior to commencement of
 operation);
- CoA E20 requirement to validate recorded monitoring data and certify compliance with the ventilation outlet limits.

The audit report will be issued directly to the Project Company and the AQCCC. All audit data will be made available to the Secretary upon request.

5.2 Ventilation outlet review and accuracy audit

In accordance with CoA E20, the ventilation outlet limits detailed CoA E19 must be reviewed on a five-yearly basis and may be lowered (i.e. made more stringent), subject to a sustainability assessment and there being improvements in vehicle fleet emissions, if the Proponent is directed to do so by the Secretary following consultation with the EPA.

In accordance with CoA E26, all continuous emissions monitoring systems installed and operated as a requirement of CoA E18, must undergo relative accuracy test audits at an interval not exceeding 12 months, or as otherwise agreed to by the Secretary in consultation with the EPA.

5.3 Ambient air quality monitor review

After a period of two years from the commencement of operation (in accordance with CoA E13), the Project Company, in consultation with the AQCCC, must review the need for the continuation of the ambient monitoring stations. Any recommendations to close the stations will require the approval of the Secretary, in consultation with the EPA.

6 Notification and reporting

6.1 Air quality reporting system

A reporting system for in-tunnel, ventilation outlet and ambient air quality limits will be developed in consultation with the EPA, in accordance with CoA E23. The air quality reporting system must be approved by the Secretary and full implemented and operational prior to operation. Minimum analytical reporting requirements for air pollution monitoring stations must be as specified in the *Approved Methods of Modelling and Assessment of Air Pollutants in NSW* (EPA 2007, or as updated).

The air quality notifications and reporting system is summarised in Annexure B.

6.2 In-tunnel

The O&M Contractor will immediately notify the Project Company of any in-tunnel air quality exceedances after they occur. The Project Company will then notify the Secretary, EPA and NSW Health of any recordings above the limits specified in CoA E4, E5 and E6, within 24 hours. The notification will include:

- Nature of the event;
- · Concentration or visibility levels that occurred;
- Duration of the event;
- Measures employed to minimise the concentration levels and/or improve the visibility levels.

Upon notification, the Secretary will consider the circumstances of the event and may request a Tunnel Air Quality Management Systems Effectiveness Report to be prepared in accordance with CoA E9.

If requested, the O&M Contractor will prepare a Tunnel Air Quality Management Systems Effectiveness Report within 20 working days. The report will consider the overall system performance and cause and major contributor of any exceedance, detailing the following:

- The overall performance and concentration levels in the tunnel for the preceding six month period (or since commencement of operation, where the SSI has operated for under six months), including average and maximum levels and time periods;
- Details of any instances throughout the operation of the SSI where pollutant concentration levels in the tunnel have exceeded the limits specified in conditions E4, E5, and E6;
- Consideration of improvements to the tunnel air quality management system.

The report must be reviewed by a suitably qualified and experienced independent specialist(s) / organisation, who must be approved by the Secretary.

Requirements resulting from the Secretary's review of the Tunnel Air Quality Management Systems Effectiveness Report will be implemented during operation of the Asset.

6.3 Ventilation outlet

The O&M Contractor will immediately notify the Project Company of any ventilation outlet air quality exceedances after they occur. The Project Company will notify the Secretary, EPA and NSW Health of any recordings above the limits specified in CoA E19, immediately after being informed of the event. The O&M Contractor will prepare a detailed report on the cause and major contributor of the exceedance and the options available to prevent recurrence within 20 working days.

The report must be reviewed by a suitably qualified and experienced independent specialist(s) / organisation, who must be approved by the Secretary prior to preparation of any report that satisfies CoA E21.

Requirements resulting from the Secretary's review of the exceedance report will be implemented during operation of the Asset.

6.4 Ambient air quality

An Ambient Air Quality Goal Protocol (Annexure A) has been prepared in accordance with CoA E15, in consultation with the EPA and AQCCC.

The Project Company will notify the Secretary, EPA and NSW Health with a Notification of Above-Goal Recording of any recordings above the limits specified in CoA E14 within 24 hours. The notification will include:

- Nature of the event;
- Concentration levels that occurred;
- Duration of the event;
- · Measures employed to minimise the concentration levels; and
- Commitment to prepare and submit a Report on Above-Goal Recording in accordance with CoA E17.

Within 20 working days of any Notification of Above-Goal Recording, the Project Company will prepare a Report on Above-Goal Recording that details the cause and major contributor of the exceedance and the options to prevent recurrence.

Where the operation of the tunnel is identified to be a significant contributor to the recorded above-goal recording, the Report on Above-Goal Recording must include consideration of improvements to the tunnel air quality management system so as to achieve compliance with the ambient air quality goals, including but not limited to installation of the additional ventilation management facilities allowed for under CoA B5, and discussion of whether those improvements are feasible and reasonable.

Requirements resulting from the Secretary's review of the Report on Above-Goal Recording will be implemented during operation of the Asset.

Annexure A Ambient Air Quality Goal Protocol



Ambient Air Quality Goal Protocol

Condition E15

Revision Date revised 07/02/2019



Revision history

This document interfaces with the New M5 Operation Air Quality Management Plan, within the Operational Environmental Management Plan (OEMP), which together describe the proposed overall management system for the O&M Services.

The latest revision of this document is available on Contract Workspace. If any unsigned hard copies of this document are printed, they are valid only on the day of printing.

The revision number is included at the bottom of each page. When revisions occur, the entire document will be issued with the revision number updated accordingly.

Appendices to this plan may be revised independently of this plan.

Rev No	Revised by	Reviewed and Approved by:	Date	Description/Summary of Changes
0.1			11/12/2018	Initial issue for internal review and approval
0.2			12/12/2018	AQCCC Comments added
0.3			12/12/2018	Version Control Adjustment
0.4			19.12.2018	Response to consultation (refer Consultation Table in separate document)
1			20.12.2018	Update to address RMS comments and finalization for submission to DP&E
2			21.01.2019	Update to address DP&E comments
3			07.02.2019	Update to address DP&E editorial corrections



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Glossary

Term Used	Explanation
AM-1	Ambient monitoring – guide for the siting of sampling units
AM-2	Ambient monitoring – guide for measurement of horizontal wind for air quality applications
AM-4	Ambient monitoring – meteorological guidance for regulatory modelling applications
AM-6	Ambient monitoring – Carbon monoxide
AM-12	Ambient monitoring – Nitrogen oxides
AGR	Above-goal reading (ambient monitoring only)
AQCCC	Air Quality Community Consultative Committee
Background levels	Existing concentrations of pollutants in the ambient air
со	Carbon Monoxide
CoA	Minister's Conditions of Approval
DP&E	NSW Department of Planning and Environment
EMT	Emergency Management Team
EPA	NSW Environment Protection Authority
Minister, the	Minister for Planning
NATA	National Association of Testing Authorities, Australia
NEPM	National Environment Protection (Ambient Air Quality) Measure 2016
NO	Nitric Oxide
NO2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
O&M	Operations and Maintenance
O&M Contractor	the contractor engaged to deliver the operations and maintenance contract for the New M5 project.
OAQMP	Operation Air Quality Management Plan
OEH	NSW Office of Environment and Heritage
OEMP	Operation Environmental Management Plan
PM10	Particulate matter (10 micrometres or less in diameter)
PM2.5	Particulate matter (2.5 micrometres or less in diameter)
Project Company	WCX M5 PT Pty Ltd (ACN 608 798 465) in its personal capacity and its capacity as trustee of the WCX M5 Project Trust (ABN 73 899 615 977)
Project, the	WestConnex New M5 Project

WestConnex

Term Used	Explanation
Reasonable and Feasible	Consideration of best practice taking into account the benefit of proposed measures and their technological and associated operational application in the NSW and Australian context. Feasible relates to engineering considerations and what is practical to build. Reasonable relates to the application of judgement in arriving at a decision, taking into account mitigation benefits and cost of mitigation versus benefits provided, community expectations and nature and extent of potential improvements.
Relevant council(s)	Canterbury Bankstown, Bayside Council, Georges River Council, Inner West Council, City of Sydney as applicable
RMS, Roads and Maritime	Roads and Maritime Services - the Proponent for the New M5 Project Roads and Maritime has engaged the Project Company to deliver the new M5 project.
Secretary	Secretary of the Department of Planning and Environment
Secretary's approval	A written approval from the Secretary (or delegate).
SMC	Sydney Motorway Corporation Pty Limited (SMC) (ABN 601 507 591) is a special purpose entity that has been created by the NSW Government to manage the delivery of WestConnex. For the purposes this New M5 Motorway Ambient Air Quality Goal Protocol, WCX M5 PT Pty Ltd will act on behalf of Sydney Motorway Corporation Pty Limited (SMC).
SSI	State Significant Infrastructure



1 Introduction

1.1 Purpose and Overview

This Ambient Air Quality Goal Protocol has been developed to satisfy the requirements of condition E15 of the Conditions of Approval (CoA) for the WestConnex New M5 project (the project).

Condition E15 requires that an Ambient Air Quality Goal Protocol (Protocol) be prepared for the evaluation of a potential measurement that exceeds the ambient air quality goals. The Protocol is to include a form and process for notifying the measurement that exceeds the goal; the form and contents for reporting the measurement; and the process for appointing an independent person to prepare a Report on Above-Goal Recording.

1.2 Environmental Management System

The O&M Contractor will utilise an Integrated Management System for environmental management. The O&M Contractor's environmental management system (EMS) has been certified as complying with AS/NZS ISO 14001.

The EMS includes the Operation Environmental Management Plan (OEMP) which provides the detail of how the environmental aspects of the project will be managed during the operational phase. The OEMP provides the overall framework for the system and procedures to ensure environmental impacts are minimised and legislative and other requirements are fulfilled.

This Ambient Air Quality Goal Protocol forms part of the management system documents which are to be implemented on WestConnex New M5. It is to be read in conjunction with the other management system documents including the OEMP, the Operation Air Quality Management Plan and the E23 Reporting system for in-tunnel, ambient and ventilation outlet limits.

1.3 Consultation

In accordance with condition E15, the Ambient Air Quality Goal Protocol must be prepared in consultation with the WestConnex New M5 Air Quality Community Consultative Committee (AQCCC).

The AQCCC were consulted during the preparation of this document.

A document titled 'Consultation for the New M5 Ambient Air Quality Goal Protocol' has been prepared separately to this document to provide detail relating to the consultation received and where feedback has been addressed (if applicable) within this Ambient Air Quality Goal Protocol.

2 Environmental Obligations

Legislative obligations relating to air quality, including ambient air quality, are detailed within the Operation Air Quality Management Plan (E31(h)(i)).

2.1 Conditions of Approval

Conditions of the Infrastructure Approval for WestConnex New M5 that are relevant to the Ambient Air Quality Goal Protocol (Protocol) are provided in the table following.

A cross-reference is included to indicate where each condition is addressed in this Protocol or other project management documents.

Table 2-1 Conditions of Approval

CoA Ref	Requirement	Reference
A16	The Proponent must notify the Secretary (using the contact name and phone number notified by the Department from time to time) of any incident (other than those relating to the Protection of the Environment Operations Act 1997) with actual, or potential, significant off-site impacts on people or the biophysical environment immediately of becoming aware of the incident on weekdays, or the following business day on weekends, public holidays and site shutdown. The Proponent must provide full written details of the incident to the Secretary within seven days of the date on which the incident occurred.	See Flowchart
E14	Should ambient monitoring of air pollutants exceed the following goals, the provisions of conditions E15, E16 and E17 will apply: CO – 8 hour rolling average of 9.0 ppm (NEPM); NO2 – One hour average of 0.12 ppm (245 µg/m3) (NEPM); PM10 – 24 hour average of 50 µg/m3 (NEPM); PM2.5 – 24 hour average of 25 µg/m3 (NEPM); PM10 – annual average of 25 µg/m3 (NEPM); PM10 – annual average of 8 µg/m3 (NEPM). Note: The notification and reporting obligations under conditions E15, E16 and E17 relating to ambient monitoring will begin at the commencement of operation of the SSI. The first annual average concentrations for PM10 and PM2.5 must be calculated on the first day the project been in operation for 12 months and on a rolling basis thereafter.1	Section 3
E15	Proponent must prepare an Ambient Air Quality Goal Protocol for the evaluation of a potential measurement that exceeds the goals. The Ambient Air Quality Goal Protocol must be developed by the Proponent in consultation with the AQCCC and submitted to the Secretary for approval at least 12 months prior to the commencement of operation of the SSI. The Ambient Air Quality Goal Protocol must include: a) the form of and process for providing a Notification of Above-Goal Recording subject to condition E16;(refer following) b) the form and contents of a Report on Above-Goal Recording, subject to condition E17 (refer following); and c) a process for appointing an independent person/organisation to prepare the Report on Above-Goal Recording. The process must include - i) approval of the independent person/organisation by the Secretary prior to preparation of the report, and ii) the appointment of the independent person/organisation at least one month prior to the commencement of operation, or at some other time prior to preparation of the report with the agreement	This document The evaluation occurs by Section 5.2 and 5.3 Section 5 and Appendix A1 Section 5 and Appendix A2 Section 6 Section 6 Section 6
E 16	· · · · · · · · · · · · · · · · · · ·	Section 5, Section 5.1.2 and Section 3

¹ New M5 Modification 2 approved 30 August 2017.

goals in condition E14. The Notification of Above-Goal Recording is to be submitted within 24 hours of the recording, to the Secretary, EPA and NSW Health. The Notification of Above-Goal Recording must detail:

- a) the nature of the event;
- b) the concentration level that occurred;
- c) the duration of the event:
- d) the measures employed to minimise the concentration levels; and
- the Proponent's commitment to prepare and submit a Report on Above-Goal Recording in accordance with condition E17.

E17 Within 20 working days of any Notification of Above-Goal Recording, the Proponent must prepare and submit to the Secretary a Report on Above-Goal Recording that details the cause and major contributor of the exceedance and the options available to prevent recurrence.

Section 5.3 Appendix A2

Where the operation of the tunnel is identified to be a significant contributor to the recorded above-goal reading, the Report on Above-Goal Recording must include consideration of improvements to the tunnel air quality management system so as to achieve compliance with the ambient air quality goals, including but not limited to installation of the additional ventilation management facilities allowed for under condition B5, and discussion of whether those improvements are feasible and reasonable.

The Proponent must comply with any requirements arising from the Secretary's review of the Report on Above-Goal Recording.

E22 Conditions E4, E5, E6, E14 and E19 do not apply in an emergency, as defined in the OEMP required by condition E31 (g).

Refer to Section 3.1

The Proponent must, as soon as reasonably practicable, notify the Secretary and the EPA of any such discharge.

E23 The Proponent must develop and implement a reporting system for in-tunnel, ambient and ventilation outlet limits in consultation with the EPA. The reporting system must be approved by the Secretary and fully implemented and operational prior to operation. Minimum analytical reporting requirements for air pollution monitoring stations must be as specified in the Approved Methods of Modelling and Assessment of Air Pollutants in NSW (EPA 2007, or as updated).

A reporting system for in-tunnel, ventilation outlet and ambient air quality limits will be developed in consultation with FPA

2.2 Revised environmental management measures

The revised environmental management measures (REMMs) relevant to ambient air quality monitoring during the operations and maintenance of the Asset are included in the table following:

Table 2-2 Revised environmental management measures relevant to ambient air quality monitoring

REMM	Relevant requirement	Reference
No ref no.	Environmental management measures that are available for improving tunnel-related air quality are categorised as follows: • Tunnel design • Ventilation design and control • Air treatment systems • Emission controls and other measures • Monitoring. Refer to Section 10.10.2 of the EIS for detailed discussion of these categories.	N/A

3 Ambient Air Quality Goals

The ambient air quality criteria for WestConnex New M5 are defined in condition E14 and are provided below in the table following:

Table 3-1 Ambient air quality criteria (condition E14)

Parameter	Concentration limit	Units of measure	Averaging period	Source
СО	9.0	ppm	Rolling 8-hour	NEPM
NO ₂	0.12 (245 μg/m3)	ppm	1 hour	NEPM
PM ₁₀	50	μg/m³	24 hour	NEPM
PM _{2.5}	25	μg/m³	24 hour	NEPM
PM ₁₀	25	μg/m³	1 year	NEPM
PM _{2.5}	8	μg/m³	1 year	NEPM

*Note: The notification and reporting obligations under conditions E15, E16 and E17 relating to ambient monitoring will begin at the commencement of operation of the SSI. The first annual average concentrations for PM10 and PM2.5 must be calculated on the first day the project been in operation for 12 months and on a rolling basis thereafter.

In accordance with condition E14, should ambient monitoring of air pollutants exceed the goals listed in Table 3-1, conditions E15, E16 and E17 apply and notification and reporting of the above-goal reading shall occur as required.

For the reporting of above-goal readings of the annual average (1-year averaging period), the first annual average result will not be available until at least 12 months following the commencement of operation. As the first annual average result will not be available until this time, any notifications or reports of above-goal readings of the annual average will also not be available until at least 12 months following the commencement of operation.

3.1 Emergency discharge

In accordance with condition E22, the air quality criteria identified in Table 3-1 do not apply in an emergency situation (refer also CoA A16). An 'emergency' has been defined in Section 8.2 of the OEMP.

In the event of an emergency situation that results in discharge(s) that exceed the nominated criteria, the Secretary and the EPA would be notified.

4 Monitoring

4.1 Monitoring methodologies

The O&M Contractor will monitor the pollutants and parameters, using the sampling method, units of measures and frequency specified in the table following:

Table 4-1 - Ambient Air Monitoring Methodologies

Pollutant	Units of Measurement	Averaging Period	Frequency	Method
NO	pphm	1-hour	Continuous	AM-12
NO2	pphm	1-hour	Continuous	AM-12
NOx	pphm	1-hour	Continuous	AM-12
PM ₁₀	μg/m3	24 hour	Continuous	AS 3580.9.8-2008 ²
PM _{2.5} ⁵	μg/m3	24 hour	Continuous	AS 3580.9.13-2013 ³
со	ppm	1-hour, 8 hour	Continuous	AM-6
Parameter⁴	Units of measure	Averaging period	Frequency	Method ¹
Wind speed @10 m	m/s	1-hour	Continuous	AM-2 & AM-4
Wind direction @ 10 m	0	1-hour	Continuous	AM-2 & AM-4
Sigma Theta @ 10 m	0	1-hour	Continuous	AM-2 & AM-4
Temperature @ 2 m	К	1-hour	Continuous	AM-4
Temperature @ 10 m	К	1-hour	Continuous	AM-4
Other	Units of measure	Averaging period	Frequency	Method ¹
Siting	N/A	N/A	N/A	AM-1 & AM-4

TABLE NOTES

- Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (EPA, 2007) or as otherwise agreed to in writing by the Secretary in consultation with the EPA.
- AS3580.9.8-2008, Methods for the Sampling and Analysis of Ambient Air Determination of Suspended Particulate Matter
 PM10 Continuous Direct Mass Method using Tapered Element Oscillating Microbalance Analyser (Standards Australia,
 2008).
- AS3580.9.12:2013, Methods for sampling and analysis of ambient air Determination of suspended particulate matter PM2.5 beta attenuation monitors. This alternate methodology was approved by the Secretary on 8 September 2017 in consultation with the EPA.
- TBD location for meteorological monitoring station(s) to be representative of weather conditions likely to occur in the vicinity of the northern and southern ventilation outlets.
- Use of tapered element oscillating microbalance monitor was approved by the Secretary on 8 September 2017 in consultation with the EPA.

The ambient air quality monitoring stations were established and are operated by Ecotech Pty Ltd. Ecotech Pty Ltd were approved by the Secretary on 7 November 2018 (after satisfactory consultation with the EPA and AQCCC) as being an organisation sufficiently skilled and accredited by the National Association of Testing Authorities Australia to supply and operate the air quality monitoring station as required under condition E11.

Ambient monitoring of pollutants for the purposes of notification and reporting obligations under conditions E15, E16 and E17 will begin at the commencement of operation. As such, the first annual average of pollutants will be available 12 months following the commencement of operations.



4.2 Monitoring Locations

Ambient air quality monitoring occurs at eight monitoring locations. These are described in the table following and shown in Figure 1 to Figure 3.

Table 4-2 - Monitoring Locations and Standards

Figure	Reference	Location	Condition E10 criteria	Landowner
1	K7	New M5 MOC1, Kingsgrove	E10(a)	Roads and Maritime Services
1	K9	Vacant lot between Kingsgrove Road & Forrester Reserve, Kingsgrove	E10(a)	Roads and Maritime Services
2	А3	49 West Botany Street, Arncliffe	E10(b)	Roads and Maritime Services
2	A5	13 Eve Street, Arncliffe	E10(b)	Roads and Maritime Services
3	S5	Campbell Street, between Church Street and Princes Highway, St Peters	E10(c)	Roads and Maritime Services
3	S7	St Peters Interchange site, adjacent to Burrows Road	E10(c)	Roads and Maritime Services
3	S1	St Peters Public School	E10(d)	Department of Education
4	S3	Barton Park, near Bestic Street	E10(e)	Roads and Maritime Services

WestConnex



Figure 1 - Ambient Air Quality monitoring stations to be located near Kingsgrove ventilation outlet, E10(a)

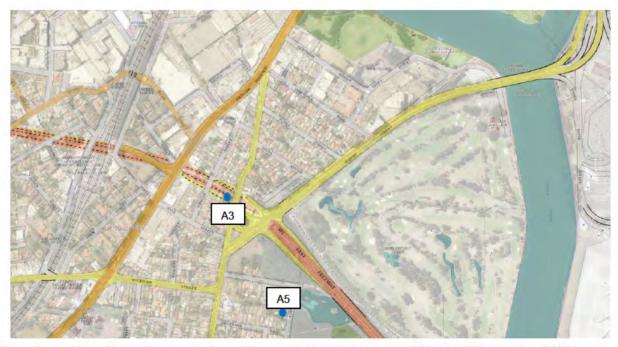


Figure 2 - Ambient Air quality monitoring stations to be located near Arncliffe ventilation outlet, E10(b)

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Figure 3 - Ambient air quality monitoring stations to be located at near St Peters Ventilation outlet, E10(c+d)

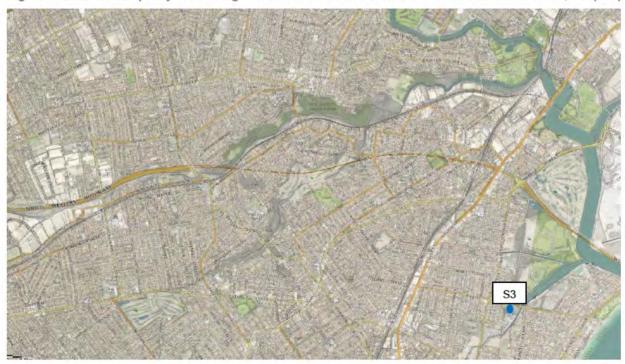


Figure 4 - Ambient air quality monitoring stations to be located away from any of the locations at E10(a-d), E10(e)

5 Notification and reporting of above-goal readings

The key steps in notification and reporting of above-goal readings are detailed within Figure 5-1 and include:

- 1. Notify the above-goal reading
- 2. Investigate the above-goal reading
- 3. Report the above-goal reading

Notification and reporting process

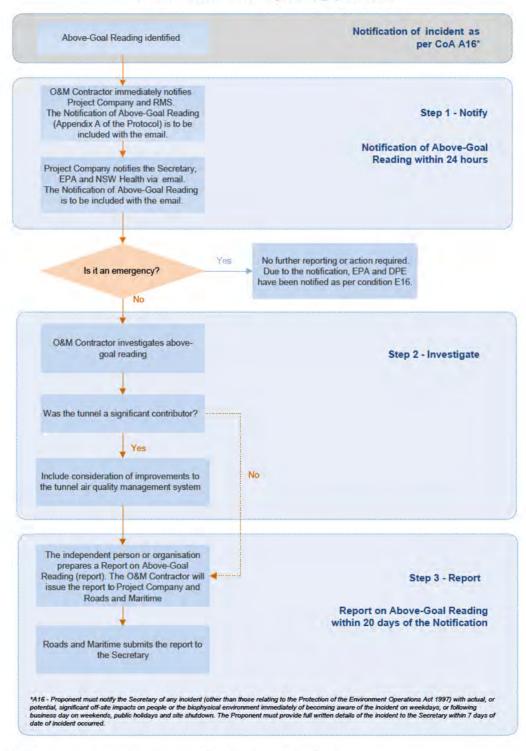


Figure 5 - Notification and reporting process for above goal readings

5.1 Notify the above-goal reading

When an exceedance of the air quality goals detailed within condition E14 occurs, it will be reported as an 'incident' in accordance with the requirements of CoA A16 and then the steps within Section 5.1.1 and 5.1.2 will be followed

5.1.1 Notifying Project Company and Roads and Maritime

Upon identification of an above-goal reading, the O&M Contractor will immediately notify Project Company and Roads and Maritime Services.

The email notification included in section 5.1.2 will be provided along with the completed form within Appendix A.

5.1.2 Notifying the Secretary, EPA and NSW Health

Project Company will notify the Secretary, EPA and NSW Health. Following consultation with the AQCCC, the councils that sit on the AQCCC will be notified. The notification is to be provided within 24 hours of the reading.

Form of Notification

After the 'incident' notification as per CoA A16, the form of notification will be via email with the Notification of Above-Goal Reading form (Appendix A) attached or included with the email. As required by condition E16, the Notification of Above-Goal Reading form will provide details of:

- (a) the nature of the event;
- (b) the concentration levels that occurred;
- (c) the duration of the event;
- (d) measures employed to minimise the concentration levels;
- (e) the Proponent's commitment to prepare a Report on Above-Goal Reading in accordance with condition E17.

The sample content of the email is indicated in Figure 6.

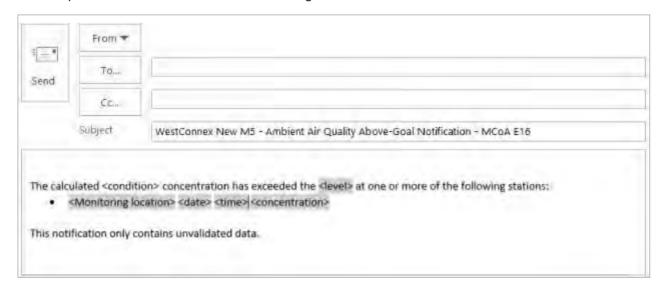


Figure 6 - Sample content of the email notification



An example of an email which would be issued is provided below:



Figure 7 - An example of an email for issue. The completed form within Appendix A will be included.

The Notification of Above-Goal Reading form within Appendix A will be attached or included with the email notification.

5.1.3 Contact details for notification

The table below provides the contact details for those stakeholders that will be notified.

Table 5-1 - Contact details for stakeholders that are to be notified

Organisation	Contact Position	Telephone	Email
Department of Planning & Environment	Secretary of the Department	ТВА	ТВА
	Director Infrastructure Management		
	Director Compliance (Post Approvals)		
EPA	Duty Officer		info@environment.nsw.gov.au
NSW Health	Director, Environmental Health		
RMS	TBA	TBA	TBA prior to commencement of operation
Project Company	ТВА	ТВА	TBA prior to commencement of operation
City of Sydney			
Canterbury Bankstown			
Bayside Council			
Georges			



It is the responsibility of the organisations detailed above to contact the O&M Contractor, in writing to O&M Manager (MCC) (refer Appendix C) should their contact details change

5.2 Investigate the above-goal reading

To determine whether an Above-Goal Reading is attributable to external phenomena or events or emissions from the New M5 Motorway tunnel outlets, the below investigations will be undertaken.

5.2.1 Validate Results

Within 2 days of the above-goal reading, the data will be quality validated.

If the data validity checks confirm that the recorded Above-Goal Reading was not valid and was due to an instrument fault or data error, the independent person will complete the Report for Above-Goal Reading (Appendix B) and will submit this document to Project Company and Roads and Maritime. Roads and Maritime will submit the report to Department of Planning and Environment.

A copy will also be placed on the WestConnex website.

If the data validity checks confirm that the recorded Above-Goal Reading was valid, the O&M Contractor will proceed to section 5.2.2.

5.2.2 Assess whether an emergency occurred

Should the investigation determine that an emergency occurred (as defined in Section 3.1), no further reporting shall occur.

It is considered that notification of the above-goal reading to DPE and EPA has occurred in accordance with condition E17 through submission of the Notification of Above-Goal Reading.

A written record of the result of the investigation (ie that it is an emergency) is to be retained by the O&M Contractor and Project Company and RMS are to be advised of the finding.

5.2.3 Further investigation of valid results

If the investigation confirms that the data is valid, and an emergency does not appear to have occurred, further investigations will be undertaken, and the O&M Contractor will request the independent person/organisation prepare a Report on Above-Goal Reading.

Further investigations of the potential cause may include the below steps.

Sydney-wide events

Obtain data for other ambient air quality monitoring stations in the Sydney Basin from the EPA for concurrent monitoring periods to determine whether the exceedance is a Sydney-wide event. This would include information from other projects' AQM stations such as the M4 East, M4-M5 Link and NorthConnex.

If the monitored exceedance is widespread, it is likely that there was an external cause. In this instance, the O&M Contractor will contact relevant authorities such as the Bureau of Meteorology and State Emergency Services to determine if a regional event has occurred consistent with the recorded exceedance.



Locally specific events

If the exceedance is not widespread throughout the Sydney basin, a local cause is possible and supplementary investigations should be undertaken, such as consulting with relevant stakeholders such as (for example) EPA or relevant Councils, with the aim of establishing whether a specific localised source may have affected one or more monitoring stations. Localised activity (e.g. rubbish burning or unusually high emissions from an industrial premise (with unfavourable weather conditions)) may adversely affect the readings.

Monitoring equipment calibration

In the circumstance where the investigations are unable to identify a logical cause of the exceedance, further investigations may be undertaken to investigate whether the monitoring equipment is calibrated and functioning effectively.

Assessment of outlet emissions

A review of the ventilation outlet emissions data will be checked to determine whether emissions are higher or considerably different to emissions over previous periods, with similar traffic conditions within the tunnel.

Assessment of background data

An assessment against background data (or pre-operational data) may also occur.

5.3 Report on Above Goal Reading

If the investigation confirms that there was not an emergency, the O&M Contractor will request the independent person/organisation (once approved) to prepare a Report on Above-Goal Reading.

The Report on Above-Goal Reading (Report) (Appendix B) will detail the cause and major contributor of the exceedance and options available to prevent recurrence.

Where the operation of the tunnel is identified as a significant contributor to the recorded Above-Goal reading, the Report on Above-Goal Reading must include consideration of improvements to the Air Quality Management System so as to achieve compliance with the ambient air quality goals, including but not limited to installation of the additional ventilation management facilities allowed for under condition B5 and discussion of whether or not those improvements are reasonable and feasible.

The Report will be submitted within 20 working days of any Notification of Above-Goal Reading and the Proponent will comply with any requirements arising from the Secretary's review of the Report.



6 Process of Appointing Independent Person / Organisation

6.1 Definition of an independent person / organisation

The Australian Securities and Investment Commission (ASIC) Regulatory Guide 112 Independence of Experts (March 2011) states that an expert must not be associated with certain interested parties, and must disclose certain interests and relationships, when preparing reports^{2...}

Any disclosures should be contained within the report/s, relate to relationships or interests existing at the time of preparation of the report or existing in the previous two years and be timely, prominent, specific and meaningful.³

6.2 Definition of an Independent Person / Organisation

Whilst it does not define an independent *organisation* in itself, ASIC's RG 112.23 states that in identifying relationships and interests that may affect, or may be perceived to affect, the expert's ability to prepare an independent report, the expert should not only identify relationships with, and interests of, the expert but also of:

- (a) the expert's associates;
- (b) those directors and senior employees who are principally responsible for preparing and issuing the expert report; and
- (c) the spouse, children and associates of the directors and senior employees who are principally responsible for preparing and issuing the expert report.

The O & M Contractor will adhere to ASIC's interpretation of independence, and whether or not an 'expert' is an individual or an organisation will largely depend on the nature, scale and complexity of the expert's business and the circumstances of the expert's engagement, as well as the requirements of the report.

Appropriately qualified independent persons/organisations will be identified prior to selection on the basis of merit.

6.3 Selection on the basis of merit

In selecting an appropriate expert, ASIC states⁴ relevant factors are likely to include:

- (d) Whether the expert has adequate resources (which may include access to appropriate third-party specialists) to perform the necessary work
- (e) The qualifications of the expert and whether the expert has the requisite level of technical expertise (including whether the expert meets the requirements of any relevant industry codes)
- (f) The experience of the expert. For example, a commissioning party may ask what comparable transactions the expert has given an opinion on and whether that experience is relevant to the current transaction
- (g) Whether the expert can meet the timeframe required for the report to be produced, and
- (h) Whether there are any independence issues

6.4 Appointment Process

The process for appointing an independent person/organisation to prepare a Report for Above-Goal Reading is as follows:

² RG 112.7 Regulatory Guide 112 Independence of Experts (March 2011) Part (a)

³ RG 112.31 – 112.35 Regulatory Guide 112 Independence of Experts (March 2011)

⁴ RG 112.40 Regulatory Guide 112 Independence of Experts (March 2011)



- 1. Identify appropriately qualified independent persons/organisations.
- 2. Select independent person/organisation on the basis of merit (refer above).
- Ensure that any pre-engagement discussions do not compromise the expert's independence. For example, these discussions should not deal with how the expert proposes to evaluate the transaction or the merits of the transaction.⁵
- Seek written approval from the Secretary. Nomination and consultation with Project Company and Roads and Maritime.
- 5. Before commencing work, an expert should obtain written terms of engagement⁶ from the commissioning party that:
 - (a) set out the scope and purpose of the report
 - (b) set out the facts of the proposal and relevant data
 - (c) recognise the expert's right to refuse to give an opinion or report at all if it is not given the information and explanations it requires to prepare the report
 - give the expert the same access to the commissioning party's records as the auditor of the commissioning party; and
 - (e) set out the fee.
- Ensure appointment of the independent person/organisation is prior to commencement of operation, or at some time prior to preparation of the report with agreement of the Secretary.

The process for appointing an independent person/organisation to prepare the Report on Above-Goal Reading is as follows:

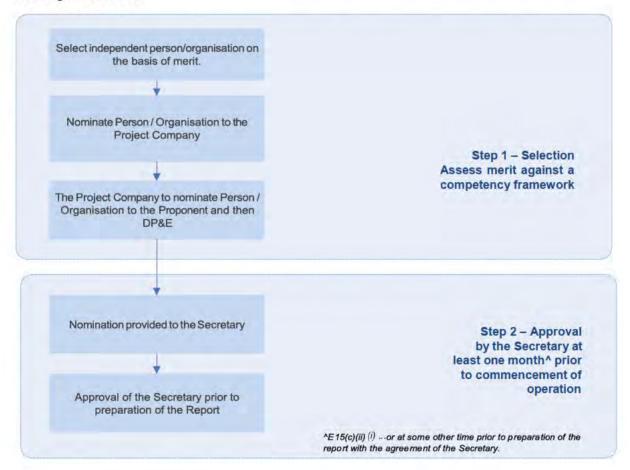


Figure 8 - Process of Appointment

⁵ RG 112.41 Regulatory Guide 112 Independence of Experts (March 2011) 6 RG 112.42 Regulatory Guide 112 Independence of Experts (March 2011)



The independent person or organisation shall not prepare a Report on Above-Goal Recording until approval has been received for their appointment by the Secretary.

It is noted where the Secretary's approval or agreement is required under a condition of this approval, the Secretary will endeavour to provide a response within one month of receiving an approval or agreement request. The Secretary may ask for additional information if the approval or agreement request is considered incomplete. When further information is requested, the time taken for the Proponent to respond in writing will be added to the one-month period. The Secretary may ask for additional information where a document is required to be submitted to the Secretary and the document is considered incomplete or not fully addressing the requirements of a condition.

It is unknown if or when the requirement to prepare a Notification of Above-Goal Recording and subsequent Report on Above-Goal Recording could be triggered once the project becomes operational. Given the timeframes involved to receive approval from the Secretary as outlined above, the independent person/organisation will be appointed prior to project operation. This will ensure the Report on Above-Goal Recording can be submitted to the Secretary within 20 working days of any Notification of Above-Goal Recording if ambient monitoring of air pollutants records an exceedance of the goals in condition E14.

Once an appropriately qualified independent person/organisation has been approved by the Secretary, this independent person/organisation will prepare all Reports on Above-Goal Recordings. Should for any reason the project need to appoint a new appropriately qualified independent person/organisation, then the appointment process outlined in this section shall be applied again.



Appendix A - Notification of Above-Goal Reading



Notification of above-goal reading

WestConnex New M5

To be notified immediately to Project	recording.	notify DPE, EPA and NSW Health within 24 hours of the
Date		
Time (start and finish)		
Relevant location	☐ New M5 MOC1, Kingsgrove	☐ Campbell Street between Church Street and Princes Highway, St Peters
	□ Vacant lot between Kingsgrove Road & Forrester Reserve	☐ St Peters Interchange Site, adjacent to Burrows Road
	☐ 49 West Botany Street, Arncliffe	☐ St Peters Public School, St Peters
	☐ 13 Eve Street, Arncliffe	☐ Barton Park, near Bestic Street
Relevant goal	☐ CO – 8 hour rolling average of 9.0	ppm (NEPM)
	☐ NO ₂ – One hour average of 0.12 pp	om (245 μg/m³) (NEPM)
	□ PM ₁₀ – 24 hour average of 50 µg/m	n³ (NEPM)
	□ PM _{2.5} – 24 hour average of 25 µg/n	n ³ (NEPM)
	□ PM ₁₀ – annual average of 25 µg/m ²	³ (NEPM)
	□ PM _{2.5} – annual average of 8 µg/m ³	(NEPM)
Above-goal reading Detail the above-goal reading that was received		
Duration Detail the duration of the abovegoal reading or event		
Nature of event Detail nature of the event that contributed to the above-goal reading		
Was the data valid? If unknown at this stage, please indicate. Refer section 5.2.1 of this Protocol.		
Was there an emergency? Refer section 3.1 of this Protocol. If this is unknown at this stage, please indicate.		
Measures employed Detail measures employed to minimise the concentration levels		
	ubmit a Report on Above-Goal Reading be prepared for this notification. Please not	ng te that a Report is not required in the event of an
Person responsible for notification	Name	
	Position	
	Organisation	



Appendix B - Report on Above-Goal Reading

Report on above-goal reading WestConnex New M5 To be submitted to DPE within 20 days of the Report of Above-Goal Reading Details of the exceedance Attach relevant Notification of Above-Goal Reading Was the data valid? If invalid, include any details or justifications for the invalidity Comparison with long term monitoring trends and background air quality This is not required to be completed, however if available and Cause or major contributor of the exceedance If the cause or major contr butor are not able to be determined, then known facts of what was occurring at the time should be included (eg traffic information, ventilation outlet monitoring records etc) Options to prevent recurrence This is to include consideration of improvements to the tunnel air quality management system so as to achieve compliance with the ambient air quality goals, including but not limited to installation of the additional ventilation management facilities allowed for under condition B5, and discussion of whether those improvements are feasible and reasonable

WestConnex

Person responsible for report	Name
	Position
	Organisation
	Date



Appendix C - Contact list

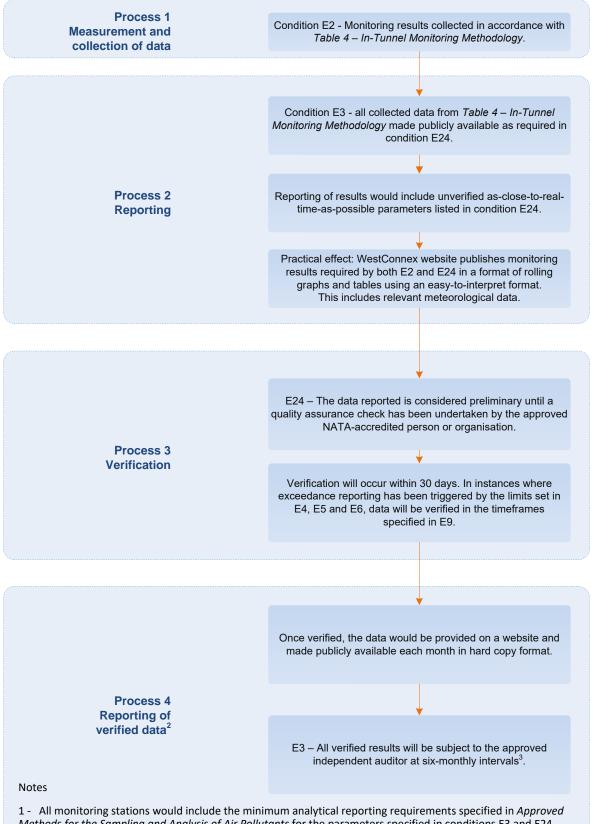
Environmental contacts

Title	Name	Phone number
O&M Contractor project repres	entatives	
Operation and Maintenance Manager	To be provided prior to commencement of operation	To be provided prior to commencement of operation
QSE Manager	To be provided prior to commencement of operation	To be provided prior to commencement of operation
Role TBC	To be provided prior to commencement of operation	To be provided prior to commencement of operation
Project Company representative	/es	
Project Company Project Representative	To be provided prior to commencement of operation	To be provided prior to commencement of operation
Roads and Maritime		
Roads and Maritime Project Representative	To be provided prior to commencement of operation	To be provided prior to commencement of operation
Stakeholders and relevant age	ncies	
Department of Planning & Environment	Director Infrastructure Management Director Compliance (Post Approvals)	
Fire and Rescue NSW		
EPA		
Ministry of Health / Camperdown Public Health Unit		
SafeWork NSW		
City of Sydney		
Canterbury Bankstown		
Bayside Council		
Georges River Council		
Inner West Council		
Transport Management		

Annexure B Air quality notifications and reporting system

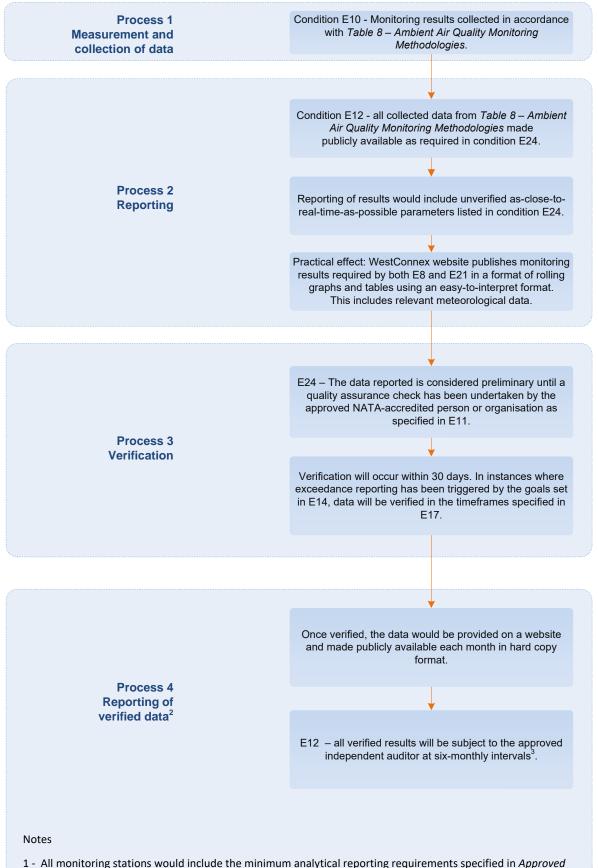
Revision Date 15 January 2020

M5 In-Tunnel Air Quality Reporting¹ Process



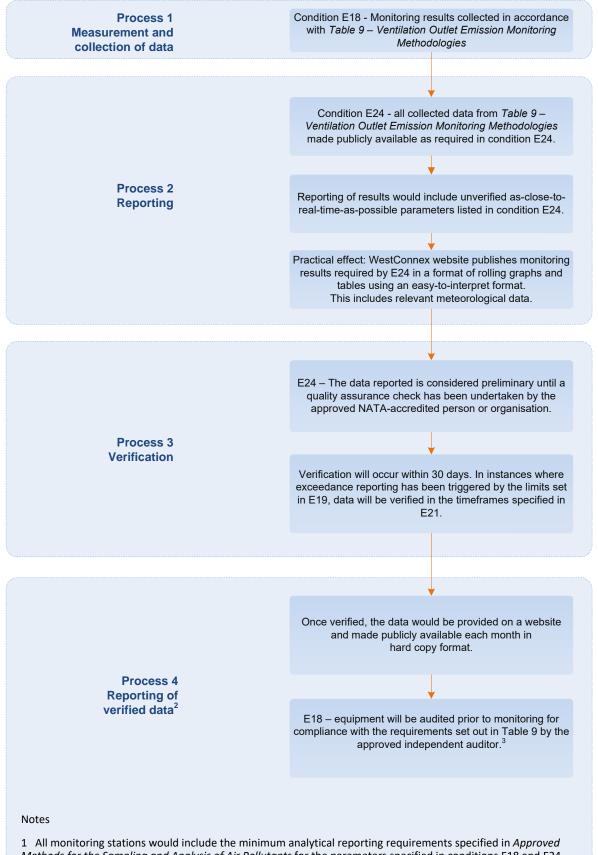
- Methods for the Sampling and Analysis of Air Pollutants for the parameters specified in conditions E3 and E24.
- 2 This is an important process used to determine whether there is a verified above limit reading substantiating the earlier triggering of E8 and E9.
- 3 As specified by condition E27, all results will be subject to six monthly audits by the approved independent auditor. The audit report will be published and issued to the AQCCC.

M5 Ambient Air Quality Reporting¹ Process



- 1 All monitoring stations would include the minimum analytical reporting requirements specified in *Approved Methods for the Sampling and Analysis of Air Pollutants* for the parameters specified in conditions E0 and E24.
- 2 This is an important process used to determine whether there is a *verified* above limit reading substantiating the earlier triggering of E15 E17.
- 3 As specified by condition E27, all results will be subject to six monthly audits by the approved independent auditor. The audit report will be published and issued to the AQCCC.

M5 Ventilation Outlet Reporting¹ Process



- Methods for the Sampling and Analysis of Air Pollutants for the parameters specified in conditions E18 and E24.
- 2 This is an important process used to determine whether there is a verified above limit reading substantiating the earlier triggering of E21. These ventilation outlet limits are also reviewed on a five-yearly basis as required by condition E20.
- 3 As specified by condition E27, all results will be subject to six monthly audits by the approved independent auditor. The audit report will be published and issued to the AQCCC.

Annexure C Summary monitoring table

CoA	Requirement	Parameter	Frequency	Responsibility
E2	In-tunnel monitoring	CO NO ₂ Visibility	Continuous	O&M Contractor
E18	Ventilation	Solid particles	Continuous	O&M Contractor
	outlets	Solid particles PM ₁₀ PM _{2.5}	Quarterly	
		NO ₂ or NO or both, as NO ₂ equivalent NO ₂ CO VOC ¹	Continuous	
		Speciated VOC Speciated PAH ²	Annual	
		Velocity Volumetric flow rate Moisture Temperature	Continuous	
E10	Ambient air quality monitoring	NO NO ₂ NO _x PM ₁₀ PM _{2.5} CO Wind speed @ 10m Wind direction @ 10m Sigma Theta @ 10m Temperature @ 2m Temperature @ 10m	Continuous	O&M Contractor

Notes:

^{1.} Must include, but not be limited to: Benzene, Toluene, Xylenes, 1,3-Butadiene, Formaldehyde and Acetaldehyde

^{2.} Must include, but not limited to: 16 USEPA priority PAHs, namely; Napthalene, Phenanthrene, Bez(a)anthracene, Benzo(a)pyrene, Acenapthylene, Anthracene, Chrysene, Indeno(1,2,3-cd)pyrene, Acenapthylene, Fluoranthene, Benzo(b)fluoranthene, Dibenz(a,h)anthracene, Fluorene, Pyrene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene.

Annexure K Operational Noise Management Plan



WESTCONNEX NEW M5

Operational Noise Management Plan (ONMP)

27 September 2019

CDS JV

TH014-15F01 ONMP (r4)

M5N-ES-PLN-PWD-0056





Document details

Detail	Reference
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	Mascot NSW 2020

Document control

Date	Revision history	Non-issued revision	Issued revision	Prepared	Instructed	Authorised
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29.03.2019	Draft		2			
28.05.2019	Address CDS comments		3			
23.08.2019	Address DPE and IC comments		4			

Important Disclaimer:

The work presented in this document was carried out in accordance with the Renzo Tonin & Associates Quality Assurance System, which is based on Australian Standard / NZS ISO 9001.

This document is issued subject to review and authorisation by the Team Leader noted by the initials printed in the last column above. If no initials appear, this document shall be considered as preliminary or draft only and no reliance shall be placed upon it other than for information to be verified later.

This document is prepared for the particular requirements of our Client referred to above in the 'Document details' which are based on a specific brief with limitations as agreed to with the Client. It is not intended for and should not be relied upon by a third party and no responsibility is undertaken to any third party without prior consent provided by Renzo Tonin & Associates. The information herein should not be reproduced, presented or reviewed except in full. Prior to passing on to a third party, the Client is to fully inform the third party of the specific brief and limitations associated with the commission.

In preparing this report, we have relied upon, and presumed accurate, any information (or confirmation of the absence thereof) provided by the Client and/or from other sources. Except as otherwise stated in the report, we have not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our observations and conclusions as expressed in this report may change.

We have derived data in this report from information sourced from the Client (if any) and/or available in the public domain at the time or times outlined in this report. The passage of time, manifestation of latent conditions or impacts of future events may require further examination and re-evaluation of the data, findings, observations and conclusions expressed in this report.

We have prepared this report in accordance with the usual care and thoroughness of the consulting profession, for the sole purpose described above and by reference to applicable standards, guidelines, procedures and practices at the date of issue of this report. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report, to the extent permitted by law.

The information contained herein is for the purpose of acoustics only. No claims are made and no liability is accepted in respect of design and construction issues falling outside of the specialist field of acoustics engineering including and not limited to structural integrity, fire rating, architectural buildability and fit-for-purpose, waterproofing and the like. Supplementary professional advice should be sought in respect of these issues.

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Introduction

Renzo Tonin & Associates (NSW) Pty Ltd, on behalf of CPB Dragados Samsung Joint Venture (CDS) has prepared this Operational Noise Management Plan (ONMP) which provides details of the noise and vibration mitigation measures to be implemented for the operation of the WestConnex New M5 Project (the Project). It forms a key element of the Operational Environmental Management Plan (OEMP) for the WestConnex New M5 Project (the Project).

This ONMP meets the requirements of the conditions E34 and E35 stipulated in Schedule 2, Part E of the Minister's Conditions of Approval (MCoA), dated 20th April 2016 related to operational noise.

The noise mitigation measures outlined in this ONMP have been designed based on the requirements of the NSW 'Road Noise Policy' (RNP, 2011), NSW 'Industrial Noise Policy' (INP, 2000), the Roads and Maritime's 'Noise Criteria Guideline' (NCG, 2015) and 'Noise Mitigation Guideline' (NMG, 2015) and the Environmental Impact Statement (EIS), in accordance with Schedule 2, Part E of the Minister's Conditions of Approval (MCOA).

The key noise mitigation measures referred to in this plan were determined as part of the detailed design phase for the Project, and are presented in detail in the Operational Noise and Vibration Review (ONVR).

Vibration impacts from traffic travelling along the various surface roads and tunnels associated with the Project was considered in the Operational Noise and Vibration Review (ONVR). Vibration from road traffic is expected to be negligible at sensitive receivers adjoining the Project. Therefore, operational management of vibration from road traffic is not further addressed in this plan.

Based on the proposed operations of the fixed facilities and the large distances to nearby sensitive receiver locations, vibration generated by the operation of the fixed facilities is not significant and is also not further addressed in this plan.

1 Purpose and objectives

This ONMP has been prepared to meet the requirements of the Minister's Conditions of Approval E34, E35 and E36. The objective of the ONMP is to provide details of the noise and vibration control measures to be implemented to minimise noise impacts to the community during the operational stage of the Project. This plan also discusses the monitoring and assessment methodology that will be followed to meet Condition E38.

This ONMP forms part of the Operation Environmental Management Plan (OEMP), which is the overarching document detailing governance and a structured approach to the management of environmental issues during the operation and maintenance of the Asset.

1.1 Purpose

In accordance with Condition E34 of the MCoA, the purpose of this ONMP is to:

- confirm the noise criteria for the Project to manage noise impacts on local residences and other noise-sensitive receivers;
- present the predicted noise levels from the operation of the Project, including traffic noise and noise from operational fixed facilities;
- identify the location, type and timing of noise mitigation measures, both physical and managerial measures, designed for the operation of the Project;
- outline noise monitoring, reporting and response procedures for the post-opening noise assessment of the Project, including the monitoring of traffic noise and noise from the operational fixed facilities;
- provide procedures for the management of operational noise and vibration complaints; and
- preparation of an Operational Ancillary Facility Noise Management Sub-Plan.

1.2 Objectives

The objectives of the ONMP are to meet the commitments to the community in managing noise and vibration impacts from the operation of the Project as described in the Minister's Conditions of Approval for the Project.

1.3 Document updates and review

This ONMP will remain a flexible document that provides continual feedback and improvement. Updates to this plan may be required to reflect:

- acceptance of mitigation measures following stakeholder consultations
- improvements in mitigation, management and monitoring measures

- changes in:
 - project implementation and operation
 - environment resulting in new or amended risks
 - maintenance methods
 - organisational structure, roles and responsibilities
 - legislation, regulation, policy and guidance
- where requested or required by DP&E or any other relevant authority.

Updates to the plan in response to regular review of the ONMP may be approved internally if they are considered minor. Minor changes would typically include those that:

- are editorial in nature (e.g. staff and agency/authority name changes);
- do not increase the magnitude of noise and/or vibration impacts to affected receivers when considered individually or cumulatively;
- are in response to audit findings or periodic reviews; or
- do not comprise the ability of the project to meet approval or legislative requirements.

Where necessary, the updated ONMP will be provided to relevant stakeholders (eg. EPA) for review and comment if required and forwarded to the Secretary of DP&E for approval.

The review process for the ONMP, and associated sub-plans, will be undertaken annually to ensure compliance with the SWTC and current Acts, Regulations and Specifications. The review process will be completed by the relevant personnel with assistance from an acoustic consultant.

2 Conditions of Approval

Table 1 summarises the Minister's Conditions of Approval (MCoA) that require consideration as part of this ONMP. The conditions of approval listed below are those issued by the Minister for Planning in April 2016 for application no. SSI 6788 applicable to operational noise.

Table 1 Minister's Conditions of Approval for Operational Noise and Vibration

MCoA No.	MCoA Details	Reference in this document
E34	A detailed Operational Noise Management Plan must be prepared as part of the Operational Environmental Management Plan required by condition E31 and submitted to the Secretary for approval. The Operational Noise Management Plan must provide details of noise and vibration control measures to be undertaken during the operation stages, and generally in accordance with the NSW Road Noise Policy (DECCW, 2011) and the NSW Industrial Noise Policy (EPA, 2000).	This document
	The Operational Noise Management Plan must include, but not be limited to:	
(a)	tests for ascertaining acoustic parameters;	Section 4
(b)	predicted noise levels;	Section 5
(c)	noise criteria for operation of the project based on the objectives of the NSW Road Noise Policy (DECCW, 2011) and the NSW Industrial Noise Policy (EPA, 2000);	Section 3
(d)	location, type and timing of erection of permanent noise barriers and/or other noise mitigation measures (including details of the barrier to replace the existing noise mound at Beverly Grove Park, consistent with the requirements of condition B62(f) demonstrating best practice including silencers and building treatments for associated plant rooms and enclosures for exposed plant;	Section 6.1.2, Section 6.2,
(e)	specific physical and managerial measures for controlling noise;	Section 6.1, Section 6.2, Section 6.3
(f)	noise monitoring, reporting and response procedures including the monitoring on surrounding roads which experience significantly increased traffic volumes as a result of the project, and including operational facilities;	Section 7
(g)	procedures for operational noise and vibration complaints management, including investigation and monitoring (subject to complainant agreement); and	Section 8
(h)	an Operational Ancillary Facility Noise Management Sub-Plan including, but not limited to -	APPENDIX E
	(i) identification of the final location of all operational ancillary facilities and plant including the Motorway Complex, ventilation facilities, tunnel jet fans and water treatment plants,	App E, Section 1
	(ii) the sound power levels of all chosen equipment and plant to be utilised during operation including spectral sound characteristics and frequency data,	App E, Section 2
	(iii) identification and/or confirmation of sensitive receivers and appropriate categorisation of the surrounding area in accordance with the INP,	App E, Table 1
	(iv) identification of the applicable noise goals, including spectral frequency, for all sensitive receivers identified as being potentially impacted by any operational ancillary facility,	App E, Table 5
	(v) presentation of noise assessment and predicted impacts including the use of mapping and noise contours,	App E, Section 4 and Appendix B
	(vi) identification and implementation of appropriate mitigation measures including building treatment, site layout, attenuators and demonstration that chosen mitigation measures can adequately achieve the noise goals in the INP, and	App E, Section 5 and Table 7

MCoA No.	MCoA Details	Reference in this document
	(vii) details of maintenance and inspection schedules to ensure plant, equipment and other operational ancillary facilities are operating at optimal levels; and	App E, Section 6
(i)	mechanisms for the monitoring and review of the Operational Noise Management Plan	Section 1.3
E35	For the purpose of assessment of noise criteria specified in the Operational Noise Management Plan, required under condition E34, noise from the development arising from ventilation facilities and plant must be:	-
(a)	measured at the most affected point on or within the site boundary at the most sensitive locations to determine compliance with the $L_{Aeq,T}$ noise limits;	Section 7
(b)	measured in the free field at least three to five metres from any vertical reflecting surface in line with the worst-affected dwelling facade to determine compliance with L_{Amax} noise limits; and	Section 7
(c)	subject to the modification factors provided in Section 4 of the NSW Industrial Noise Policy (EPA, 2000), where applicable.	Section 3.2.2
	Notwithstanding, should direct measurement of noise from the fixed facilities be impractical, the Proponent may employ an alternative noise assessment method deemed acceptable by the EPA (refer to Section 11 of the NSW Industrial Noise Policy (EPA, 2000)). Details of such an alternative noise assessment method accepted by the EPA must be submitted to the Secretary prior to the implementation of the assessment method.	Section 7.2.4
E36	the Proponent must design and operate the SSI with the objective, where feasible and reasonable, of not exceeding the vibration goals for human exposure for existing receivers, as presented in <i>Assessing vibration: a technical guideline</i> (DECC, 2006)	Section 1

Table 2 summarises the revised environmental management measures (REMMs) that would require consideration as part of this ONMP. The REMM listed was presented in the New M5 Submissions and Preferred Infrastructure Report (Volume 1B), dated March 2016.

Table 2 Revised Environmental Management Measures

REMM No.	Environmental management measure	Reference in this document
OpNV01	At locations where residual impacts remain after all feasible and reasonable approaches have been exhausted, noise mitigation in the form of acoustic treatment of existing individual dwellings will be considered.	Section 6.1.3
OpNV02	Operational traffic noise will be monitored at sensitive receivers between six months and one year after opening. If the traffic noise levels are above the predicted levels, consideration of additional feasible and reasonable mitigation measures will be undertaken.	Section 7
OpNV3	Operational fixed facilities will be designed to meet project specific noise criteria derived in accordance with the NSW Industrial Noise Policy.	Section 3.2

3 Operational Noise Criteria

3.1 Road traffic noise criteria

In accordance with the MCoA, the traffic noise mitigation measures designed for the operational stage of the Project have been designed in accordance with the NSW 'Road Noise Policy' (RNP) and Roads and Maritime's 'Noise Criteria Guideline' (NCG) and 'Noise Mitigation Guideline' (NMG).

Traffic noise criteria are assigned to sensitive receivers using the Roads and Maritime Services' NCG. The NCG provides guidance on how to apply the requirements of the RNP. The assessment timeframe for the criteria are in the year of opening and 10 years after opening, which for the project is 2021 and 2031, respectively.

The project assessment area extends to where noise levels are dominated by other roads that are not being assessed as part of this project, as defined in the NCG. This is up to a maximum distance of 600 metres from the centreline of the outermost traffic lane on each side of the subject road.

The WestConnex New M5 project comprises of a freeway, arterial roads, sub-arterial roads and new tunnels which carry traffic directly from one locality to another and have characteristically heavy and continuous traffic flows. The upgrade of the Project typically involves the widening of the existing road corridors to accommodate tunnel portals and to increase the traffic carrying capacities of the existing roads. Noise from traffic travelling through the tunnels would be contained within the tunnels and would not impact noise sensitive areas on the surface. Therefore, only operational traffic noise from surface roads and tunnel portals were assessed as part of the ONVR.

The RNP and the NCG set road noise criteria based on the road's function in the road network and the type of road development.

The roads which form the Project are classified as freeways, arterial roads and sub-arterial roads because they support major regional traffic movement and provide connection to local roads. In accordance with the Environmental Impact Statement (EIS), the Project contains three different noise categories. These are:

New Road

Per the NCG, a road is assessed as a 'new' road for any of the following cases:

- The project proposes road construction in an undeveloped corridor
- The road project changes the functional class of the road
- Widening, curve straightening, or adjustment of the corridor occurs where the upgrade road pavement has been substantially realigned
- Duplication of an existing road where the new lanes have been substantially realigned from the existing corridor

• A bypass road extends beyond the existing road corridor, where substantial realignment of an existing road is defined as a distance beyond a tolerance band that is six (6) times the existing road's total lane width.

Parts of the Project will involve the acquisition and demolition of buildings to allow the road corridor to be widened. Where the Project is substantially realigned outside the existing road corridor, the 'new' road assessment criteria would be applicable to the impacted receivers.

The 'new' road assessment criteria have been adopted for receivers affected by the following roads:

Road name	Reason for 'new' road assessment
Campbell Road / Campbell Street	Significant widening and large increase in traffic carrying capacity means functional class will change to arterial/sub-arterial road
St Peters Interchange	Roads constructed in undeveloped corridor
Alexandra Canal crossing to Gardeners Road	Roads constructed in undeveloped corridor

Redeveloped Road

Per the NCG, for a road to be considered 'redeveloped' rather than 'new', the existing road pavement should not be substantially realigned. Typical examples of road upgrades assessable under the 'redeveloped' noise criteria include:

- Widening/adjustment of the corridor where the road segment (including duplicated carriageway)
 has not been substantially realigned
- Duplication of a carriageway adjacent and parallel with the existing road corridor where the widened road has not been substantially realigned
- Duplication of a carriageway wholly within an existing corridor
- Introduction of on or off ramps to provide access through an intersection that was previously inaccessible for that direction.

The 'redeveloped' road assessment criteria have been adopted for receivers affected by the following roads:

Road name	Reason for 'redeveloped' road assessment
Euston Road	Road widening occurs within existing corridor
M5 and New M5 lanes at western portal	Road widening and adjustment of corridor occurs without substantial realignment

Transition Zone

The NCG defines a 'transition zone' as the junction between new and redeveloped roads or different functional classes. In these areas, transition zones are established, which provide a gradual change in noise criteria according to the road type (redeveloped or new) which the receivers are most exposed to.

At the St Peters Interchange end of the Project, whilst there are both new and redeveloped project roads, there are no receivers within any transition zones. All receivers have either new or redeveloped road criteria.

At the Kingsgrove end of the project there are no transition zones as all project roads are redeveloped roads. All residential receivers have been assigned with redeveloped road criteria.

3.1.1 Relative Increase Criteria

A large increase in the existing level of noise can cause a major change in the acoustic environment of a location. Under Section 8 of the NCG and Section 2.4 of the RNP, this is assessed using the 'Relative Increase Criterion' (RIC). The purpose of the RIC is to recognise the potential for such a change and provide a means to assess and mitigate for this type of noise impact.

Some receivers may not be currently impacted by traffic noise due to noise shielding provided by buildings located between the receiver and the road. This potentially occurs where the widened road corridor results in houses being demolished, exposing receivers to traffic noise when they were previously well shielded by the demolished houses. For these receivers, the traffic noise impact from the project would need to also comply with the RIC.

The RIC is to be applied to the external areas of existing residential receivers impacted upon by the project. The RIC, as set out in the NCG and RNP applicable to this project, is reproduced as follows.

Table 3 Relative Increase Criterion

Type of development	Total traffic noise level increase, dB(A)
Redevelopment of existing road	Existing traffic L _{Aeq(period)} + 12 dB (external)

Notes: 'Existing traffic' refers to the traffic noise levels for the relevant 'No build' scenario

The RIC should only be applied to receivers where the noise criteria are more stringent than the new or redeveloped road criteria. For this Project the RIC would only be applied where existing traffic noise levels at the receiver are very low: for example, day LAeq(15hour) traffic noise < 42 dB(A) for new and < 47 dB(A) for redeveloped roads; or night LAeq(9hour) traffic noise < 37 dB(A) for new and < 42 dB(A) for redeveloped roads. When assigning noise criteria to receivers, the requirements for RIC have been applied in accordance with Table 3 above.

3.1.2 Traffic noise criteria for residential receivers

A summary of the applicable traffic noise criteria in accordance with the NCG for residential receivers is presented in the table below.

Table 4 NCG Criteria for residential receivers

		Assessment criteria (dB)	
Road category	Type of project/land use	Daytime (7am to 10pm)	Night-time (10pm to 7am)
Freeway/ arterial/ sub- arterial roads	Existing residences affected by noise from new freeway/arterial/sub-arterial road corridors Existing residences affected by noise from redevelopment of existing freeway/arterial/sub-arterial roads	L _{Aeq(15hr)} 55 (external) L _{Aeq(15hr)} 60	LAeq(9hr) 50 (external) LAeq(9hr) 55
	3. Existing residences affected by additional traffic on existing freeways/arterial/sub-arterial roads generated by land use developments Output Description:	(external)	(external)
	4. Existing residences affected by both new roads and the redevelopment of existing freeway/arterial/sub-arterial roads in a Transition Zone ¹	Between L _{Aeq(15hr)} 55-60 (external)	Between L _{Aeq(9hr)} 50-55 (external)
	5. Existing residences affected by increases in traffic noise of 12dB(A) or more from new freeway/arterial/sub-arterial roads ²	Between L _{Aeq(15hr)} 42-55 (external)	Between L _{Aeq(9hr)} 42-50 (external)
	6. Existing residences affected by increases in traffic noise of 12dB(A) or more from redevelopment of existing freeway/arterial/sub-arterial roads ²	Between L _{Aeq(15hr)} 42-60 (external)	Between L _{Aeq(9hr)} 42-55 (external)

Notes

3.1.3 Sensitive land uses

The NCG and RNP also set criteria for the assessment of traffic noise on non-residential sensitive land uses such as schools, hospitals, places of worship and recreation areas. Given that there are non-residential sensitive land uses that may be potentially impacted by traffic noise from the project, the following criteria are presented in the table below.

Table 5 NCG Criteria for non-residential sensitive land uses

Existing sensitive	Assessment criteria,	dB(A)	Additional considerations
land use	Day (7am to 10pm)	Night (10pm to 7am)	Additional considerations
School classrooms	L _{Aeq(1hr)} 40 (internal) when in use	-	In the case of buildings used for education or health care, noise level criteria for spaces other than classrooms and wards may be obtained by
Hospital wards	L _{Aeq(1hr)} 35 (internal)	L _{Aeq(1hr)} 35 (internal)	interpolation from the 'maximum' levels shown in Australian Standard 2107:2000 (Standards Australia 2000).

^{1.} The criteria assigned to the entire residence depend on the proportion of noise from the new and redeveloped road. See the NCG for further information.

^{2.} The criteria at each facade are determined from the existing traffic noise level plus 12dB(A).

Existing sensitive	Assessment criteria, dB(A)		— Additional considerations	
land use	Day (7am to 10pm) Night (10pm to 7am)			
Places of worship	L _{Aeq(1hr)} 40 L _{Aeq(1hr)} 40 (internal)		The criteria are internal, i.e. the inside of a church. Areas outside the place of worship, such as a churchyard or cemetery, may also be a place of worship. Therefore, in determining appropriate criteria for such external areas, it should be established what in these areas may be affected by road traffic noise.	
			For example, if there is a church car park between a church and the road, compliance with the internal criteria inside the church may be sufficient. If, however, there are areas between the church and the road where outdoor services may take place such as weddings and funerals, external criteria for these areas are appropriate. As issues such as speech intelligibility may be a consideration in these cases, the passive recreation criteria (see point 5) may be applied.	
Open space (active use)	L _{Aeq(15hr)} 60 (external) when in use		Active recreation is characterised by sporting activities and activities which generate their own noise or focus for participants, making them less sensitive to external noise intrusion.	
			Passive recreation is characterised by contemplative activities that generate little noise and where benefits are compromised by external noise intrusion, e.g. playing chess, reading.	
Open space (passive use)	L _{Aeq(15hr)} 55 (external) when in use		In determining whether areas are used for active or passive recreation, the type of activity that occurs in that area and its sensitivity to noise intrusion should be established. For areas where there may be a mix of passive and active recreation, e.g. school playgrounds, the more stringent criteria apply. Open space may also be used as a buffer zone for more sensitive land uses.	
Isolated residences in commercial or industrial zones	-	-	For isolated residences in industrial or commercial zones, the external ambient noise levels can be higher than those in residential areas. Internal noise levels in such residences are likely to be more appropriate in assessing any road traffic noise impacts, and the proponent should determine suitable internal noise level targets, taking guidance from Australian Standard 2107:2000 (Standards Australia 2000).	
Mixed use development	-	-	Each component of use in a mixed use development should be considered separately. For example, in a mixed use development containing residences and a childcare facility, the residential component should be assessed against the appropriate criteria for residences in Table 3, and the childcare component should be assessed against the childcare criteria below.	

Existing sensitive	Assessment criteria, dB(A)		Additional considerations	
land use	Day (7am to 10pm) Night (10pm to 7am)			
Childcare facilities	Sleeping rooms $L_{Aeq(1hr)}$ 35 (internal)	-	Multi-purpose spaces, e.g. shared indoor play/sleeping rooms should meet the lower of the respective criteria.	
	Indoor play areas L _{Aeq(1hr)} 40 (internal)		Measurements for sleeping rooms should be taken during designated sleeping times for the facility, or if these are not known, during the highest hourly traffic noise level during the opening hours of the	
	Outdoor play areas L _{Aeq(1hr)} 55 (external)	facility.		
Aged care facilities	-	-	Residential land use noise assessment criteria should be applied to these facilities	

Notes:

Land use developers must meet internal noise goals in the Infrastructure SEPP (Department of Planning NSW 2007) for sensitive developments near busy roads.

For sensitive land uses such as schools, hospitals, places of worship and childcare centres the criteria are applicable to internal areas. It is generally accepted that most buildings provide a noise reduction of at least 10dB(A) when windows are left 20% open, without providing additional treatment. Therefore, where the noise goals are internal, a 10dB(A) reduction from external noise levels to internal noise levels has been adopted to allow an external assessment. This approach is consistent with the EIS.

For childcare centres, it is noted that two internal noise criteria are applicable, representing sleeping rooms and indoor play areas. For the purpose of a conservative assessment, the equivalent external criterion of 45dB(A) [ie. 35dB(A) + 10dB(A)] for sleeping rooms has been applied as part of the noise assessment for childcare centres. Detailed information on floorplans of childcare centres determined to exceed the NCG criteria should be obtained to confirm the use of the internal areas adjacent to facades determined to exceed the assigned sleeping room criterion. Where the internal areas are not sleeping rooms, then a reassessment of the predicted noise levels should be undertaken against the equivalent external noise criterion for indoor play areas [ie. 50dB(A)].

3.1.4 Noise impacts from existing roads

The NCG provides guidance for assessing traffic noise from existing roads not subject to any redevelopment but predicted to increase traffic noise levels by more than 2dB(A) as a result of the project. An example of this is when traffic from the project uses the existing road as a detour resulting in traffic volumes to significantly increase on the existing road, which in turn increases the traffic noise levels at affected receivers by more than 2dB(A).

At the Kingsgrove western interchange, there are no existing roads identified as potentially having traffic noise levels increasing by more than 2dB(A) due to the project. King Georges Road connects to the existing M5 Motorway and New M5 at the western end of the project, however the King Georges

Road Interchange has recently been upgraded as a separate project with assessment of traffic noise levels and mitigation conducted separately.

The construction of the St Peters Interchange is predicted to increase road traffic noise by more than 2dB(A) in the Opening Year (2021) on Kent Road, Mascot. Receivers adjacent to Kent Road have existing road criteria applied. For the receivers impacted upon by these sections of roads and given that these roads are not subject to redevelopment, the NCG and RNP states that the existing road criteria applies.

Table 6 NCG criteria existing roads not subject to redevelopment

Evirting road category	Target noise level (dBA)		
Existing road category	Daytime (7am to 10pm)	Night-time (10pm to 7am)	
Freeway/arterial/sub-arterial road	L _{Aeq(15hr)} 60 (external)	L _{Aeq(9hr)} 55 (external)	

3.2 Operational fixed facilities noise criteria

3.2.1 NSW Industrial Noise Policy (INP) Criteria

The EIS noise criteria for operational fixed facilities and any modifications to the criteria are presented in Table 7. These criteria have been set in accordance with the NSW 'Industrial Noise Policy' (INP) and confirmed by additional noise monitoring conducted by SLR in October 2015. The goals are for total noise from all noise sources associated with each fixed facility including:

- ventilation exhaust noise
- noise breakout from fan buildings
- jet fan noise from portals
- ancillary equipment such as substation transformers, condensers and fans associated with substation buildings, fire pump buildings, and water treatment plants.

Table 7 Noise criteria for fixed facilities, dB(A)

Period	Kingsgrove MOC1	Bexley Road South MOC2	Arncliffe MOC3	St Peters MOC4 and FWC1	Motorway Control Centre MOC5
Day	50	52	52	47	59
Evening	45	45	50	45	51
Night	38	40	44	41 ¹	45

Notes: 1. The criteria for St Peters is lower than the EIS reported criteria based on additional noise monitoring in accordance with Condition E37(b).

3.2.2 INP modifying factor adjustments

Where the character of the industrial noise is assessed as particularly annoying (i.e. if it has an inherently tonal, low frequency, impulsive or is intermittent at night), then an adjustment is to be added to

penalise the noise for its potential increase in annoyance. The INP provides definitive procedures for determining whether a penalty or adjustment should be applied.

Noise from ventilation facilities has been assessed and it has been determined that noise emissions from the large ventilation fans would likely have low-frequency characteristics, and therefore a 5dB penalty has been applied. This penalty has been applied by adding 5dB to the predicted levels for the ventilation fans only. The penalty has not been added to the noise predictions for building services equipment.

3.2.3 EPA's sleep disturbance criteria

The NSW EPA has made the following policy statement with respect to sleep disturbance as part of the INP Application Notes (December 2010):

Peak noise level events, such as reversing beepers, noise from heavy items being dropped or other high noise level events, have the potential to cause sleep disturbance. The potential for high noise level events at night and effects on sleep should be addressed in noise assessments for both the construction and operational phases of a development. The INP does not specifically address sleep disturbance from high noise level events.

Research on sleep disturbance is reviewed in the NSW Road Noise Policy. This review concluded that the range of results is sufficiently diverse that it was not reasonable to issue new noise criteria for sleep disturbance.

From the research, the EPA recognised that the current sleep disturbance criterion of an LA1, (1 minute) not exceeding the LA90, (15 minute) by more than 15 dB(A) is not ideal. Nevertheless, as there is insufficient evidence to determine what should replace it, the EPA will continue to use it as a guide to identify the likelihood of sleep disturbance. This means that where the criterion is met, sleep disturbance is not likely, but where it is not met, a more detailed analysis is required.

The detailed analysis should cover the maximum noise level or LA1, (1 minute), that is, the extent to which the maximum noise level exceeds the background level and the number of times this happens during the night-time period. Some guidance on possible impact is contained in the review of research results in the NSW Road Noise Policy. Other factors that may be important in assessing the extent of impacts on sleep include:

- how often high noise events will occur
- time of day (normally between 10pm and 7am)
- whether there are times of day when there is a clear change in the noise environment (such as during early morning shoulder periods).

The LA1, (1 minute) descriptor is meant to represent a maximum noise level measured under 'fast' time response. The EPA will accept analysis based on either LA1, (1 minute) or LA, (Max).

Source: http://www.epa.nsw.gov.au/noise/applicnotesindustnoise.htm

In summary, the sleep disturbance criteria of $L_{A1(1min)} \le L_{A90(15min)} + 15dB(A)$ is to be used for initial assessment. The L_{Amax} descriptor may be used as an alternative to the $L_{A1(1min)}$. It is noted that the background L_{A90} noise level used for establishing the sleep disturbance criteria includes all background noise including noise from the project.

Where the background noise level is very low, this may result in a limit which is unnecessarily strict. Therefore, where the screening limit L_{A90} + 15 is less than 55dB(A) outside, a value of 55dB(A) would be appropriate to ensure the internal noise level does not exceed 45dB(A), on the assumption that there is a 10dB(A) outside-to-inside noise loss through an open window (see INP, p17). Where windows are likely to remain closed on the basis of adequate ventilation that meets the Building Code of Australia's ventilation requirements, then outside noise levels can be greater than 65dB(A), on the assumption that there is a minimum 20dB(A) outside-to-inside noise loss through a closed window.

The project sleep disturbance criteria are presented in Table 8.

Table 8 Sleep Disturbance Screening Limits, dB(A)

	Kingsgrove MOC1	Bexley Road South MOC2	Arncliffe MOC3	St Peters MOC4 and FWC1	Motorway Control Centre (MOC5)
RBL	41	41	39	36	40
Screening limit	56	56	55 ²	55 ²	55

Notes:

- 1. The criteria apply for the night time period only
- 2. Set at 55dB(A) in accordance with EPA lower limit

4 Noise Assessment Methodology

4.1 Road traffic noise modelling

Road traffic noise modelling was undertaken using the Road Traffic Noise Module in the CadnaA noise modelling software. This noise modelling software is recognised and accepted by NSW Roads and Maritime Service, Environment Protection Authority and the Department of Planning & Environment.

The traffic noise prediction model adopted by CadnaA is based on a method developed by the United Kingdom Department of Environment entitled "Calculation of Road Traffic Noise (1988)" known as the CoRTN88 method. This method has been adapted to Australian conditions and extensively tested by the Australian Road Research Board. The model predicts noise levels for free-flowing traffic and a modified method has been developed which enables an accurate prediction of noise from high truck exhausts to be considered.

The method predicts the $L_{A10(1hr)}$ noise levels, and a correction of -3dB(A) is applied to obtain the $L_{Aeq(1hr)}$ noise levels. The $L_{Aeq(1hr)}$ noise levels for the daytime 15 hour period from 7am to 10pm are then determined to derive the daily $L_{Aeq(15hr)}$ noise level. Similarly, the $L_{Aeq(1hr)}$ noise levels for the night-time nine hour period from 10pm to 7am are then determined to derive the night time $L_{Aeq(9hr)}$ noise level.

The noise prediction model takes account of the following inputs:

Table 9 Summary of modelling inputs

	·
Parameters	Inputs
Model geometry	
Source height	Three source heights:
	0.5m for car exhausts/engines and car/truck tyre noise
	1.5m for heavy vehicle engines
	3.6m for heavy vehicle exhausts
Source lines	All lanes of traffic on multi-lane roads have been considered by applying even distribution of traffic across carriageways
Ground topography at receiver and road:	Topographic data provided previously in the Tender Documents (electronic). Land contours presented in 1m intervals.
Road alignment	Existing: Current 2D Cadastral and aerial photo
	Future: Detailed design road geometry provided by CDS JV.
Noise sensitive receiver locations, building heights, angle of view:	From aerial and terrestrial photography, supplemented by site checks and surveys.
Receiver heights	Buildings receiver heights:
	 1.5m above ground level to represent 1.5m above ground floor level
	 4.5m above ground level to represent 1.5m above first floor level
	 For multi-storey residences, it has been assumed that all floors are 3m in height with the assessment point for each floor at 1.5m above floor level.

Parameters	Inputs	
Road pavement surface:	 Western Interchange noise model Open graded asphalt (OGA) for the 'No build' and 'Build' M5 Open graded asphalt (OGA) for the NewM5 surface lanes 	Motorway
	St Peters Interchange noise model	
	Dense Graded Asphalt (typically AC14)	
Noise barriers	Western Interchange	
	Existing noise wall heights and locations based on data provi-	ded by CDS JV
	 Locations, heights and lengths of new noise barriers analysed methodology and final heights determined though feasibility with RMS and community. 	_
	St Peters Interchange	
	F-type barriers on ramps	
Reflections from existing	Determined from review of design drawings and aerial photography	of the Project area.
barriers, structures & cuttings on opposite side of road	Detailed within CoRTN algorithms and their application in CadnaA (v2017).
Traffic parameters		
Traffic volume and mix	Traffic volumes for daytime 15hr and night-time 9hr and correspond vehicle mix as per EIS information, and additional data/clarifications surrounding road network where not detailed in the EIS.	
Vehicle speed	Western Interchange	
	M5 Motorway main carriageway 80km/h	
	M5 Motorway ramps 80km/h	
	St Peters Interchange	
	SPI interchange main alignment 80km/hSPI interchange ramps 60km/h	
	SPI local roads 60km/h	
Corrections to model	5.7.566.15665	
L _{A10} to L _{Aeq} conversion	$L_{Aeq} = L_{A10} - 3dB(A)$	
Heavy vehicle source	-0.6dB at 1.5m source height	
distribution corrections	-8.6dB at 3.6m source height	
Road pavement surface	Corrections applied relevant to standard Dense Graded Asphalt (DG OdB(A) for DGA -2dB(A) for OGA	A):
Tunnel portal correction:	Portal noise amplification was modelled by adding +4dB on road tradistance of 80m at portal dives.	affic line sources for a
Ground Absorption	0.5	
Facade correction	+2.5dB(A), when modelling to 1m from building facades [RNP Table	7 (p17)].
Australian conditions	Western Interchange noise model	
corrections:	 -1.7 dB(A) for 'at 1m from facade' conditions (L_{Aeq(15hr)} only) 	
	 -0.7 dB(A) for 'free field' conditions (L_{Aeq(15hr)} only) 	
	St Peters Interchange noise model	
	• -1.7 dB(A) for 'at 1m from facade' conditions (L _{Aeq(15hr)} and L _{Ae}	q(9hr))
	-0.7 dB(A) for 'free field' conditions (L _{Aeq(15hr)} and L _{Aeq(9hr)})	(6)
	from the Australian Road Research Board (ARRB) Transport Research and referred to in Austroads Research Report (ARR), "An Approach Traffic Noise Models" (2002).	

Parameters	Inputs
Calibration adjustment:	Noise model validated using noise monitoring data collected during EIS phase. No calibration adjustment required.
CadnaA noise model setting	gs
Calculation method:	Ray-tracing method adopted, as opposed to angle-scan method
Maximal search radius:	3,000m

4.2 Road noise model validation

4.2.1 Western Interchange

The traffic noise model was validated by comparing measured noise levels and predicted noise levels at the same locations, as shown in Table 10. The validation outcomes show a good level of agreement between the noise model and noise measurements. Given that the overall mean difference was found to be within 1dB(A) for both daytime $L_{Aeq(15hr)}$ and night-time $L_{Aeq(9hr)}$ periods and the noise model generally predicts conservatively higher noise levels than what was measured, no calibration factor was applied to the Western Interchange noise model.

The noise measurements and traffic counts for locations L01 to L06 were concurrent. The noise measurements at L11, L13 and L14 were not concurrent with the traffic counts but were included to see if the validation held true for these locations. Traffic flows on motorways such as the M5 are often very consistent from day to day and due to the high volumes, it would take a large change in traffic to see a significant difference in noise levels. Assuming the traffic volumes were generally consistent during both monitoring periods, these three additional locations were included. If these three locations were removed from the analysis and only the first five locations were used, the validation would still be acceptable as the measured versus modelled difference would still be less than 1dB(A).

Table 10 Noise model validation (Western Interchange)

Location	Address	Traffic noise level, dB(A)							
		Measured existing ^{1, 2}		Modelled existing ³		Difference (modelle minus measured)			
		L _{Aeq(15hr)}	L _{Aeq(9hr)}	L _{Aeq(15hr)}	L _{Aeq(9hr)}	L _{Aeq(15hr)}	L _{Aeq(9hr)}		
L01	6 Grove Avenue, Narwee	57	53	57.5	53.9	0.5	0.9		
L02	15 Rosetta Street, Beverly Hills	57	54	57.7	54.0	0.7	0.0		
L03	311 King Georges Road, Beverly Hills	71	69	71.3	69.1	0.3	0.1		
L05	6 Allambee Crescent, Beverly Hills	55	52	56.9	53.1	1.9	1.1		
L06	19 Elouera Street, Beverly Hills	55	51	56.2	52.4	1.2	1.4		
L11	Top of noise mound, south of M5, east of heavy vehicle parking bay, Kingsgrove	73	71	75.1	71.2	2.1	0.2		
L13	Top of noise mound, north of M5, west of heavy vehicle parking bay, Kingsgrove	71	69	71.6	67.7	0.6	-1.3		

Location	Address	Traffic noise level, dB(A)									
		Measured existing ^{1, 2}		Modelled existing ³		Difference minus me	e (modelled asured)				
		L _{Aeq(15hr)}	Laeq(15hr) Laeq(9hr) Laeq(15hr)		L _{Aeq(9hr)}	L _{Aeq(15hr)}	L _{Aeq(9hr)}				
L14	97 Tallawalla Street, Beverly Hills	56	52	57.0	53.1	1.0	1.1				
				Mean diffe	erence	1.0	0.4				
				Standard deviation		0.8	0.9				

Notes:

- 1. Measured noise levels were provided as rounded whole numbers only.
- 2. Where the noise monitor was in the free field, the measured noise levels have had a +2.5dB facade correction added.
- 3. Modelled noise levels are facade corrected levels and include ARRB corrections

4.2.2 St Peters Interchange

Noise monitoring data from SLR as presented in "WestConnex Stage 2 Noise Logging Summary December 2014 Survey", and concurrent traffic counting was used for validation at St Peters. Monitoring location L01 was not used because the recorded address and location description was not consistent with the GIS location provided and the speed of vehicles at this location is uncertain. Location L05 was also not used because of uncertainty about the monitoring location and inconsistency with the results at nearby locations L06.

From the four locations that could be confidently used, the validation outcomes show a good level of agreement between the noise model and noise measurements. Given that the overall mean difference was found to be within 1dB(A) for both day and night periods, no calibration factor was applied to the St Peters model for both day and night.

Table 11 Noise model validation (St Peters Interchange)

Location	Address	Traffic noise level, dB(A)								
		Measured existing ^{1,2}		Modelled existing ³		Difference minus me	e (modelled easured)			
		L _{Aeq(15hr)}	L _{Aeq(9hr)}	L _{Aeq(15hr)}	L _{Aeq(9hr)}	L _{Aeq(15hr)}	L _{Aeq(9hr)}			
L02	112 Campbell St	62	54	60.9	54.5	-1.1	0.5			
L03	4-16 Campbell St	67	62	67.2	60.1	0.2	-1.9			
L04	506-518 Gardeners Rd	68	63	69.5	63.1	1.5	0.1			
L06	608 Princes Hwy	70	64	69.9	65.2	-0.1	1.2			
				Mean difference		0.1	0.0			
				Standard deviation		1.1	1.3			

Notes

- 1. Measured noise levels were provided as rounded whole numbers only.
- 2. Where the noise monitor was in the free field, the measured noise levels have had a +2.5dB facade correction added.
- 3. Modelled noise levels are facade corrected levels and include ARRB corrections

4.3 Operational fixed facilities noise assessment methodology

4.3.1 Methodology

Noise emissions from each operational fixed facility were assessed as follows:

 The total operating sound power level of the main ventilation fans was calculated based on the number of duty fans.

- Noise losses along the air path such as bend losses and directivity were subtracted, based on bare concrete finishes for fan rooms and exhaust stacks.
- The sound power level was converted to a sound pressure level at the receiver location based on the distance to the nearest or worst affected receiver and directivity, to provide an un-attenuated receiver level.
- The insertion loss of the proposed sound attenuator was subtracted and the expected attenuator regenerated noise component (as estimated by the attenuator supplier) was added, to determine the attenuated receiver noise level.
- A test for low-frequency or tonal noise annoyance was conducted as per the INP procedure and a 5dB(A) correction was added to the resultant noise level if required.
- The receiver noise level was compared to the noise goals and adjustments were made to the attenuator selections until the required noise goals were achieved.

In conjunction with the above assessment of ventilation fans and to allow assessment of total noise from any site, noise from other ancillary equipment associated with ventilation buildings and substation buildings such as condenser units, exhaust fans, supply air fans, relief air fans and transformers were added to ventilation facility noise. Mitigation measures were then determined for the ancillary equipment and buildings (e.g. silencers, acoustic louvres, acoustic doors, etc) so that total noise from any MOC did not increase above the set criterion.

Spectral data for the noise sources and spectral data for the noise mitigation (see Appendix E sub-plan) were used as inputs to the noise calculations. However, it is noted that the assessment of noise from fixed facilities is against the Industrial Noise Policy (INP), which is based on overall dB(A) noise levels.

Fire pumps would operate in an emergency situation but could also operate at night for periodic testing and this testing could potentially last for several hours. Therefore noise emissions were designed to comply with the night time noise criteria. Noise mitigation was designed based on the expected noise level of diesel pumps inside the fire pump rooms and includes mitigation measures such as concrete or core filled blockwork for walls, concrete roofs, silencers, grille attenuators and acoustic doors.

4.3.2 Noise model

Noise emissions were determined by modelling the noise sources, receiver locations, topographical features of the intervening area, and potential noise control treatments using the CadnaA computer

noise model. The model calculates the contribution of each noise source at each specified receptor point and allows for the prediction of the total noise from a site.

The noise prediction model takes into account:

- Location of noise sources and receiver locations
- Height of sources and receivers referenced to imported ground contours
- Separation distances between sources and receivers
- Ground type between sources and receivers (ground absorption = 0.5)
- Attenuation from barriers and buildings.

4.3.3 Sleep disturbance

Mechanical and electrical plant typically operates with fairly constant noise levels and without peak noise level events and therefore limited potential to exceed the L_{Amax} limits or cause sleep disturbance at night. The main ventilation fans change speed gradually on demand and therefore do not have any significant peak noise events. Transformers and building services such as condenser units and fans also operate fairly steadily. Electrical switchgear is wholly contained within substation buildings and any switching noise will be mitigated by the concrete and blockwork construction.

The L_{Amax} sleep disturbance criteria is at least 10dB higher than the L_{Aeq} criteria. Since all equipment have been mitigated to meet the lower L_{Aeq} criteria, and since the L_{Amax} emission of these items is expected to be within 10dB of the L_{Aeq} emission, then sleep disturbance is not expected to be an issue for any noise sources at the operational fixed facility sites. No special or additional noise mitigation measures are required to mitigate L_{Amax} noise events over and above the measures described in the sections below to mitigate L_{Aeq} noise.

4.4 Fixed facility noise sources

4.4.1 Ventilation fan noise levels

The noise assessment of the main ventilation fans for each MOC has been undertaken based on the fan sound power data presented in Table 12. MOC5 is a motorway control centre only and therefore has no ventilation fan noise sources.

Table 12 Fan sound power levels

		Sound power level, dB re1x10 ⁻¹² W (per fan)									
Building	No of fans operating at 100% capacity	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total dB(A)	
MOC1											
Exhaust	4	113	122	118	116	113	108	104	99	118	
MOC2											
Smoke exhaust	3	113	123	121	120	117	113	109	104	122	
MOC3											
Exhaust EB	3	124	122	124	122	118	113	109	104	123	
Exhaust SC NB	3	119	128	125	123	120	115	111	106	125	
Supply EB/WB	4	124	122	122	120	116	111	107	102	121	
Supply SC SB	2	111	121	118	118	115	110	106	101	120	
MOC4											
Exhaust	3	118	127	123	122	118	114	109	105	124	
Supply	4	111	120	118	118	115	111	106	101	120	

Note: Total dB(A) value is the A-weighted logarithmic sum of the octave band values

4.4.2 Jet Fans

Jet fans are to be installed at intervals along the length of the tunnel, suspended from the roof as part of the ventilation system. The preferred supplier of jet fans has conducted factory acceptance testing of noise levels from their fan and silencer combination, in accordance with ISO 13350:2015. The measured sound levels are shown in Table 13 and have been used for noise modelling.

Table 13 Jet fan sound power levels

Jet fan model	Direction	Sound F	Power Lev	el, dB re1	x10-12 W					Overall
	Direction	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dB(A)
1250mm	Forward	89	91	95	92	91	91	87	82	97
diameter with 2300mm silencer	Reverse	92	97	101	93	93	91	88	83	99

Note: Total dB(A) value is the A-weighted logarithmic sum of the octave band values

4.4.3 Ancillary equipment noise sources

Mechanical and Electrical drawing packages were provided by the design team showing the proposed locations of ancillary buildings such as substations and fire pump rooms. As the design progressed, the design team provided equipment selections and noise levels, which were added into the noise model and the total noise level from each fixed facility site was recalculated. Noise attenuation measures such as acoustic attenuators and screens were incorporated into ancillary facilities so that the total noise level from all sources did not exceed the noise criteria.

The key ancillary noise sources that could potentially add to the overall external noise level at receivers are listed below.

Table 14 Ancillary equipment sound levels

Plant Item	No. off	Indicative sound level
MOC1		
Substation		
Rooftop condenser OSA294	6	75dB(A) sound power
Rooftop condenser OSA116	4	75dB(A) sound power
Supply air fan	2	72dB(A) sound pressure @3m
HV room dry type transformer	2	80dB(A) maximum sound power
Fire pump room		
Fire pump (duty)	2	105dB(A) sound pressure @1m
Fire pump exhaust	2	95dB(A) sound power with muffler
Exhaust fan	2	102dB(A) sound power
MOC2		
Substation		
Rooftop condenser OSA294	6	75dB(A) sound power
Rooftop condenser OSA139	2	71dB(A) sound power
Supply air fan	2	70dB(A) sound pressure @3m
HV room dry type transformer	2	80dB(A) maximum sound power
MOC3		
Substation		
Rooftop condenser OSA294	5 duty, 2 standby	75dB(A) sound power
Supply air fan	2	74dB(A) sound pressure @3m
HV room dry type transformer	2	80dB(A) maximum sound power
MOC4		
Substation		
Rooftop condenser OSA324	6	71dB(A) sound power
Rooftop condenser OSA139	6	71dB(A) sound power
Supply air fan	2	77dB(A) sound pressure @3m
HV room dry type transformer	2	80dB(A) maximum sound power
Fire pump room		
Fire pump (duty)	2	105dB(A) sound pressure @1m
Fire pump exhaust	2	95dB(A) sound power with muffler
Exhaust fan	2	104dB(A) sound power

Plant Item	No. off	Indicative sound level
MOC5		
Substation		
Rooftop condenser OSA324	6	71dB(A) sound power
Ground level condenser OSA380	1 duty, 1 standby	80dB(A) sound power
Supply air fan	1 duty, 1 standby	68dB(A) sound pressure @3m
HV room dry type transformer	2	80dB(A) maximum sound power
MCC building		
Air handling unit	1 duty, 1 standby	63dB(A) sound pressure @4m
Air handling unit	2 duty	67dB(A) sound pressure @4m
Rooftop condenser unit	2 duty, 2 standby	61dB(A) sound pressure @3m

4.4.4 Transformers within Substation Buildings

Transformers within substation buildings will be required to meet AS60076.10 noise levels which are very stringent, and the sound power level of each transformer is expected to be in the range of 69dB(A) to 76dB(A) depending on the rated power. Noise modelling has conservatively assumed up to 80dB(A) sound power. The transformers are contained within rooms that have blockwork walls and concrete slab rooves, so transformer noise is well contained.

All substations are located at least 60m from the nearest receivers. Allowing for noise reductions from the substation building envelope, distance losses, ground absorption, directivity and shielding from buildings and structures, predicted noise levels at the nearest receivers to each substation are below 30dB(A). This is well below the total noise limit for each MOC and ensures that cumulative noise from the MOC as a whole does not exceed the night time noise limits specified in Table 7.

5 Noise predictions results

5.1 Road traffic noise

Operational noise modelling has been conducted based on the traffic volumes for the 'No build' and 'Build' scenarios. Traffic noise predictions were undertaken for the following scenarios:

- Opening Year where noise levels are predicted for the year 2021 for both the 'No build' and 'Build' scenarios, for the day and night periods.
- Design Year where noise levels are predicted for the year 2031 (i.e. 10 years after opening of the project) for both the 'No build' and 'Build' scenarios, for the day and night periods.

Noise modelling for the above scenarios was completed at noise sensitive assessment locations potentially worst affected by the operation of the proposed Project.

The tables in APPENDIX B present the detailed noise modelling results and NCG assessment for the Project for the day and night time periods only at the receivers identified for at-property treatment, with the mitigation measures detailed in Section 6.1 incorporated into the Project.

5.2 Operational fixed facilities noise

5.2.1 Ventilation buildings and support facilities

Based on the design inputs in Section 4.4, the assessment methodology in Section 4.3, and the noise mitigation measures in Section 6.2, the following L_{Aeq} noise levels are predicted at the nearest and most affected residential receivers. The predicted noise levels are for the night time period which is the controlling period, and in each case the predicted noise level complies with the criteria. All other surrounding receivers not mentioned in Table 15 have noise levels less than those shown.

Table 15 Noise compliance for fixed facilities

	Receiver location	L _{Aeq} noise le	evel contribut	Total	Noise		
Facility		Exhaust building ¹	Supply building ¹	Substation	Fire pumps	predicted noise level, dB(A)	Criteria (Night)
MOC1	Glamis Street, Kingsgrove	28	-	33	33	37	38
MOC2	Kingsgrove Avenue, Bexley North	30	-	34	-	36	40
MOC3	Flora Street, Arncliffe	28	37	37	-	40	44
MOC4	Edith Street, St Peters	24	28	33	33	37	41
MOC5	Campbell Road, St Peters	-	-	<35	-	<35	45

^{1.} Predicted noise levels include a +5dB penalty for annoyance in accordance with the NSW Industrial Noise Policy

5.2.2 Jet fan noise from portals

Jet fan noise breakout from portals has been considered for receivers near to portals. Table 16 shows the predicted jet fan noise level at the nearest receivers for the western and eastern portals assuming a set of three jet fans with silencers located inside the mainline tunnel. The distance from the portal opening to the first jet fan bank inside the tunnel is 120 metres for the St Peters portal and 300 metres for the Western Interchange portal.

Noise levels at all residential receiver locations nearest to portals are predicted to comply with the set criteria.

Table 16 Predicted environmental noise from jet fans

Portal	Receiver location	Noise Criteria, dB(A)	Predicted jet fan noise level, dB(A)
Western Portal	Glamis Street, Kingsgrove	38	29
Eastern Portal	Edith Street, St Peters	41	36

6 Noise Mitigation Measures

6.1 Traffic noise mitigation measures

6.1.1 Quieter pavement surfaces

The NMG sets out that a quieter pavement surface is the preferred form of noise mitigation as it reduces source noise levels and provides protection to both external and internal sensitive areas and also has the least visual impact. Quieter pavements should be considered where there are groups of four or more closely spaced receivers (i.e. facades are separated by less than 20 metres) that exceed the NCG criteria.

Open graded asphalt (OGA), which is a "quieter" pavement, has been proposed for the surface roads of the M5 Motorway and New M5 given the vehicle speeds proposed (i.e. posted speed of 80km/h) and free-flowing traffic. For St Peters local roads, quiet pavement is not feasible due to the lower traffic speeds, distance and the stop-start traffic that would occur as a result of signalised intersections.

For St Peters interchange ramps and bridges, quiet pavement is not required due to the distance to the receivers and the relatively low contribution of these roads to the total traffic noise level. The nearest receivers are more than 300m from centre of the interchange and more than 75m from any bridge or ramp. All of the ramps and bridges combined contribute a maximum of 1.2 dB(A) to the total traffic noise level at the most affected receiver, but generally contribute less than 1 dB(A).

6.1.2 Noise barriers and mounds

6.1.2.1 Western Interchange

As part of the project works, the existing noise walls on the northern and southern sides of the M5 Motorway at Kingsgrove will be demolished between Kirrang Street and Garema Circuit to allow for the widening of the road corridor. These noise walls are being relocated and replaced at the same height as the existing noise walls.

The existing northern mound is being temporarily moved to allow establishment of a construction compound, and then replaced at a similar height once the compound is no longer required.

The reinstated noise walls heights and locations are listed in Table 17 and the locations of the noise walls and mound are shown in Figure 1 and Figure 2.

Temporary noise walls have been used along the motorway at Kingsgrove during the construction phase. Permanent noise panels were completed in mid 2018 in the NW section of Kingsgrove, with work continuing on the NE section. Shaping of the noise mound has commenced and will be completed around October 2019.

Table 17 Noise wall schedule

Noise wall	Location	Height
MNB1	Eastbound	5.0m / 6.5m
MNN1	Eastbound	1.85m
MNN5	Eastbound	1.5m
MNB5	Eastbound	6.5m / 4.0m
MNFJ	Westbound	4.0m
MNFL	Westbound	4.0m
MNFN	Westbound	4.0m
MNFU	Westbound	4.0m

6.1.2.2 St Peters Interchange

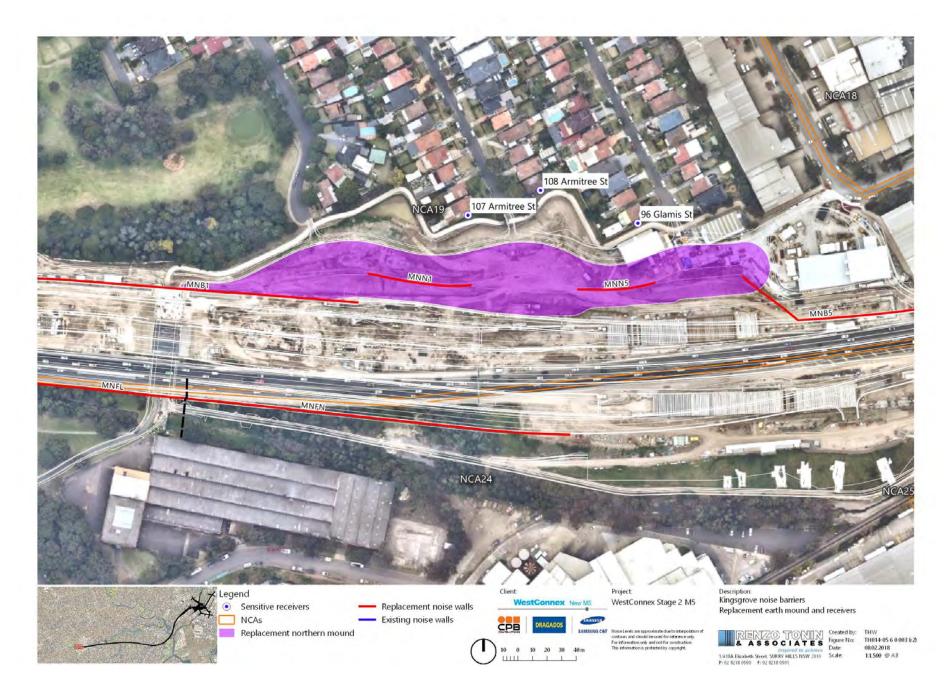
Other than F-type barriers on the interchange ramps, noise barriers have not been used at the St Peters Interchange and local roads. Road traffic noise is dominated by the local road network and barriers are not feasible along these roads due to urban design issues and driveway access. All receivers that are considered for additional noise mitigation would be offered at-property treatment. This outcome is consistent with the EIS.

Figure 1 Replacement noise walls



RENZO TONIN & ASSOCIATES

Figure 2 Kingsgrove replacement northern mound



RENZO TONIN & ASSOCIATES

6.1.3 At-Property treatment

At-property treatment is considered for dwellings that remain above the NCG criteria after all other noise mitigation measures (i.e. low-noise pavement and noise barriers) are exhausted. The level of at-property treatment for affected receivers would be subject to review following detailed site inspections of individual properties to confirm floorplans and the current state of the dwellings prior to implementation of any treatments, such as existing noise treatments, or constraints on the implementation of property treatment.

A summary of the affected receivers identified for at-property treatment and the recommended treatment type is in APPENDIX C. Table 18 provides details on the level of treatment required in relation to the exceedance above the NCG external assessment criteria.

Table 18	Residential a	t-propert	y treatment on a _l	plica	ble '	facades	

Treatment	Predicted exceedance of NCG external criteria, dB(A)	At-property acoustic treatment
1a	<5	Install fresh air mechanical ventilation to affected rooms (see Notes 1 & 2)
1b	6-10	Treatment 1a + replace weather seals with acoustic seals on windows and doors + seal wall vents
2	11-15	Treatments 1a + 1b + replace existing glazing with thicker laminated glazing + provide solid core doors (see Note 3)
	>15	Treatments 1a + 1b + install supplementary window fitted with acoustic seals to inner side of existing window + provide solid core doors (see Note 3)

Notes

6.2 Operational fixed facilities noise mitigation measures

The noise mitigation measures required for the operational fixed facilities and associated plant and equipment are presented in the Operational Ancillary Facility Noise Management Sub-Plan, appended to this ONMP in APPENDIX E.

6.3 Noise management measures for maintenance works

Noise mitigation of the operational fixed facilities would typically be through the implementation of physical measures such as acoustic attenuators, building envelope upgrades and the like. However, maintenance of the assets will be undertaken and noise during the programmed maintenance works will be managed accordingly to reduce any potential impacts to nearby residences.

^{1.} If internal noise goals can only be achieved with windows closed, then mechanical ventilation should be considered to ensure fresh airflow inside the dwelling so to meet the requirements of the Building Code of Australia.

^{2.} It is important to ensure that mechanical ventilation does not provide a new noise leakage path into the dwelling and does not create a noise nuisance to neighbouring residential premises.

^{3.} These upgrades are only suitable for masonry type buildings. It is unlikely that this degree of upgrade would provide noticeable benefits to light framed structures with no acoustic insulation in the walls.

^{4.} The Sydney climate zone is considered to be a warm temperate climate and is not impacted by prevailing adverse climate conditions. Fresh air ventilation when doors and windows are closed is managed by fresh air mechanical ventilation without the need for consideration of air conditioning.

The following management measures should be considered as part the maintenance regime for the assets of the project:

- programmed maintenance works will be undertaken where possible, during daylight hours
- where maintenance works need to be undertaken outside of daytime periods due to safety or
 operational requirements of the motorway (eg. outside of peak hour traffic periods), notification to
 the community and stakeholders should be carried out during the planning stage and before the
 works are undertaken. Urgent unplanned maintenance will be undertaken in accordance with the
 O&M Contractor's Community Relations Plan.
- behavioural practices should be considered such as:
 - no swearing or unnecessary shouting or loud stereos/radios on site
 - no dropping of materials from height where practicable, throwing of metal items and slamming of doors
- site inductions for maintenance employees which would cover:
 - location of nearby sensitive receivers
 - designated parking areas for works outside of daytime periods
 - designated loading / unloading areas and procedures
 - any limitations on high noise generating activities.

7 Operational noise monitoring

In accordance with MCoA E38, no later than 12 months after commencement of operation of the project, or as otherwise agreed by the Secretary, operational noise monitoring shall be conducted to compare actual noise performance of the project against noise performance predicted in this ONVR.

Following the operational noise monitoring and within 60 days of completing the monitoring, a copy of the Operational Noise and Vibration Compliance Report is to be prepared and submitted to the Secretary and the EPA.

The following sections provide details of the noise monitoring, assessment and reporting procedures required for the Operational Noise and Vibration Compliance Report.

7.1 Operational traffic noise

7.1.1 Monitoring procedures

Monitoring of operational traffic noise shall be undertaken in accordance with Practice Note viii of Roads and Maritime's 'Environmental Noise Management Manual' (ENMM) and RMS 'Procedure – Preparing a post construction noise assessment report' to meet Condition E38 of the MCoA.

Operational traffic noise monitoring shall compare actual traffic noise levels with the predicted mitigated noise levels and determine whether the intended acoustical outcomes, as presented in the ONVR (and other environmental documents) and prepared in accordance with Condition E37 of the MCoA, are achieved.

Traffic noise monitoring locations are selected to represent the potentially most affected noise-sensitive receptors, and where appropriate to correlate with noise monitoring locations selected prior to the Project's construction, to enable direct comparison where possible. Table 19 presents the proposed long term traffic noise monitoring locations and theses locations are also presented on aerial maps in APPENDIX D.

Table 19 Proposed long term traffic noise measurement locations

Monitoring Location	Address	Purpose of monitoring	
RN1	1-3 Kirrang Street, Beverly Hills	To quantify any change in noise due to reconfiguration of	
RN2	28 Kirrang Street, Beverly Hills	motorway lanes and noise wall design	
RN3	97 Tallawalla Street, Beverley Hills		
RN4	82 Rosebank Avenue, Kingsgrove	To quantify any change in noise due to reconfiguration of	
RN5	108 Armitree Street, Kingsgrove	motorway lanes and noise wall / noise mound design	
RN6	187 Princes Highway, St Peters (Anglican Church)	To quantify change in noise on existing Princes Hwy and from new interchange	
RN7	4 St Peters Street, St Peters	To quantify change in noise from redevelopment of Campbell Road	

Monitoring Location	Address	Purpose of monitoring	
RN8	33 Campbell Street, St Peters	To quantify change in noise from redevelopment of	
RN9	18 Campbell Road, Alexandria	Campbell Road and from new interchange	
RN10	105-155 Euston Road, Alexandria	To quantify change in noise from increased traffic on Euston Road	

The proposed operational traffic noise monitoring locations will be subject to alteration (while preserving the intent of the noise monitoring program) based on site specific conditions including access to the site and consideration of localised extraneous noise sources (eg. air conditioners etc).

Additional or alternative traffic noise monitoring locations from those identified in Table 19 may be selected to monitor traffic noise levels at residences from where comments or complaints may be received from the community with regard to operational traffic noise.

A minimum of seven days of traffic noise monitoring is to be conducted, excluding all adverse weather [e.g. rain, wind, temperature inversions etc.] and excluding all non-traffic noise influences [e.g. noise from fauna (insects, frogs etc.), rail activity, industrial activity, local traffic noise unrelated to the Project, foliage noise etc.].

Where practicable, traffic noise monitoring shall be conducted at 1m from the building facade most exposed to traffic noise, at a height of 1.5m above the floor level. Where physical constraints on site prevent noise monitoring to be undertaken at such a location, monitoring shall be conducted in the free-field, and a +2.5dB(A) facade correction shall be applied to the measured L_{Aeq} traffic noise levels to convert the free-field measurements to equivalent measurements at 1m from the relevant building facade.

In the case of multi-level residential buildings, where practicable, traffic noise monitoring shall be undertaken at the two floors of the building most exposed to traffic noise (generally the ground and first floors). Where this is not practicable, then long term (unattended) traffic noise monitoring shall be conducted at the most accessible floor of the building backed up by supporting short term (attended) traffic noise measurements conducted on the other floor concurrently with the long term noise monitor, to establish a relationship of traffic noise levels between the two floors.

All noise monitoring instrumentation shall comply with IEC 61672 (parts 1-3) 'Electroacoustics - Sound Level Meters' and IEC 60942 'Electroacoustics - Sound calibrators' and carry current NATA certification (or if less than 2 years old, manufacturers certification). The noise monitoring equipment shall be calibrated prior and subsequent to the noise measurements.

Classified traffic monitoring is to be conducted simultaneously with the noise monitoring to identify:

- traffic volumes,
- vehicle classifications as a minimum the total vehicles and % heavy vehicles, and
- mean and 85-percentile vehicle speeds.

The above data shall be provided daily for each day period (15 hours; 7am to 10pm) and night period (9 hours; 10pm to 7am) over the entire traffic noise monitoring period covering all noise monitoring sites. The above information shall be provided as spreadsheets and reports for each traffic monitoring site.

To avoid the noise of vehicle tyres passing over the traffic counter tubes and affecting the monitored noise levels, the position of traffic counter tubes shall be placed at locations well removed from the noise monitors. The exact locations shall be discussed and agreed prior to the deployment of traffic monitors on site.

7.1.2 Assessment

The assessment of the adequacy of the traffic noise mitigation measures presented in this ONMP shall be undertaken, as required by MCoA E38. The adequacy of the traffic noise mitigation measures shall be assessed in accordance with Practice Note viii of the ENMM, which requires the following:

- If the measured noise levels exceed the design noise levels for Year 1 by 2 dB(A) or less, the noise data should be examined, the prediction methodology and suitability of mitigation measures should be reassessed and the reasons for the marginal exceedance(s) be identified and reported.
- If measured noise levels exceed the design noise level for Year 1 by more than 2 dB(A), the adequacy of the noise mitigation needs to be reviewed, and if problems are identified steps need to be taken to rectify the situation. Additional noise treatments may be required to achieve the design noise level, where this is feasible and reasonable.

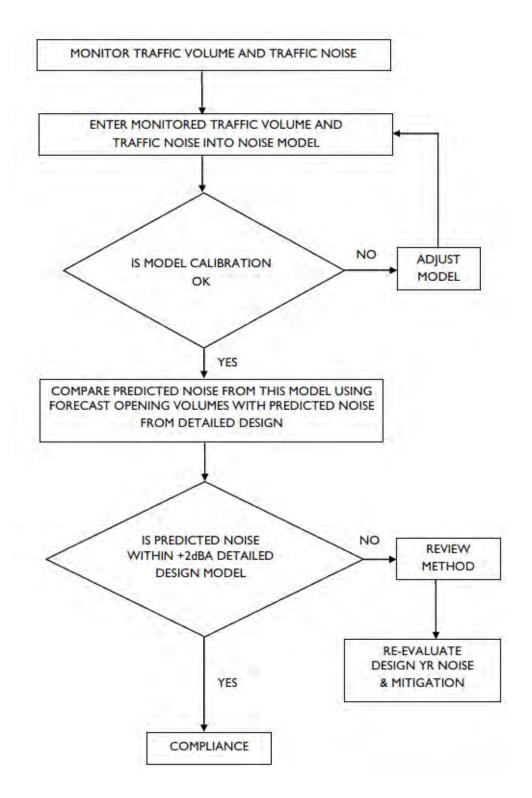
Therefore, the methodology to be used for the assessment shall be as follows:

- Measure actual traffic noise levels and concurrently measure traffic volumes, classifications and vehicle speeds after the opening of the project.
- Update the noise model prepared during the detailed design stage of the project with the 'as-built' road design.
- Use measured actual traffic noise and volumes, classifications and vehicle speed data to validate the noise model updated with the 'as-built' road design.
- Predict opening year 2021 traffic noise levels at all receiver locations identified in the ONVR using the validated noise model.
- Opening year 2021 traffic noise levels, as predicted with the validated model, will be compared
 against the opening year 2021 noise levels as predicted as part of the detailed design and
 presented in the ONVR, to determine differences between the detailed design predicted noise
 levels and the 'as-built' noise levels.
- In accordance with Practice Note viii of the ENMM, should the difference be 2dB(A) or less, then the adequacy of the noise mitigation measures implemented are determined to be adequate.

• Should the differences be greater than 2dB(A), the adequacy of the noise mitigation measures need to be reviewed and if required, additional reasonable and feasible noise mitigation measures will be investigated with the objective of meeting the project noise goals.

The above methodology is shown graphically in a flowchart in the RMS 'Procedure – Preparing a post construction noise assessment report' document and reproduced in Figure 3.

Figure 3 Post construction operational noise assessment procedure



Source: RMS 'Procedure – Preparing a Post Construction Noise Assessment Report' (June 2014)

7.1.3 Reporting

In accordance with MCoA E38, operational noise monitoring and reporting should be undertaken within 12 months of the Project opening. Furthermore, an Operational Noise and Vibration Compliance Report will be required to be submitted within 60 days upon completion of the noise monitoring, in accordance with MCoA E38. This report will be prepared, in accordance with MCoA E38, to the satisfaction of the Secretary and the EPA and would include the following information:

- Methodology, location and frequency of noise monitoring undertaken.
- Summary of measured traffic noise levels.
- Assessment of the performance and adequacy of applied noise mitigation measures, as determined in this ONMP.
- Where required, reassessment of additional feasible and reasonable noise mitigation measures.
- In accordance with MCoA E38(c), detail any complaints and enquiries received in relation to operational noise generated by the project.

7.2 Operational fixed facilities noise

7.2.1 Monitoring procedures

Monitoring of operational fixed facilities shall be undertaken in accordance with Condition E38. To measure noise from the operation of these facilities, short term (attended) noise measurements would be conducted at locations selected to represent the potentially most affected noise-sensitive receivers surrounding a fixed facility. Additional noise measurement locations may be selected based on receivers where comments or complaints may have been received from the community with regard to operational noise from fixed facilities.

The short term (attended) noise measurements would be undertaken during periods of low ambient noise (eg. night time) in accordance with the following procedure:

- Conduct short term (attended) noise measurements at the nominated receiver location with all
 plant and equipment from the fixed facility operating at typical maximum operating capacity
 (excluding emergency and standby plant and equipment).
- Conduct short term (attended) noise measurements at the nominated receiver location with all
 plant and equipment from the fixed facility turned off to measure background and ambient noise
 levels.
- Noise measurements to be conducted from 25Hz to 20kHz in one-third octave bands to allow assessment of tonal noise annoyance in accordance with the INP procedures.

Where practicable, all measurements should be conducted in the free-field (ie. at least 3m to 5m from any vertical reflecting surface) and on or near the most affected property boundary of the nominated receiver location.

Any extraneous noise captured during the measurements and considered to not typically represent the ambient noise environment at the measurement location, should be excluded from the measurement data.

Table 20 presents the proposed short term (attended) noise measurement locations and these locations are also presented on aerial maps in APPENDIX D.

Table 20 Proposed short (attended) noise measurement locations

Monitoring Location	Address
FN01	99 Glamis Street, Kingsgrove
FN02	113 Tallawalla Street, Beverley Hills
FN03	14 Sutcliffe Street, Kingsgrove
FN04	1 Kingsgrove Avenue, Kingsgrove
FN05	94 Wolli Avenue, Earlwood
FN06	41 Flora Street, Arncliffe
FN07	26 - 32 Marsh Street, Wolli Creek
FN08	311 Princes Highway, St Peters
FN09	1 Edith Street, St Peters
FN10	53 Barwon Park Road, St Peters
FN11	34 Campbell Road, Alexandria

All noise measuring instrumentation shall comply with IEC 61672 (parts 1-3) 'Electroacoustics - Sound Level Meters' and IEC 60942 'Electroacoustics - Sound calibrators' and carry current NATA certification (or if less than 2 years old, manufacturers certification). The noise measuring equipment shall be calibrated prior and subsequent to the noise measurements.

7.2.2 Assessment

The measured noise levels from the operation of the fixed facilities shall be assessed against the applicable noise criteria presented in Section 3.2 of this ONMP and the adequacy of the noise mitigation measures implemented shall be assessed.

The methodology to be used for the assessment shall be as follows:

- Measure noise from the operation of the fixed facilities with the associated plant and equipment operating at typical maximum operating capacity (excluding emergency and standby plant and equipment).
- Measure background and ambient noise levels with all plant and equipment associated with the fixed facilities turned off.

 Using the measured noise results, determine the source emission noise levels by removing all nonproject noise from the total noise measured from the fixed facilities at the nominated most affected noise-sensitive receiver locations.

- Apply test for low-frequency or tonal noise annoyance in accordance with the INP procedures and add 5dB(A) correction to the measured noise level if required.
- Compare the source emission noise levels to the applicable noise criteria for the corresponding fixed facility.
- If the source emission noise levels comply with the nominated noise criteria, then the noise mitigation measures implemented are determined to be adequate.
- Where source emission noise levels are determined to exceed the nominated noise criteria, the adequacy of the noise mitigation measures need to be reviewed and if required, additional reasonable and feasible noise mitigation measures will be investigated and where applicable, be implemented with the objective of complying with the nominated noise criteria.

Any additional feasible and reasonable mitigation measures will be subject to supplementary professional advice in respect of fire ratings, structural design, buildability, fitness for purpose and the like.

7.2.3 Reporting

The outcomes of the operational noise monitoring for the fixed facilities will form part of the Operational Noise and Vibration Compliance Report required under Condition E38 of the MCoA. The Operational Noise and Vibration Compliance Report will be required to be submitted within 60 days upon completion of the noise monitoring, in accordance with Condition E38 of the MCoA and to the satisfaction of the Secretary and the EPA and would include the following information:

- Methodology, location and frequency of noise monitoring undertaken.
- Summary of measured operational noise levels from the fixed facilities.
- Assessment of the performance and adequacy of applied fixed facilities noise mitigation measures, as presented in this ONMP.
- Where required, reassessment of additional feasible and reasonable noise mitigation measures.
- In accordance with Condition E38 (c), detail any complaints and enquiries received in relation to operational noise generated by the fixed facilities associated with Project.

7.2.4 Alternative measurement and assessment methodology where source is not measureable

In the case where existing noise levels from traffic and other community noise is higher than the noise levels from the source, it may be difficult to quantify the noise level of the operational facility. It may not

be feasible to measure compliance at a specified location. In this situation the following alternative method will be employed to determine source noise emission levels:

• Establish a new measurement location closer to the source where noise from the operation of the fixed facility is clearly audible above the ambient noise environment.

- Measure noise from the operation of the fixed facilities with the associated plant and equipment operating at typical maximum operating capacity (excluding emergency and standby plant and equipment). Multiple measurements for different individual sources may be conducted.
- Measure background and ambient noise levels with all plant and equipment associated with the fixed facilities turned off.
- Using the measured noise results, determine the source emission noise levels by removing all nonproject noise from the total noise measured at this alternative measurement location.
- Account for the difference between the alternative measurement location and the sensitive receiver location by applying distance corrections and 'near field' corrections where applicable.
- Where individual sources were measured, add together the corrected noise levels for all sources, and determine a total noise level at the sensitive receiver location.
- Compare the total source emission noise levels to the applicable noise criteria for the corresponding fixed facility and consider additional noise mitigation if required, as described in Section 7.2.2.

7.2.5 Alternative measurement methodology where source noise is not able to be turned off

Part of the measurement methodology for fixed facilities is to measure background and ambient noise levels with all plant and equipment associated with the fixed facilities turned off. This is to allow non-project noise to be quantified and removed from the total noise level to determine the project noise levels.

Where it is not possible to turn off the fixed facilities, an alternative measurement location would be used for the "project off" measurement only, where noise from the operation of the fixed facility is inaudible, and yet where the ambient noise environment is similar to that at the compliance location. This may involve moving further away from the fixed facility, or measuring in a location shielded from the fixed facility by other buildings or structures.

8 Complaints management

A complaint is defined as any communication received from a stakeholder expressing dissatisfaction. This is a purposely broad definition and is used to ensure that matters of concern to stakeholders are addressed promptly.

Specific protocols and procedures would be required to ensure a consistent approach to managing enquires and complaints, including systems for recording and monitoring community contact. All contact from the community should be referred to the community relations team for action.

The strategic approach to managing complaints consists of:

- Courtesy
- Accessibility
- Responsiveness
- Delegation of authority to resolve the issue
- Access to accurate information.

Typically, complaints shall be managed in accordance with Section 7.3.2 of the Operation Environmental Management Plan (ref. M5N-ES-PLN-PWD-0047) and associated processes.

When a complaint specific to noise and/or vibration is received, the following procedure will be carried out:

- Review and investigate the nature of the complaint to determine the potential cause of the complaint
- If determined necessary and subject to the complainant's consent, conduct noise and/or vibration monitoring at the complainant's property to quantify the nature of the complaint
- Subject to monitoring results, review and/or inspect all reasonable and feasible mitigation measures implemented to confirm the adequacy of the implemented noise mitigation
- Where the noise mitigation measures are deemed to be not adequate, investigate any additional or alternative reasonable and feasible noise mitigation measures.

APPENDIX A Glossary of terminology

The following is a brief description of the technical terms used to describe noise to assist in understanding the technical issues presented.

Adverse weather	Weather effects that enhance noise (particularly wind and temperature inversions) occurring at a site for a significant period of time. In the NSW INP this occurs when wind occurs for more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of nights in winter.
Air-borne noise	Noise which is fundamentally transmitted by way of the air and can be attenuated by the use of barriers and walls placed physically between the noise source and receiver.
Ambient noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
Amenity	A desirable or useful feature or facility of a building or place.
AS	Australian Standard
Assessment period	The time period in which an assessment is made. e.g. Day 7am-6pm, Evening 6pm-10pm, Night 10pm-7am.
Assessment Point	A location at which a noise or vibration measurement is taken or estimated.
Attenuation	The reduction in the level of sound or vibration.
Audible Range	The limits of frequency which are audible or heard as sound. The normal hearing in young adults detects ranges from 20 Hz to 20 kHz, although some people can detect sound with frequencies outside these limits.
A-weighting	A filter applied to the sound recording made by a microphone to approximate the response of the human ear.
Background noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the LA90 noise level if measured as an overall level or an L90 noise level when measured in octave or third-octave bands.
Barrier (Noise)	A natural or constructed physical barrier which impedes the propagation of sound and includes fences, walls, earth mounds or berms and buildings.
Berm	Earth or overburden mound.
Buffer	An area of land between a source and a noise-sensitive receiver and may be an open space or a noise-tolerant land use.
Bund	A bund is an embankment or wall of brick, stone, concrete or other impervious material, which may form part or all of the perimeter of a compound.
BS	British Standard
CoRTN	United Kingdom Department of Environment entitled "Calculation of Road Traffic Noise (1988)"

Decibel [dB]	The units of sound measurement. The following are examples of the decibel readings of every day sounds:
	0dB The faintest sound we can hear, defined as 20 micro Pascal
	30dB A quiet library or in a quiet location in the country
	45dB Typical office space. Ambience in the city at night
	60dB CBD mall at lunch time
	70dB The sound of a car passing on the street
	80dB Loud music played at home
	90dB The sound of a truck passing on the street
	100dB The sound of a rock band
	110dB Operating a chainsaw or jackhammer
	120dB Deafening
dB(A)	A-weighted decibel. The A- weighting noise filter simulates the response of the human ear at relatively low levels, where the ear is not as effective in hearing low frequency sounds as it is in hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the "A" filter. A sound level measured with this filter is denoted as dB(A). Practically all noise is measured using the A filter.
dB(C)	C-weighted decibels. The C-weighting noise filter simulates the response of the human ear at relatively high levels, where the human ear is nearly equally effective at hearing from mid-low frequency (63Hz) to mid-high frequency (4kHz), but is less effective outside these frequencies. The dB(C) level is not widely used but has some applications.
Diffraction	The distortion of sound waves caused when passing tangentially around solid objects.
DIN	German Standard
ECRTN	Environmental Criteria for Road Traffic Noise, NSW, 1999
EPA	Environment Protection Authority
Field Test	A test of the sound insulation performance in-situ. See also 'Laboratory Test'
	The sound insulation performance between building spaces can be measured by conducting a field test, for example, early during the construction stage or on completion.
	A field test is conducted in a non-ideal acoustic environment. It is generally not possible to measure the performance of an individual building element accurately as the results can be affected by numerous field conditions.
Fluctuating Noise	Noise that varies continuously to an appreciable extent over the period of observation.
Free-field	An environment in which there are no acoustic reflective surfaces. According to AS1055:2018, free field noise measurements should, whenever possible, be carried out at least 3.5 m from any reflecting structure other than the ground.
Frequency	Frequency is synonymous to pitch. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.
Ground-borne noise	Vibration propagated through the ground and then radiated as noise by vibrating building elements such as wall and floor surfaces. This noise is more noticeable in rooms that are well insulated from other airborne noise. An example would be vibration transmitted from an underground rail line radiating as sound in a bedroom of a building located above.
Habitable Area	Includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom.
	Excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.
Heavy Vehicle	A truck, transporter or other vehicle with a gross weight above a specified level (for example: over 8 tonnes).
Impulsive noise	Having a high peak of short duration or a sequence of such peaks. A sequence of impulses in rapid succession is termed repetitive impulsive noise.

IND	NCW Industrial Naise Policy, FDA 1000
INP	NSW Industrial Noise Policy, EPA 1999
Intermittent noise	The level suddenly drops to that of the background noise several times during the period of observation. The time during which the noise remains at levels different from that of the ambient is one second or more.
Intrusive noise	Refers to noise that intrudes above the background level by more than 5 dB(A).
ISEPP	State Environmental Planning Policy (Infrastructure), NSW, 2007
ISEPP Guideline	Development Near Rail Corridors and Busy Roads - Interim Guideline, NSW Department of Planning, December 2008
L ₁	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L ₁₀	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
L _{10(1hr)}	The L10 level measured over a 1 hour period.
L _{10(18hr)}	The arithmetic average of the L10(1hr) levels for the 18 hour period between 6am and 12 midnight on a normal working day.
L ₉₀	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L90 noise level expressed in units of $dB(A)$.
L _{Aeq} or L _{eq}	The "equivalent noise level" is the summation of noise events and integrated over a selected period of time, which would produce the same energy as a steady sound level occurring over the same period of time. When A-weighted, this is written as the L _{Aeq} .
LAeq(1hr)	The L_{Aeq} noise level for a one-hour period. In the context of the NSW EPA's Road Noise Policy it represents the highest tenth percentile hourly A-weighted L_{eq} during the period 7am to 10pm, or 10pm to 7am (whichever is relevant).
L _{Aeq(8hr)}	The L _{Aeq} noise level for the period 10pm to 6am.
L _{Aeq(9hr)}	The L _{Aeq} noise level for the period 10pm to 7am.
L _{Aeq(15hr)}	The L _{Aeq} noise level for the period 7am to 10pm.
L _{Aeq} (24hr)	The L _{Aeq} noise level during a 24 hour period, usually from midnight to midnight.
L _{max}	The maximum sound pressure level measured over a given period. When A-weighted, this is usually written as the $L_{\mbox{\scriptsize Amax}}$.
L _{min}	The minimum sound pressure level measured over a given period. When A-weighted, this is usually written as the L_{Amin} .
Loudness	A rise of 10 dB in sound level corresponds approximately to a doubling of subjective loudness. That is, a sound of 85 dB is twice as loud as a sound of 75 dB which is twice as loud as a sound of 65 dB and so on. That is, the sound of 85 dB is four times or 400% the loudness of a sound of 65 dB.
Microphone	An electro-acoustic transducer which receives an acoustic signal and delivers a corresponding electric signal.
NCA	Noise Catchment Area. An area of study within which the noise environment is substantially constant.
NCG	Roads and Maritime 'Noise Criteria Guideline'
NMG	Roads and Maritime 'Noise Mitigation Guideline'
Noise	Unwanted sound
Pre-construction	Work in respect of the proposed project that includes design, survey, acquisitions, fencing, investigative drilling or excavation, building/road dilapidation surveys, minor clearing (except where threatened species, populations or ecological communities would be affected), establishing ancillary facilities such as site compounds, or other relevant activities determined to have minimal environmental impact (e.g. minor access roads).
RBL	Rating Background Level is the representative LA90 background noise level for a period, as defined in the NSW EPA's noise ploicies.

Reflection	Sound wave reflected from a solid object obscuring its path.
RMS	Root Mean Square value representing the average value of a signal.
Rw	Weighted Sound Reduction Index
	A measure of the sound insulation performance of a building element. It is measured in very controlled conditions in a laboratory.
	The term supersedes the value STC which was used in older versions of the Building Code of Australa. Rw is measured and calculated using the procedure in ISO 717-1. The related field measurement is the DnT,w.
	The higher the value the better the acoustic performance of the building element.
R'w	Weighted Apparent Sound Reduction Index.
	As for Rw but measured in-situ and therefore subject to the inherent accuracies involved in such a measurement.
	The higher the value the better the acoustic performance of the building element.
RNP	Road Noise Policy, NSW, March 2011
Sabine	A measure of the total acoustic absorption provided by a material.
	It is the product of the Absorption Coefficient (alpha) and the surface area of the material (m2). For example, a material with alpha = 0.65 and a surface area of $8.2m2$ would have $0.65 \times 8.2 = 5.33$ Sabine.
	Sabine is usually calculated for each individual octave band (or third-octave).
SEL	Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations.
Sound	A fluctuation of air pressure which is propagated as a wave through air.
Sound absorption	The ability of a material to absorb sound energy by conversion to thermal energy.
Sound Insulation	Sound insulation refers to the ability of a construction or building element to limit noise transmission through the building element. The sound insulation of a material can be described by the Rw and the sound insulation between two rooms can be described by the DnT,w.
Sound level meter	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.
Sound power level	Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power of 1 pico watt.
Sound pressure level	The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone referenced to 20 mico Pascal.
STC	Sound Transmission Class
	A measure of the sound insulation performance of a building element. It is measured in controlled conditions in a laboratory.
	The term has been superseded by Rw.
Structure-borne Noise	Audible noise generated by vibration induced in the ground and/or a structure. Vibration can be generated by impact or by solid contact with a vibrating machine.
	Structure-borne noise cannot be attenuated by barriers or walls but requires the isolation of the vibration source itself. This can be achieved using a resilient element placed between the vibration source and its support such as rubber, neoprene or springs or by physical separation (using an air gap for example).
	Examples of structure-borne noise include the noise of trains in underground tunnels heard to a listener above the ground, the sound of footsteps on the floor above a listener and the sound of a lift car passing in a shaft. See also 'Impact Noise'.
Tonal Noise	Sound containing a prominent frequency and characterised by a definite pitch.

Transmission Loss	The sound level difference between one room or area and another, usually of sound transmitted through an intervening partition or wall. Also the vibration level difference between one point and another.
	For example, if the sound level on one side of a wall is 100dB and 65dB on the other side, it is said that the transmission loss of the wall is 35dB. If the transmission loss is normalised or standardised, it then becomes the Rw or R'w or DnT,w.
Vibration	A mechanical phenomenon whereby oscillations occur about an equilibrium point; a periodic back-and-forth motion of an elastic body or medium, commonly resulting when almost any physical system is displaced from its equilibrium condition.

APPENDIX B Predicted traffic noise modelling results with noise mitgation measures

Table E.1
Predicted LAeq traffic noise levels
Kingsgrove

				Facade	Opening Year					Design Year			Increase (Build - No Build)				NCG project road noise Do noise levels exceed the cumulative				Is the contribution from the road		
					No Build Bu					Build		Openi	Opening Year Design Year				eria		mit with project roads adding ≥2dB to				
NCA	NCA ID	Receiver Address	Receiver Type		Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	the total noise		Day	Night	Consider further treatment?
				Floor Orientation	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h		
NCA19	NCA19 189	101 ARMITREE STREET KINGSGROVE	Residential	G SW	55	52	54	50	55	53	54	49	-0.9	-2.8	-1.5	-4	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_190	103 ARMITREE STREET KINGSGROVE	Residential	G SW	55	53	54	50	56	54	54	50	-1.2	-3.2	-2	-4.3	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_191	105 ARMITREE STREET KINGSGROVE	Residential	G SW	56	53	54	50	56	54	54	49	-1.6	-3.6	-2.3	-4.7	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_192	107 ARMITREE STREET KINGSGROVE	Residential	G SW	56	53	54	49	56	54	54	49	-1.9	-3.8	-2.5	-5	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_193	108 ARMITREE STREET KINGSGROVE	Residential	G SE	55	53	54	49	56	54	53	49	-1.6	-3.5	-2.4	-4.7	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_193	108 ARMITREE STREET KINGSGROVE	Residential	1 SE	56	54	55	51	57	55	55	50	-1.1	-3	-1.9	-4.3	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_194	106 ARMITREE STREET KINGSGROVE	Residential	G SW	55	52	54	49	55	53	53	49	-1	-3.1	-1.8	-4.2	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_195	104 ARMITREE STREET KINGSGROVE	Residential	G SW	55	52	54	49	55	53	53	49	-1	-3	-1.8	-4.1	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_284	84 GLAMIS STREET KINGSGROVE	Residential	G SW	55	52	53	49	55	53	53	49	-1.4	-3.3	-2.2	-4.6	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_284	84 GLAMIS STREET KINGSGROVE	Residential	1 SW	56	54	55	50	57	55	54	50	-1.5	-3.4	-2.3	-4.6	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_285	86 GLAMIS STREET KINGSGROVE	Residential	G SW	55	52	53	49	55	53	53	49	-1.2	-3.1	-2	-4.4	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_285	86 GLAMIS STREET KINGSGROVE	Residential	1 SW	56	54	55	50	57	55	54	50	-1.4	-3.3	-2.1	-4.6	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_286	88 GLAMIS STREET KINGSGROVE	Residential	G SW	54	52	53	49	55	53	53	48	-1.3	-3.2	-2	-4.4	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_287	90 GLAMIS STREET KINGSGROVE	Residential	G SW	55	52	54	49	55	53	53	49	-1.3	-3.3	-2.1	-4.4	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_287	90 GLAMIS STREET KINGSGROVE	Residential	1 SW	56	54	55	51	57	55	55	50	-1	-2.9	-1.8	-4.2	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_288	92 GLAMIS STREET KINGSGROVE	Residential	G SW	56	53	54	50	56	54	54	49	-1.8	-3.7	-2.5	-4.9	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_288	92 GLAMIS STREET KINGSGROVE	Residential	1 SE	57	55	56	51	58	56	55	51	-1.5	-3.4	-2.3	-4.7	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_289	94 GLAMIS STREET KINGSGROVE	Residential	G SW	56	54	54	50	56	54	54	49	-1.8	-3.8	-2.6	-5	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_290	96 GLAMIS STREET KINGSGROVE	Residential	G SE	56	54	54	50	57	55	54	49	-2.1	-4.1	-2.9	-5.3	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_291	99 GLAMIS STREET KINGSGROVE	Residential	G SE	58	55	55	50	58	56	54	50	-2.8	-4.8	-3.7	-6	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_291	99 GLAMIS STREET KINGSGROVE	Residential	1 SE	59	57	56	52	59	57	56	51	-2.8	-4.7	-3.7	-6	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_292	97 GLAMIS STREET KINGSGROVE	Residential	G SW	56	53	54	50	56	54	54	49	-2	-3.9	-2.7	-5	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_293	95 GLAMIS STREET KINGSGROVE	Residential	G SW	56	53	54	50	56	54	54	49	-1.8	-3.7	-2.7	-5	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_294	93 GLAMIS STREET KINGSGROVE	Residential	G SW	55	53	54	49	56	54	53	49	-1.6	-3.6	-2.4	-4.8	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_295	91 GLAMIS STREET KINGSGROVE	Residential	G SW	56	53	54	50	56	54	54	49	-1.6	-3.5	-2.5	-4.8	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_296	89 GLAMIS STREET KINGSGROVE	Residential	G SW	55	53	54	49	56	54	53	49	-1.4	-3.4	-2.2	-4.6	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_296	89 GLAMIS STREET KINGSGROVE	Residential	1 SW	57	55	55	51	57	55	55	51	-1.6	-3.4	-2.4	-4.7	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_297	87 GLAMIS STREET KINGSGROVE	Residential	G SW	55	52	54	49	55	53	53	49	-1.3	-3.2	-2.1	-4.4	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_298	85 GLAMIS STREET KINGSGROVE	Residential	G SW	55	53	54	49	55	53	53	49	-1.4	-3.3	-2.1	-4.4	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_488	82 ROSEBANK AVENUE KINGSGROVE	Residential	G SE	57	55	56	51	58	56	55	51	-1.5	-3.4	-2.1	-4.6	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_489	80 ROSEBANK AVENUE KINGSGROVE	Residential	G SE	55	52	55	50	55	53	54	50	-0.3	-2.3	-1	-3.3	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_490	78 ROSEBANK AVENUE KINGSGROVE	Residential	G SE	54	52	54	50	54	52	54	49	-0.1	-2.1	-0.8	-3.2	60	55	NO	NO	NO	NO	NO
NCA19	NCA19_490	78 ROSEBANK AVENUE KINGSGROVE	Residential	1 SW	58	55	57	52	58	56	56	52	-1.2	-3.1	-1.9	-4.3	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_308	35 COOLOONGATTA ROAD BEVERLY HILLS	Residential	G S	62	59	63	58	62	60	63	58	0.9	-1	0.3	-2.1	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_309	37 COOLOONGATTA ROAD BEVERLY HILLS	Residential	G W	58	56	59	54	58	56	58	54	0.6	-1.4	-0.1	-2.5	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_309	37 COOLOONGATTA ROAD BEVERLY HILLS	Residential	1 W	61	59	63	58	62	60	62	58	1.2	-0.6	0.6	-1.8	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_362	19 ELOUERA STREET BEVERLY HILLS	Residential	G SE	59	57	58	54	59	57	58	54	-0.7	-2.8	-1.4	-3.8	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_362	19 ELOUERA STREET BEVERLY HILLS	Residential	1 SE	63	60	62	58	63	61	62	57	-0.4	-2.4	-1	-3.5	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_368	21 ELOUERA STREET BEVERLY HILLS	Residential	G SE	59	57	59	55	60	58	59	54	-0.3	-2.3	-0.9	-3.3	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_368	21 ELOUERA STREET BEVERLY HILLS	Residential	1 SE	62	60	62	58	63	61	62	58	0.1	-1.8	-0.6	-2.9	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_373	23 ELOUERA STREET BEVERLY HILLS	Residential	G SE	59	57	59	55	60	58	59	54	-0.1	-2	-0.7	-3.1	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_373	23 ELOUERA STREET BEVERLY HILLS	Residential	1 SE	61	59	62	57	62	60	62	57	0.4	-1.5	-0.2	-2.6	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_377	25 ELOUERA STREET BEVERLY HILLS	Residential	G SE	59	57	59	55	59	58	59	54	-0.2	-2.1	-0.8	-3.3	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_381	27 ELOUERA STREET BEVERLY HILLS	Residential	G E	59	56	59	54	59	57	58	54	-0.2	-2.1	-0.9	-3.2	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_381	27 ELOUERA STREET BEVERLY HILLS	Residential	1 E	61	58	61	57	61	59	61	56	0.5	-1.4	-0.2	-2.6	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_385	29 ELOUERA STREET BEVERLY HILLS	Residential	G SE	59	56	58	54	59	57	58	54	-0.3	-2.2	-0.8	-3.3	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_385	29 ELOUERA STREET BEVERLY HILLS	Residential	1 SE	60	58	61	56	61	59	60	56	0.2	-1.7	-0.5	-2.9	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_390	31 ELOUERA STREET BEVERLY HILLS	Residential	G SE	58	56	58	53	58	56	57	53	-0.5	-2.4	-1	-3.5	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_390	31 ELOUERA STREET BEVERLY HILLS	Residential	1 SE	60	57	60	55	60	58	59	55	-0.2	-2.2	-0.9	-3.3	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_395	33 ELOUERA STREET BEVERLY HILLS	Residential	G SE	58	56	58	53	59	57	57	53	-0.6	-2.5	-1.2	-3.6	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_402	35 ELOUERA STREET BEVERLY HILLS	Residential	G E	58	55	57	53	58	56	57	52	-0.9	-2.8	-1.6	-4	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_402	35 ELOUERA STREET BEVERLY HILLS	Residential	1 E	59	57	59	54	60	58	59	54	-0.7	-2.6	-1.3	-3.7	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_420	40 ELOUERA STREET BEVERLY HILLS	Residential	G SE	61	58	60	56	61	59	60	55	-0.6	-2.6	-1.3	-3.6	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_420	40 ELOUERA STREET BEVERLY HILLS	Residential	1 SE	63	61	64	59	64	62	63	59	0.2	-1.7	-0.5	-2.9	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_423	42 ELOUERA STREET BEVERLY HILLS	Residential	G SE	59	57	59	54	60	58	59	54	-0.4	-2.4	-1.1	-3.5	60	55	NO	NO	NO	NO	NO

							Open	ing Year			Desig	n Year			Increase (Buil	ld - No Build	1)	NCG projec	t road noise	Do noise levels exce	ed the cumulative	Is the contribution	on from the road	
NCA	NCA ID	Receiver Address	Receiver Type		Facade	No	Build	В	uild	No E	Build	Вι	ild	Openi	ing Year	Design	n Year			limit with project roa	ds adding ≥2dB to	project	Acute?	Consider further
NCA	NCA ID	Receiver Address	Receiver Type	Floor	Orientation -	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	the total noi	se levels?	Day	Night	treatment?
						dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h										
NCA20	NCA20_432	44 ELOUERA STREET BEVERLY HILLS	Residential	G	SE	58	55	57	53	58	56	57	53	-0.3	-2.3	-1	-3.4	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_432	44 ELOUERA STREET BEVERLY HILLS	Residential	1	SE	60	57	59	55	60	58	59	54	-0.8	-2.7	-1.5	-3.8	60	55	NO	NO	NO NO	NO	NO
NCA20	NCA20_433 NCA20_437	1 KIRRANG STREET BEVERLY HILLS 46 ELOUERA STREET BEVERLY HILLS	Residential Residential	G	SE SF	58	59 55	61 57	56 52	62 58	56	56	56 52	-0.6 -1.1	-2.6 -3	-1.3 -1.7	-3.6 -4.1	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA20	NCA20_437 NCA20_439	2 KIRRANG STREET BEVERLY HILLS	Residential	G	SW	58	55	58	53	58	56	57	53	-0.3	-2.2	-1.7	-3.3	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_439	2 KIRRANG STREET BEVERLY HILLS	Residential	1	SF	60	58	60	55	61	59	60	55	-0.6	-2.5	-1.1	-3.6	60	55	NO	NO	NO	NO	NO
NCA20	NCA20 441	48 ELOUERA STREET BEVERLY HILLS	Residential	G	SE	57	55	56	52	58	56	56	52	-1	-2.9	-1.7	-4.1	60	55	NO	NO	NO	NO	NO
NCA20	NCA20 441	48 ELOUERA STREET BEVERLY HILLS	Residential	1	SE	59	57	58	53	59	57	57	53	-1.5	-3.4	-2.2	-4.5	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_443	50 ELOUERA STREET BEVERLY HILLS	Residential	G	SE	56	54	55	50	57	55	55	50	-1.5	-3.4	-2.2	-4.5	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_443	50 ELOUERA STREET BEVERLY HILLS	Residential	1	SE	58	56	56	52	59	57	56	52	-2.1	-4	-2.8	-5.1	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_447	52 ELOUERA STREET BEVERLY HILLS	Residential	G	SE	56	54	55	50	57	55	54	50	-1.6	-3.6	-2.3	-4.6	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_449	4 KIRRANG STREET BEVERLY HILLS	Residential	G	SE	59	57	59	54	60	58	58	54	-0.5	-2.5	-1.2	-3.5	60	55	NO	NO	NO	NO	NO
NCA20	NCA20_455	6 KIRRANG STREET BEVERLY HILLS	Residential	G	SE	60	58	59	55	60	59	59	55	-0.9	-2.8	-1.5	-3.9	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_325	2 ELOUERA STREET BEVERLY HILLS	Residential	G	NW	56	54	55	51	56	55	55	51	-0.7	-2.7	-1.3	-3.8	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_325	2 ELOUERA STREET BEVERLY HILLS	Residential	1	NW	58	55	57	53	58	56	57	52	-0.7	-2.7	-1.3	-3.8	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_327	2A ELOUERA STREET BEVERLY HILLS	Residential	G	NW	57	55	57	52	58	56	56	52	-0.7	-2.8	-1.4	-3.8	60	55	NO NO	NO	NO	NO	NO
NCA23	NCA23_327	2A ELOUERA STREET BEVERLY HILLS	Residential	1	NW	59	57	59	54	60	58	58	54	-0.6	-2.7	-1.3	-3.8	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA23	NCA23_331	4 ELOUERA STREET BEVERLY HILLS	Residential	G	NW NW	58	56	57	53 54	58 59	56 57	57 58	53	-0.8	-2.8	-1.4	-3.9	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA23	NCA23_344 NCA23_344	8 ELOUERA STREET BEVERLY HILLS 8 ELOUERA STREET BEVERLY HILLS	Residential Residential	G 1	NW NW	59 62	57 59	58 61	54	62	60	61	56	-0.9	-2.9 -2.7	-1.5 -1.3	-4	60	55	NO NO	NO NO	NO NO	NO	NO NO
NCA23	NCA23_344 NCA23_346	10 ELOUERA STREET BEVERLY HILLS	Residential	G	NW	59	57	58	54	60	58	58	53	-1.1	-3.1	-1.7	-4.1	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_348	12 ELOUERA STREET BEVERLY HILLS	Residential	G	NW	60	57	58	54	60	58	58	54	-1.4	-3.3	-1.9	-4.5	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_360	35 KIRRANG STREET BEVERLY HILLS	Residential	G	N	57	54	55	51	57	55	55	50	-1.9	-3.9	-2.6	-5	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_360	35 KIRRANG STREET BEVERLY HILLS	Residential	1	N	59	57	57	53	59	58	57	53	-1.9	-3.8	-2.5	-5	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_361	35A KIRRANG STREET BEVERLY HILLS	Residential	G	E	54	52	53	49	55	53	53	49	-1.2	-3.2	-1.9	-4.3	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_361	35A KIRRANG STREET BEVERLY HILLS	Residential	1	Е	57	55	56	51	57	55	56	51	-1.1	-3.1	-1.7	-4.2	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_371	33 KIRRANG STREET BEVERLY HILLS	Residential	G	N	56	54	55	50	57	55	54	50	-1.8	-3.9	-2.5	-4.9	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_371	33 KIRRANG STREET BEVERLY HILLS	Residential	1	N	59	57	57	53	59	58	57	52	-2.1	-4.1	-2.7	-5.2	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_374	31 KIRRANG STREET BEVERLY HILLS	Residential	G	N	58	55	56	51	58	56	55	51	-1.9	-4	-2.6	-5	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_374	31 KIRRANG STREET BEVERLY HILLS	Residential	1	N	60	58	59	54	61	59	58	54	-1.9	-3.9	-2.5	-5	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_382	29 KIRRANG STREET BEVERLY HILLS	Residential	G	W	58	56	56	52	59	57	56	52	-2.1	-4.2	-2.8	-5.2	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_382	29 KIRRANG STREET BEVERLY HILLS	Residential	1	W	61	59	59	55	62	60	59	55	-2	-4	-2.6	-5.1	60	55	NO	NO	NO NO	NO	NO
NCA23	NCA23_387	27 KIRRANG STREET BEVERLY HILLS	Residential	G 1	NW NW	59 62	57 59	57 60	52	60	58	57	52	-2.2	-4.2 -4	-2.9	-5.4	60	55	NO NO	NO NO	NO NO	NO NO	NO
NCA23	NCA23_387 NCA23_394	27 KIRRANG STREET BEVERLY HILLS 25 KIRRANG STREET BEVERLY HILLS	Residential Residential	G	NE NE	61	59	58	55 54	61	59	58	55 54	-2 -2.5	-4.5	-2.6 -3.1	-5.1 -5.6	60	55 55	NO NO	NO	NO NO	NO NO	NO NO
NCA23	NCA23_411	46 KIRRANG STREET BEVERLY HILLS	Residential	G	N	57	55	55	50	58	56	55	50	-2.4	-4.3	-3.1	-5.5	60	55	NO NO	NO	NO NO	NO	NO
NCA23	NCA23_421	44 KIRRANG STREET BEVERLY HILLS	Residential	G	W	58	55	55	51	58	56	55	51	-2.5	-4.5	-3.1	-5.6	60	55	NO	NO	NO	NO	NO
NCA23	NCA23 431	40 KIRRANG STREET BEVERLY HILLS	Residential	G	NW	59	56	56	52	59	57	56	52	-2.7	-4.7	-3.3	-5.8	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_431	40 KIRRANG STREET BEVERLY HILLS	Residential	1	NE	61	58	59	54	61	59	58	54	-1.9	-3.9	-2.5	-5	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_434	38 KIRRANG STREET BEVERLY HILLS	Residential	G	NW	59	57	56	52	60	58	56	52	-2.8	-4.8	-3.5	-5.9	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_441	36 KIRRANG STREET BEVERLY HILLS	Residential	G	NW	60	57	57	52	60	58	57	52	-3	-5	-3.7	-6.1	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_447	34 KIRRANG STREET BEVERLY HILLS	Residential	G	NW	60	58	57	53	61	59	57	53	-3	-5.1	-3.7	-6.2	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_455	32 KIRRANG STREET BEVERLY HILLS	Residential	G	NW	61	59	58	53	61	59	57	53	-3.4	-5.4	-4.1	-6.5	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_455	32 KIRRANG STREET BEVERLY HILLS	Residential	1	SE	62	59	60	55	62	60	60	55	-2	-4	-2.6	-5.1	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_465	30 KIRRANG STREET BEVERLY HILLS	Residential	G	NW	61	59	58	53	62	60	57	53	-3.6	-5.6	-4.3	-6.7	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_465	30 KIRRANG STREET BEVERLY HILLS	Residential	1	SE	61	59	60	55	62	60	59	55	-1.6	-3.6	-2.2	-4.7	60	55	NO NO	NO	NO	NO	NO
NCA23	NCA23_469	28 KIRRANG STREET BEVERLY HILLS	Residential	G 1	NE NE	62	60	59	55	62	60	59	54	-2.9	-4.8	-3.5	-6	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA23	NCA23_469 NCA23_552	28 KIRRANG STREET BEVERLY HILLS	Residential Residential	1 G	NE NW	64	61 59	61 59	56 54	64	62 59	61 59	56 54	-2.8	-4.8 -4.1	-3.5 -2.8	-5.9 -5.3	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA23	NCA23_552 NCA23_561	60 TALLAWALLA STREET BEVERLY HILLS 62 TALLAWALLA STREET BEVERLY HILLS	Residential	G	W	61	59	59	55	62	60	59	55	-2.1	-4.1	-2.8	-5.3	60	55	NO	NO	NO	NO	NO
NCA23	NCA23_563	27 KOOEMBA ROAD BEVERLY HILLS	Residential	G	N	63	61	61	57	63	61	61	57	-1.9	-3.8	-2.4	-4.9	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_097	64 TALLAWALLA STREET BEVERLY HILLS	Residential	G	NW	62	60	61	57	63	61	61	56	-1.3	-3.3	-2	-4.4	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_098	67 TALLAWALLA STREET BEVERLY HILLS	Residential	G		62	59	61	56	62	60	61	56	-0.9	-2.9	-1.6	-4.1	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_098	67 TALLAWALLA STREET BEVERLY HILLS	Residential	1	NW	63	60	62	58	63	61	62	58	-0.5	-2.5	-1.2	-3.7	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_099	28 KOOEMBA ROAD BEVERLY HILLS	Residential	G	NW	60	57	59	54	60	58	58	54	-1	-3	-1.7	-4.1	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_100	69 TALLAWALLA STREET BEVERLY HILLS	Residential	G	NW	62	59	61	56	62	60	60	56	-0.9	-2.9	-1.6	-4.1	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_103	71 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	62	60	61	57	63	61	61	57	-0.8	-2.8	-1.5	-3.9	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_105	73 TALLAWALLA STREET BEVERLY HILLS	Residential	G	NW	62	60	61	57	63	61	61	57	-0.8	-2.8	-1.4	-3.9	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_108	74 TALLAWALLA STREET BEVERLY HILLS	Residential	G	NW	65	62	63	58	65	63	62	58	-2.5	-4.4	-3.1	-5.5	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_109	75 TALLAWALLA STREET BEVERLY HILLS	Residential	G	NW	62	60	61	57	63	61	61	57	-0.8	-2.8	-1.5	-4	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_111	77 TALLAWALLA STREET BEVERLY HILLS	Residential	G	NW	62	60	62	57	63	61	61	57	-0.8	-2.8	-1.5	-4	60	55	NO	NO	NO	NO	NO

							Openi	ng Year			Desig	n Year		ı	ncrease (Bui	ld - No Build	I)	NCG projec	ct road nois	Do noise levels exce	ed the cumulative	Is the contribution	n from the road	
					Facade	No I	Build	В	uild	No B	uild	Вι	iild	Openi	ng Year	Desig	n Year		teria	limit with project roa		project	Acute?	Consider further
NCA	NCA ID	Receiver Address	Receiver Type	Fl	0	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	the total noi	se levels?	Day	Night	treatment?
				Floor	Orientation	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA24	NCA24_113	76 TALLAWALLA STREET BEVERLY HILLS	Residential	G	NW	64	62	62	58	65	63	62	58	-2	-4	-2.6	-5.1	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_115	79 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	63	60	62	57	63	61	62	57	-0.8	-2.9	-1.5	-4	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_115	79 TALLAWALLA STREET BEVERLY HILLS	Residential	1	N	64	61	63	59	64	62	63	59	-0.3	-2.3	-1	-3.5	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_119	81 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	62	60	62	57	63	61	61	57	-0.8	-2.9	-1.6	-4	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_123	83 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	62	60	61	57	63	61	61	57	-0.8	-2.9	-1.5	-4	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_127	85 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	62	60	61	57	63	61	61	57	-0.8	-2.8	-1.5	-3.9	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_129	87 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	62	59	61	57	62	60	61	56	-0.8	-2.8	-1.5	-3.9	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_129	87 TALLAWALLA STREET BEVERLY HILLS	Residential	1	N	63	60	63	58	63	61	62	58	-0.1	-2.2	-0.8	-3.3	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_136	89 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	62	60	61	57	62	60	61	57	-0.6	-2.7	-1.3	-3.8	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_136	89 TALLAWALLA STREET BEVERLY HILLS	Residential	1	N	63	60	63	58	63	61	62	58	0.1	-2.1	-0.7	-3.2	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_139	91 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	62	59	61	56	62	60	61	56	-0.8	-2.8	-1.5	-3.9	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_143	93 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	62	59	61	56	62	60	61	56	-0.7	-2.9	-1.4	-3.9	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_148	95 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	62	59	61	56	62	60	61	56	-0.8	-2.8	-1.5	-4	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_148	95 TALLAWALLA STREET BEVERLY HILLS	Residential	1	N	62	60	62	58	63	61	62	58	-0.2	-2.2	-0.9	-3.4	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_157	97 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	61	59	61	56	62	60	60	56	-0.7	-2.8	-1.4	-3.9	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_157	97 TALLAWALLA STREET BEVERLY HILLS	Residential	1	N	62	60	62	57	62	61	62	57	-0.1	-2.2	-0.9	-3.3	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_165	99 TALLAWALLA STREET BEVERLY HILLS	Residential	G	N	61	59	60	56	62	60	60	56	-0.7	-2.9	-1.4	-3.9	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_167	101 TALLAWALLA STREET BEVERLY HILLS	Residential	G	NE	58	56	58	53	59	57	57	53	-0.7	-2.7	-1.4	-3.9	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_167	101 TALLAWALLA STREET BEVERLY HILLS	Residential	1	NW	61	58	60	56	61	59	60	56	-0.2	-2.4	-0.9	-3.4	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_170	103 TALLAWALLA STREET BEVERLY HILLS	Residential	G	NE	58	55	57	53	58	56	57	53	-0.5	-2.5	-1.2	-3.7	60	55	NO	NO	NO	NO	NO
NCA24	NCA24_175	105 TALLAWALLA STREET BEVERLY HILLS	Residential	G	NE	58	56	58	53	58	56	57	53	-0.5	-2.5	-1.1	-3.6	60	55	NO	NO	NO	NO	NO
OSR	OSR_483	30 KOOEMBA ROAD BEVERLY HILLS	Non Assess Building	G	NW	64	62	62	58	64	62	62	57	-2	-4	-2.6	-5	-	-	-	-	-	-	NO
OSR	OSR_483	30 KOOEMBA ROAD BEVERLY HILLS	Non Assess Building	1	NW	66	64	65	60	67	65	65	60	-1.4	-3.4	-2.1	-4.5	-	-	-	-	-	-	NO

								Opening Yea	r			Design Yea	ar		lr	ncrease (Build - No	lo Ruild)								
					Facade		No Build	Opening rea	Build		No Build	Design rea	Build		Opening Ye	ear	Design Yea	ar	NCG noise	riteria	Do noise levels exceed the cun adding ≥2dB to the	nlative limit with project roa	ds Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Receiver T		Floor Ori	ntation	Day N	light	Day Nig	ght I	Day !	Night	Day	Night	Day	Night I	Day	Night	Day	Night	adding 2208 to the	total floise levels?	Day	Night	Consider further treatment?
				'	FIOOI OII	intation	dB(A) di	B(A) c	IB(A) dB	(A) d	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A) d	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA01	NCA01_001	298-300 BELMONT STREET ALEXANDRIA	Resident	ial	0	NE	46	40	48 4	13	46	41	48	43	1.9	2.6	1.9	2.4	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_001	298-300 BELMONT STREET ALEXANDRIA	Resident			NE			49 4		48	42	50	45	2	2.6	2	2.4	60	54	NO	NO	NO	NO	NO
NCA01	NCA01_002	301-303 BELMONT STREET ALEXANDRIA	Resident			NE	44		46 4	-	44	39	46	43	1.9		1.8	2.3	56	51	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_002 NCA01_003	301-303 BELMONT STREET ALEXANDRIA 305-307 BELMONT STREET ALEXANDRIA	Resident Resident		0	NE SE	46	40 39	47 4 45 4		46	39	48	41	1.9		1.6	1.6	56	51	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_004	311-313 BELMONT STREET ALEXANDRIA	Resident		0	SE	45	39	46 4		44	39	46	41	1.1		1.6	1.6	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_005	302 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	42	37	44 3	19	42	37	44	39	1.2	1.5	1.6	1.7	54	49	NO	NO	NO	NO	NO
NCA01	NCA01_006	304 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	44	39	45 4	10	44	39	46	41	1.3	1.6	1.7	1.8	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_007	306 BELMONT STREET ALEXANDRIA	Resident		0	SE	43	38	45 4	10	43	38	45	40	1.2	1.6	1.6	1.7	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_008	308 BELMONT STREET ALEXANDRIA	Resident		0	SE		38	44 3		43	38	44	40	1.3		1.6	1.9	55	50	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_009	309 BELMONT STREET ALEXANDRIA 310 BELMONT STREET ALEXANDRIA	Resident		0	SE	43	38	44 3		43	38	44	40	1.4		1.7	1.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_010 NCA01_011	310 BELMONT STREET ALEXANDRIA	Resident Resident		0	SE SE	45	39	46 4 46 4		44	39	46	41	1.2	-	1.7	1.8	56	51	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_012	314 BELMONT STREET ALEXANDRIA	Resident		0	SE	44	39	46 4	-	44	39	46	41	1.3		1.8	1.8	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_013	315 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	45	40	46 4	11	44	39	46	41	1	1.4	1.5	1.6	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_014	316 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	43	38	45 4	10	43	38	45	40	1.2	1.5	1.5	1.7	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_014	316 BELMONT STREET ALEXANDRIA	Resident	ial	1	SE	46	40	47 4	12	45	40	47	42	1.3	1.6	1.7	1.8	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_015	317 BELMONT STREET ALEXANDRIA	Resident		0	SE		40	46 4	_	45	40	46	41	1		1.5	1.6	57	52	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_016 NCA01_017	318 BELMONT STREET ALEXANDRIA 319 BELMONT STREET ALEXANDRIA	Resident Resident		0	SE SE	44	39 40	45 4		44	39 40	45	40	1.4		1.6	1.7	56	51 52	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_017	320 BELMONT STREET ALEXANDRIA	Resident		0	SE	43	38	45 4		43	38	45	40	1.4		1.6	1.7	55	50	NO NO	NO NO	NO NO	NO NO	NO
NCA01	NCA01_019	321 BELMONT STREET ALEXANDRIA	Resident		0	SE			46 4		45	40	46	41	1.2		1.6	1.7	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_020	322 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	43	37	44 3	19	43	38	44	39	1.4		1.6	1.8	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_020	322 BELMONT STREET ALEXANDRIA	Resident	ial	1	SE	45	40	46 4	11	45	40	46	41	1.3	1.6	1.6	1.8	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_021	323 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	45	40	46 4		45	40	46	41	1.2		1.7	1.6	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_022	324 BELMONT STREET ALEXANDRIA	Resident		0	SE	45		46 4		45	40	47	42	1	-	1.7	1.7	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_022	324 BELMONT STREET ALEXANDRIA	Resident		1	SE			48 4		46	41	48	43	1.3		1.9	2	58	53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_023	325 BELMONT STREET ALEXANDRIA 325 BELMONT STREET ALEXANDRIA	Resident Resident		1	SE SE	45		47 4	-	45	40	47	42	1.3	2.1	1.6	2.1	57	52	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_023 NCA01_024	325 BELMONT STREET ALEXANDRIA 326 BELMONT STREET ALEXANDRIA	Resident		0	SE	47	-	48 4		45	40	48	43	1.7		1.7	1.7	58	53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_024 NCA01_024	326 BELMONT STREET ALEXANDRIA	Resident		1	SE	46	41	48 4		46	41	48	43	1.5	1.8	2	2	58	53	NO NO	NO NO	NO	NO	NO NO
NCA01	NCA01_025	327 BELMONT STREET ALEXANDRIA	Resident		0	SW	45	40	47 4	12	45	40	47	42	1.4		1.7	1.7	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_026	328 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	45	40	46 4	12	45	40	47	42	1.2	1.5	1.7	1.7	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_026	328 BELMONT STREET ALEXANDRIA	Resident	ial	1	SE	47	41	48 4	13	46	41	48	43	1.5	1.8	1.9	2	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_027	329 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	46	40	47 4	12	45	40	47	42	1.3	1.7	1.7	1.7	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_027	329 BELMONT STREET ALEXANDRIA	Resident	ial	1	SE	47	42	49 4	14	47	42	49	44	1.7		2	2	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_028	330 BELMONT STREET ALEXANDRIA	Resident		0	SE			46 4		45	40	46	41	1.3		1.7	1.8	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_028	330 BELMONT STREET ALEXANDRIA	Resident		1	SE SE	46		48 4		46	40	48	43	1.6	1.9	2	1.7	58	53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_029 NCA01_030	331 BELMONT STREET ALEXANDRIA 332 BELMONT STREET ALEXANDRIA	Resident Resident		0	SE	45	40	47 4		45	40	46	42	1.4		1.7	1.8	57	52	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_030	332 BELMONT STREET ALEXANDRIA	Resident		1	SE	46	41	48 4		46	41	48	43	1.6	2	2	2	58	53	NO	NO	NO	NO	NO NO
NCA01	NCA01_031	333 BELMONT STREET ALEXANDRIA	Resident		0	SE	46	41	47 4	13	45	41	47	42	1.3	1.7	1.7	1.7	57	53	NO	NO	NO	NO	NO
NCA01	NCA01_031	333 BELMONT STREET ALEXANDRIA	Resident	ial	1	SE	47	42	49 4	14	47	42	49	44	1.7	2.1	2	2.1	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_032	334 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	45	39	46 4	11	44	39	46	41	1.5	1.9	1.8	1.9	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_032	334 BELMONT STREET ALEXANDRIA	Resident		1	SE	46	41	48 4		46	41	48	43	1.7		2.1	2.2	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_033	335 BELMONT STREET ALEXANDRIA	Resident		0	SE			47 4		46	41	47	43	1.2		1.7	1.7	58	53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_033 NCA01_034	335 BELMONT STREET ALEXANDRIA 336 BELMONT STREET ALEXANDRIA	Resident Resident		0	SE	47		49 4		47	42	49	44	1.6		1.9	1.8	59	54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_034	336 BELMONT STREET ALEXANDRIA	Resident		1	SE	46		48 4	-	46	41	48	43	1.6		1.8	2	58	53	NO NO	NO.	NO NO	NO NO	NO
NCA01	NCA01_035	337 BELMONT STREET ALEXANDRIA	Resident		0	SE	46		48 4		46	41	48	43	1.2		1.7	1.7	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_035	337 BELMONT STREET ALEXANDRIA	Resident	ial	1	SE	48	43	49 4	15	47	42	49	44	1.6	2	2	2	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_036	337A BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	46	41	48 4	13	46	41	48	43	1.5	1.8	1.8	1.8	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_036	337A BELMONT STREET ALEXANDRIA	Resident	ial	1	SE	48	43	49 4	15	47	43	49	44	1.6	1.9	1.8	1.8	59	55	NO	NO	NO	NO	NO
NCA01	NCA01_037	338 BELMONT STREET ALEXANDRIA	Resident		0	SE			47 4					42	0.8		1.6	1.6	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_037	338 BELMONT STREET ALEXANDRIA	Resident		1	SE			49 4		47	42	49	44	1.2		1.9	1.9	59	54	NO NO	NO NO	NO	NO	NO NO
NCA01 NCA01	NCA01_038 NCA01_039	339 BELMONT STREET ALEXANDRIA 340 BELMONT STREET ALEXANDRIA	Resident Resident		-	SE SE			45 4 47 4				45	40	1.2		1.6	1.6	56 58	51 53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_039 NCA01_039	340 BELMONT STREET ALEXANDRIA 340 BELMONT STREET ALEXANDRIA	Resident			SE			49 4				49	44	1.4		1.9	2	59	54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_040	342 BELMONT STREET ALEXANDRIA	Resident			SE			47 4				47	42	1.1		1.7	1.7	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_040	342 BELMONT STREET ALEXANDRIA	Resident			SE	48	43	49 4		47	42	49	44	1.4		2	2	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_041	343 BELMONT STREET ALEXANDRIA	Resident		0	SE	47	42	48 4			42	48	43	1		1.4	1.4	58	54	NO	NO	NO	NO	NO
NCA01	NCA01_042	344 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	46	41	47 4	12	46	41	47	42	1.2	1.5	1.7	1.7	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_042	344 BELMONT STREET ALEXANDRIA	Resident			SE			49 4	•			49	44	1.4		2	2	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_043	344A BELMONT STREET ALEXANDRIA	Resident			SE			46 4		45	40		42	1		1.5	1.6	57	52	NO NO	NO NO	NO	NO NO	NO NO
NCA01	NCA01_043	344A BELMONT STREET ALEXANDRIA	Resident		1	SE SW			49 4		47	43	49	45	1.4	1.8	2	2	59	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_044 NCA01_044	345 BELMONT STREET ALEXANDRIA 345 BELMONT STREET ALEXANDRIA	Resident Resident		-	sw sw			48 4 50 4			42	50	43 45	0.9		1.6	1.2	59 60	54 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_044 NCA01_045	345 BELMONT STREET ALEXANDRIA 346 BELMONT STREET ALEXANDRIA	Resident			SE			47 4					43	1		1.6	1.6	58	53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_046	347 BELMONT STREET ALEXANDRIA	Resident			SE			48 4	-			48	43	0.7		1.2	1.2	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_047	348 BELMONT STREET ALEXANDRIA	Resident			SE	46		48 4		46	41	48	43	1.1		1.6	1.6	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_048	349 BELMONT STREET ALEXANDRIA	Resident		0	SE	48	43	48 4		47	42	48	43	0.6	0.9	1	1.1	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_048	349 BELMONT STREET ALEXANDRIA	Resident	ial	1	SE	49	44	50 4	15	48	43	50	45	1	1.3	1.4	1.4	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_049	350 BELMONT STREET ALEXANDRIA	Resident			SE			47 4				47	43	1.2		1.6	1.7	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_050	351 BELMONT STREET ALEXANDRIA	Resident			SE			48 4					43	0.5		0.9	0.9	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_050	351 BELMONT STREET ALEXANDRIA	Resident			SE			50 4		49	44	50	45	0.9		1.3	1.3	60	55	NO	NO NO	NO	NO	NO
NCA01 NCA01	NCA01_051	352 BELMONT STREET ALEXANDRIA 353 BELMONT STREET ALEXANDRIA	Resident Resident		-	SE SE			47 4 48 4			43	48	43	0.3		0.9	0.9	58	53 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_052 NCA01_052	353 BELMONT STREET ALEXANDRIA 353 BELMONT STREET ALEXANDRIA	Resident			SE			50 4				50	45	0.3		1.2	1.2	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_052 NCA01_053	353A BELMONT STREET ALEXANDRIA	Resident			SE			49 4	-			49	44	0.8		0.8	0.9	60	55	NO NO	NO NO	NO	NO	NO
NCA01	NCA01_053	353A BELWONT STREET ALEXANDRIA	Resident		1	SE			51 4		49	44	50	45	0.8		1.2	1.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_054	354 BELMONT STREET ALEXANDRIA	Resident			SE			48 4	-		42	48	43	0.8		1.4	1.5	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_055	355 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	49	44	49 4	14	48	43	49	44	0.3	0.6	0.7	0.8	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_055	355 BELMONT STREET ALEXANDRIA	Resident	ial	1	SE	50	45	51 4	16	49	45	51	46	0.7	1	1.1	1.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_056	357 BELMONT STREET ALEXANDRIA	Resident	ial	0	SE	49	44	49 4	14	48	43	49	44	0.2	0.6	0.7	0.7	60	55	NO	NO	NO	NO	NO

					Facade		Opening	y Year			Design Ye	ar		Increase (Buil	ld - No Build)		NCG noise	critoria			. Is the contribution from t	he read project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Receive	er Type	racaue	No E	Night	Build Day	Night	No Build	Night	Build Day Night	Openii	ng Year Night	Design \	Year Night	Day	Night	adding ≥2dB to the	e total noise levels?	ls the contribution from to		Consider further treatment?
					Floor Orientation	dB(A)	dB(A)	dB(A)	dB(A)		dB(A)	dB(A) dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA01	NCA01_056	357 BELMONT STREET ALEXANDRIA	Reside	dential	1 SE	51	45	51	46	50	45	51 46	0.5	1	1	1.1	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_057 NCA01_058	358 BELMONT STREET ALEXANDRIA 359 BELMONT STREET ALEXANDRIA	Reside Reside		0 SE	46	41	47	42		41	47 42 49 44	0.1	0.5	0.6	0.6	58	53 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_058	359 BELMONT STREET ALEXANDRIA	Reside		1 SE	51	46	51	47		45	51 46	0.5	1	1	1	60	55	NO NO	NO NO	NO	NO	NO
NCA01	NCA01_059	360 BELMONT STREET ALEXANDRIA	Reside	dential	O SE	48	42	48	44	47	42	48 44	0.8	1.2	1.4	1.5	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_060	361 BELMONT STREET ALEXANDRIA	Reside		0 SE	49	44	50	45		44	49 44	0.2	0.5	0.6	0.7	60	55	NO NO	NO	NO NO	NO NO	NO NO
NCA01	NCA01_060 NCA01_061	361 BELMONT STREET ALEXANDRIA 362 BELMONT STREET ALEXANDRIA	Reside Reside		1 SE 0 SE	51 47	46	47	47		45	51 46 47 43	0.5	1.2	1.4	1.1	60 58	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_062	363 BELMONT STREET ALEXANDRIA	Reside		0 SE	49	44	50	45		44	49 45	0.3	0.7	0.7	0.8	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_062	363 BELMONT STREET ALEXANDRIA	Reside		1 SE	51	46	52	47		46	52 47	0.7	1.2	1.1	1.1	60	55	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_063 NCA01_064	364 BELMONT STREET ALEXANDRIA 365 BELMONT STREET ALEXANDRIA	Reside Reside		0 SE 0 SE	48 50	43	50	44		44	49 44 50 45	0.7	0.7	0.8	0.8	59 60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_064	365 BELMONT STREET ALEXANDRIA	Reside		1 SE	52	46	52	48		46	52 47	0.7	1.2	1.1	1.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_065	366 BELMONT STREET ALEXANDRIA	Reside	dential	O SE	48	43	49	44	47	42	49 44	0.9	1.3	1.4	1.4	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_066	367 BELMONT STREET ALEXANDRIA	Reside		0 SE	50	45	50	46		44	50 45	0.4	0.9	0.8	0.9	60	55	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_066 NCA01_067	367 BELMONT STREET ALEXANDRIA 368 BELMONT STREET ALEXANDRIA	Reside Reside		1 SE 0 SF	52	47	53	48		46	52 48 49 44	0.9	1.3	1.2	1.3	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_068	369 BELMONT STREET ALEXANDRIA	Reside		O SE	50	45	50	46		44	50 45	0.4	0.9	0.8	0.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_069	369A BELMONT STREET ALEXANDRIA	Reside	dential	O SE	50	45	50	46	49	44	50 45	0.6	1.1	1	1.1	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_070	370 BELMONT STREET ALEXANDRIA	Reside		0 NE	47	42	48	43		41	47 43	0.9	1.3	1.4	1.5	58	53	NO	NO NO	NO	NO	NO NO
NCA01 NCA01	NCA01_071 NCA01_071	371 BELMONT STREET ALEXANDRIA 371 BELMONT STREET ALEXANDRIA	Reside Reside		0 SE 1 SE	49 52	44	50	46		46	50 45	0.9	1.3	1.3	1.4	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_072	372 BELMONT STREET ALEXANDRIA	Reside		0 SW	50	45	51	46		45	50 45	0.4	0.9	1	0.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_073	373-375 BELMONT STREET ALEXANDRIA	Reside	dential	0 SE	48	43	49	44	47	43	49 44	1	1.5	1.3	1.4	59	55	NO	NO	NO	NO	NO
NCA01	NCA01_073	373-375 BELMONT STREET ALEXANDRIA	Reside		1 SW	51	46	52	48		46	52 47	1.1	1.6	1.5	1.6	60	55	NO NO	NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_074 NCA01_075	374 BELMONT STREET ALEXANDRIA 376 BELMONT STREET ALEXANDRIA	Reside Reside		0 SE 0 SW	47 57	42 52	48 56	51		51	48 43 56 51	-0.7	-0.3	0	0	59 60	54 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_076	377 BELMONT STREET ALEXANDRIA	Reside		0 SE	52	46	52	48		46	52 47	0.6	1.1	1	1.2	60	55	NO NO	NO	NO	NO	NO
NCA01	NCA01_077	378 BELMONT STREET ALEXANDRIA	Reside		0 SE	58	53	57	52		52	56 52	-0.9	-0.5	-0.4	-0.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_077	378 BELMONT STREET ALEXANDRIA	Reside Reside		1 SE	59	54 33	58	33		53	58 53 38 33	-0.6 -0.2	-0.3	-0.1	0.4	50	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_078 NCA01_079	1 COULSON STREET ERSKINEVILLE 2 COULSON STREET ERSKINEVILLE	Reside Reside		0 N	38 49	33 44	38 46	33 40		43	38 33 45 40	-0.2 -3.2	-3.4	-2.4	-2.4	60	45 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_079	2 COULSON STREET ERSKINEVILLE	Reside		1 E	50	44	46	41		44	46 41	-3.2	-3.4	-2.2	-2.4	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_079	2 COULSON STREET ERSKINEVILLE	Reside	dential	2 E	51	45	47	42	50	45	47 42	-3.3	-3.4	-2.2	-2.4	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_079	2 COULSON STREET ERSKINEVILLE	Reside		3 E	51	46	48	43		45	48 43	-3.1	-3.3	-1.9	-2.2	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_079 NCA01_079	2 COULSON STREET ERSKINEVILLE 2 COULSON STREET ERSKINEVILLE	Reside Reside	dential	4 E	51	46	49 50	43		45	50 45	-2.9 -2.6	-3	-1.7 -1.4	-1.9 -1.5	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_080	3 COULSON STREET ERSKINEVILLE	Reside		0 N	38	33	38	33		33	39 34	-0.2	0.1	0.6	0.7	50	45	NO	NO	NO	NO	NO
NCA01	NCA01_081	5 COULSON STREET ERSKINEVILLE	Reside	dential	0 N	38	33	38	33	38	33	39 33	-0.3	0	0.6	0.6	50	45	NO	NO	NO	NO	NO
NCA01	NCA01_082	1B COULSON STREET ERSKINEVILLE	Reside		0 E	45	40	46	42		40	45 41	1.4	1.6	0.8	1.1	57	52	NO NO	NO NO	NO	NO NO	NO
NCA01 NCA01	NCA01_082 NCA01_082	1B COULSON STREET ERSKINEVILLE 1B COULSON STREET ERSKINEVILLE	Reside Reside		1 E	47	42	48	44		42	48 43	1.6	1.8	1.2	1.2	59	54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_082	1B COULSON STREET ERSKINEVILLE	Reside		3 E	48	44	50	46		44	49 45	1.7	1.7	1.2	1.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_083	21-25 COULSON STREET ERSKINEVILLE	Reside	dential	0 SE	39	34	40	35	39	34	40 35	0.6	0.9	1.3	1.2	51	46	NO	NO	NO	NO	NO
NCA01	NCA01_083	21-25 COULSON STREET ERSKINEVILLE	Reside		1 SE	40	35 40	41	36		35	41 36	0.6	0.9	1.2	1.2	52	47	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_083 NCA01_083	21-25 COULSON STREET ERSKINEVILLE 21-25 COULSON STREET ERSKINEVILLE	Reside Reside	dential	2 SW 3 SW	45	40	44	39 41		40	44 39 46 41	-0.8	-0.7	-0.6	-0.7	57	52 54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_084	21-25 COULSON STREET ERSKINEVILLE	Reside		0 NW	42	37	40	35	41	37	40 35	-2.2	-2.3	-1.6	-1.6	53	49	NO	NO	NO	NO	NO
NCA01	NCA01_084	21-25 COULSON STREET ERSKINEVILLE	Reside	dential	1 NW	44	39	42	36	43	38	42 37	-2	-2.3	-1.6	-1.7	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_084 NCA01_085	21-25 COULSON STREET ERSKINEVILLE 41 EUSTON LANE ALEXANDRIA	Reside Reside		2 NW	45	40	44	38		39	44 39 45 40	-1.6 -0.1	-1.7	-1.1 0.8	-1.2	57 56	52 51	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_085	41 EUSTON LANE ALEXANDRIA	Reside		1 SE	46	41	46	41		41	46 42	0	0.4	1	1.1	57	53	NO NO	NO	NO NO	NO	NO
NCA01	NCA01_086	43 EUSTON LANE ALEXANDRIA	Reside		0 SE	44	39	44	39	44	39	45 40	-0.2	0.1	0.6	0.8	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_086	43 EUSTON LANE ALEXANDRIA	Reside		1 SE	46	41	46	41		41	46 42	0	0.3	0.9	1.1	58	53	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_087 NCA01_087	105-155 EUSTON ROAD ALEXANDRIA 105-155 EUSTON ROAD ALEXANDRIA	Reside Reside		0 SE 1 SE	71	65	75 75	70		65	76 71 75 71	4.6	5.5	4.7	5.2 4.8	60	55 55	YES YES	YES YES	YES YES	YES	YES YES
NCA01	NCA01_087	105-155 EUSTON ROAD ALEXANDRIA	Reside		2 SE	71	65	75	70		66	75 70	3.8	4.4	3.7	4.2	60	55	YES	YES	YES	YES	YES
NCA01	NCA01_088	105-155 EUSTON ROAD ALEXANDRIA	Reside	dential	O SE	72	66	76	71	72	66	76 71	3.8	4.4	4	4.4	60	55	YES	YES	YES	YES	YES
NCA01	NCA01_088	105-155 EUSTON ROAD ALEXANDRIA	Reside		1 SE	72	67	76	71		67	76 71	3.1	3.7	3.2	3.7	60	55	YES	YES	YES	YES	YES
NCA01 NCA01	NCA01_088 NCA01_088	105-155 EUSTON ROAD ALEXANDRIA 105-155 EUSTON ROAD ALEXANDRIA	Reside Reside		2 SE 3 SE	72	67	75 74	70 70		67	75 70 75 70	2.8	3.4	2.8	3.3	60	55 55	YES YES	YES	YES YES	YES	YES YES
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA	Reside		0 SE	71	65	75	70		66	76 71	4.1	4.9	4.1	4.6	60	55	YES	YES	YES	YES	YES
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA	Reside		1 SE	71	66	75	70		66	75 70	3.7	4.4	3.6	4.1	60	55	YES	YES	YES	YES	YES
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA	Reside		2 SE	71	66	74	70		66	75 70	3.3	4	3.3	3.7	60	55	YES	YES	YES	YES	YES
NCA01 NCA01	NCA01_089 NCA01_090	93-103 EUSTON ROAD ALEXANDRIA 3-9 EVE STREET ERSKINEVILLE	Reside Reside		3 SE 0 S	71	65 34	74 40	69 35		66 34	74 69 40 35	0.3	3.5 0.5	0.8	0.8	60 51	55 46	YES NO	YES NO	YES NO	YES NO	YES NO
NCA01	NCA01_090	3-9 EVE STREET ERSKINEVILLE	Reside		1 S	41	36	41	36		36	41 36	0.2	0.5	0.8	0.8	53	48	NO	NO	NO	NO	NO
NCA01	NCA01_090	3-9 EVE STREET ERSKINEVILLE		dential	2 S	42	37	42	37		37	43 38	0.1	0.3	0.7	0.7	54	49	NO	NO	NO	NO	NO
NCA01	NCA01_090	3-9 EVE STREET ERSKINEVILLE	Reside		3 S	44	39 40	44	39		39	44 39	-0.3	-0.2	0.4	0.4	56	51	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_090 NCA01_090	3-9 EVE STREET ERSKINEVILLE 3-9 EVE STREET ERSKINEVILLE	Reside Reside		5 S	46	40	45 47	40		40	46 40 47 42	-0.4	-0.2	0.3	0.2	57 58	52 54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_090	3-9 EVE STREET ERSKINEVILLE	Reside		6 S	47	42	49	44		42	49 44	1.7	1.8	1.6	1.5	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_091	8 EVE STREET ERSKINEVILLE	Reside		0 S	38	33	39	35		33	40 35	1.1	1.5	1.5	1.5	50	45	NO	NO	NO	NO	NO
NCA01	NCA01_091	8 EVE STREET ERSKINEVILLE 8 EVE STREET ERSKINEVILLE	Reside Reside		1 E	40	35 37	41	37		35	42 37 44 39	1.4	1.7	1.7	1.8	52 54	47	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_091 NCA01_092	8 EVE STREET ERSKINEVILLE 8 EVE STREET ERSKINEVILLE	Reside		0 S	38	33	39	39		32	39 34	1.3	1.7	1.7	1.8	49	49	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_092	8 EVE STREET ERSKINEVILLE		dential	1 S	39	34	40	36		34	40 36	1.4	1.7	1.6	1.8	51	46	NO	NO	NO	NO	NO
NCA01	NCA01_093	8 EVE STREET ERSKINEVILLE		dential	0 S	39	34	41	36		34	41 36	1.3	1.5	1.6	1.6	51	46	NO	NO	NO	NO	NO
NCA01	NCA01_093	8 EVE STREET ERSKINEVILLE 8 EVE STREET ERSKINEVILLE	Reside		1 S	41	36 37	42	37		36	42 37	1.3	1.6	1.7	1.7	53	48	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_093 NCA01_093	8 EVE STREET ERSKINEVILLE 8 EVE STREET ERSKINEVILLE	Reside Reside		2 S 3 S	42	37	43	38		37	43 38 44 39	1.4	1.7	1.8	1.8	54 55	49	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_093	8 EVE STREET ERSKINEVILLE	Reside		4 S	44	38	45	40		38	45 40	1.6	1.9	2	2	55	50	NO	NO	NO	NO	NO NO
NCA01	NCA01_094	8 EVE STREET ERSKINEVILLE	Reside		0 W	41	36	39	34		35	40 35	-1.8	-1.8	-0.8	-0.9	53	47	NO	NO	NO	NO	NO
NCA01	NCA01_094	8 EVE STREET ERSKINEVILLE 8 EVE STREET ERSKINEVILLE	Reside Reside		1 E	39 41	34 36	41	36 37		34	41 36 42 37	1.5	1.9	1.8	1.9	51 52	46 47	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_094 NCA01_094	8 EVE STREET ERSKINEVILLE 8 EVE STREET ERSKINEVILLE		dential	3 E	41	36	42	37		35	42 37 44 39	1.6	1.9	1.9	1.9	52	49	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_095	8 EVE STREET ERSKINEVILLE		dential	0 W	43	37	40	35		37	40 35	-2.4	-2.4	-1.4	-1.4	54	49	NO	NO	NO	NO	NO
NCA01	NCA01_095	8 EVE STREET ERSKINEVILLE	Reside		1 W	43	38	41	36		38	41 36	-2.3	-2.3	-1.2	-1.4	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_095	8 EVE STREET ERSKINEVILLE	Reside	dential	2 W	44	39	42	37	43	38	42 37	-2.1	-2.1	-1.1	-1.2	55	50	NO	NO	NO	NO	NO

					Faca	de	No E		ing Year	ild	No E	Design	n Year Bu		Openina	Increase (Build	l - No Build) Design	Vanz	NCG nois	e criteria	Do noise levels exceed the cumlat	ive limit with project roa	ads Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor C	rientation	Day	Night	Day dB(A)	Night dB(A)	Day	Night	Day	Night	Day	Night dB(A)	Day	Night	Day	Night	adding ≥2dB to the tot	al noise levels?	Day 15h	Night	nsider further treatment?
NCA01	NCA01_095	8 EVE STREET ERSKINEVILLE		Residential	3	s	42	dB(A) 36	43	38	dB(A)	dB(A) 36	dB(A) 43	dB(A) 38	1.2	1.5	dB(A)	dB(A)	dB(A) 54	dB(A) 48	NO Day	NO	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h NO	NO
NCA01	NCA01_095	8 EVE STREET ERSKINEVILLE		Residential	4	E	43	38	45	40	43	38	45	40	1.6	1.9	2	1.9	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_096	11 EVE STREET ERSKINEVILLE		Residential	0	w	39	34	39	34	39	34	40	35	0	0.3	0.8	0.8	51	46	NO	NO	NO	NO	NO
NCA01	NCA01_097	13 EVE STREET ERSKINEVILLE		Residential	0	w	39	34	39	34	39	34	39	34	0.1	0.4	0.8	0.8	51	46	NO	NO	NO	NO	NO
NCA01	NCA01_098	15 EVE STREET ERSKINEVILLE		Residential	0	W	38	33	39	34	38	33	39	34	0.1	0.3	0.8	0.8	50	45	NO NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_099 NCA01_100	17 EVE STREET ERSKINEVILLE 20 EVE STREET ERSKINEVILLE		Residential Residential	0	E NA/	37	32	38	33	37 43	32	38 41	33	-2.8	-2.8	-1.7	-1.9	49 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_100	20 EVE STREET ERSKINEVILLE		Residential	1	w	45	40	42	37	44	39	42	37	-2.8	-2.9	-1.7	-1.8	56	51	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_100	20 EVE STREET ERSKINEVILLE		Residential	2	w	45	40	43	38	45	40	43	38	-2.5	-2.6	-1.5	-1.6	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_100	20 EVE STREET ERSKINEVILLE		Residential	3	w	46	41	44	39	45	40	44	39	-2	-2	-1	-1.2	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_101	20 EVE STREET ERSKINEVILLE		Residential	0	E	38	33	39	34	38	33	39	34	1.2	1.5	1.7	1.7	50	45	NO	NO	NO	NO	NO
NCA01	NCA01_101	20 EVE STREET ERSKINEVILLE		Residential	1	E	40	35	41	36	40	35	41	36	1.3	1.7	1.7	1.7	52	47	NO	NO	NO	NO	NO
NCA01	NCA01_101 NCA01_101	20 EVE STREET ERSKINEVILLE 20 EVE STREET ERSKINEVILLE		Residential	2	E	42	37	43	39	42	37	43	39	1.3	1.6	1.7	1.8	54	49	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_101 NCA01_101	20 EVE STREET ERSKINEVILLE 20 EVE STREET ERSKINEVILLE		Residential	4	<u> </u>	45	40	46	41	45	40	46	41	1.1	1.4	1.5	1.6	60	52 54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_102	23 EVE STREET ERSKINEVILLE		Residential	0	w	39	34	39	34	39	34	39	34	-0.3	-0.1	0.2	0.2	51	46	NO	NO	NO	NO	NO
NCA01	NCA01_103	27 EVE STREET ERSKINEVILLE		Residential	0	w	39	34	38	33	38	33	39	33	-0.4	-0.2	0.2	0.2	50	45	NO	NO	NO	NO	NO
NCA01	NCA01_104	29 EVE STREET ERSKINEVILLE		Residential	0	w	39	33	38	33	38	33	38	33	-0.3	-0.1	0.2	0.2	50	45	NO	NO	NO	NO	NO
NCA01	NCA01_105	31 EVE STREET ERSKINEVILLE		Residential	0	E	38	32	38	33	37	32	38	33	0.2	0.4	0.9	0.8	49	44	NO	NO	NO	NO	NO
NCA01	NCA01_106	33 EVE STREET ERSKINEVILLE		Residential	0	E	37	32	38	33	37	32	38	33	0.3	0.5	0.8	0.8	49	44	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_107 NCA01_108	35 EVE STREET ERSKINEVILLE 37 EVE STREET ERSKINEVILLE		Residential Residential	0	F	37	32	38	33	37	32	38	33	0.4	0.5	0.9	0.8	49	44	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_108	39 EVE STREET ERSKINEVILLE		Residential	0	E	37	32	37	33	37	32	38	33	0.3	0.5	0.8	0.9	49	44	NO	NO	NO	NO	NO
NCA01	NCA01_110	41 EVE STREET ERSKINEVILLE		Residential	0	E	37	32	37	32	37	32	38	33	0.3	0.5	0.8	0.9	49	44	NO	NO	NO	NO	NO
NCA01	NCA01_111	1A GODDARD STREET ERSKINEVILLE		Residential	0	w	39	34	38	33	39	34	38	33	-1.1	-1	-0.4	-0.6	51	46	NO	NO	NO	NO	NO
NCA01	NCA01_111	1A GODDARD STREET ERSKINEVILLE		Residential	1	W	41	36	40	35	41	36	40	35	-1.3	-1.4	-0.7	-0.8	53	48	NO	NO	NO	NO	NO
NCA01	NCA01_111	1A GODDARD STREET ERSKINEVILLE		Residential	2	W	43	38	42	36	42	37	42	37	-1.1	-1.1	-0.5	-0.7	54	49	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_112 NCA01_112	1B GODDARD STREET ERSKINEVILLE 1B GODDARD STREET ERSKINEVILLE		Residential	1	w	37	32	37	32	37	32	37	32	-0.5	-0.2	0.1	0.2	49 51	44	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_112 NCA01_112	1B GODDARD STREET ERSKINEVILLE 1B GODDARD STREET ERSKINEVILLE		Residential	2	w	42	36	41	36	41	36	41	36	-0.5	-0.5	0.1	-0.1	53	48	NO NO	NO	NO	NO	NO NO
NCA01	NCA01_113	1C GODDARD STREET ERSKINEVILLE		Residential	0	w	37	31	36	31	36	31	37	32	-0.3	-0.2	0.3	0.2	48	43	NO	NO	NO	NO	NO
NCA01	NCA01_113	1C GODDARD STREET ERSKINEVILLE		Residential	1	w	39	34	38	33	39	33	39	34	-0.4	-0.2	0.1	0.2	51	45	NO	NO	NO	NO	NO
NCA01	NCA01_113	1C GODDARD STREET ERSKINEVILLE		Residential	2	w	41	36	41	36	41	36	41	36	-0.5	-0.3	0	0	53	48	NO	NO	NO	NO	NO
NCA01	NCA01_114	1D GODDARD STREET ERSKINEVILLE		Residential	0	W	36	31	36	31	36	31	36	31	-0.3	-0.1	0.4	0.3	48	43	NO NO	NO	NO	NO	NO
NCA01	NCA01_114 NCA01_114	1D GODDARD STREET ERSKINEVILLE 1D GODDARD STREET ERSKINEVILLE		Residential Residential	2	w	38 41	33	38 41	33	38 41	33	38 41	33	-0.3	-0.1	0.3	0.2	50	45	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_115	1E GODDARD STREET ERSKINEVILLE		Residential	0	w	35	30	35	30	35	30	35	30	-0.2	0	0.5	0.1	47	42	NO NO	NO NO	NO	NO NO	NO
NCA01	NCA01_115	1E GODDARD STREET ERSKINEVILLE		Residential	1	w	37	32	37	32	37	32	38	32	-0.2	0	0.4	0.3	49	44	NO	NO	NO	NO	NO
NCA01	NCA01_115	1E GODDARD STREET ERSKINEVILLE		Residential	2	w	41	35	40	35	40	35	41	35	-0.3	0	0.3	0.3	52	47	NO	NO	NO	NO	NO
NCA01	NCA01_116	1F GODDARD STREET ERSKINEVILLE		Residential	0	w	34	30	34	30	33	30	34	30	-0.2	0	0.7	0	45	42	NO	NO	NO	NO	NO
NCA01	NCA01_116	1F GODDARD STREET ERSKINEVILLE		Residential	1	W	36	31	36	31	36	31	36	31	0	0.1	0.6	0.5	48	43	NO	NO	NO	NO	NO
NCA01	NCA01_116 NCA01_117	1F GODDARD STREET ERSKINEVILLE 5 GODDARD STREET ERSKINEVILLE		Residential	0	w c	39 40	34	39 40	34	39 40	34	40	34	-0.3	-0.1	0.5	0.4	51 52	46	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_117 NCA01_118	201 LAWRENCE STREET ALEXANDRIA		Residential	0	NE NE	50	45	52	47	50	45	52	48	2.1	2.7	1.9	2.5	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_118	201 LAWRENCE STREET ALEXANDRIA		Residential	1	NE	51	46	53	49	52	46	54	49	2	2.7	2	2.5	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_119	203 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	44	39	45	41	44	39	46	41	1.2	1.6	1.6	1.9	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_119	203 LAWRENCE STREET ALEXANDRIA		Residential	1	SE	46	41	47	42	46	41	47	43	1.2	1.6	1.7	1.8	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_120	203A LAWRENCE STREET ALEXANDRIA		Residential	0	SE	44	39	45	41	44	39	46	41	1.2	1.5	1.6	1.7	56	51	NO NO	NO	NO	NO	NO
NCA01	NCA01_120 NCA01 121	203A LAWRENCE STREET ALEXANDRIA 205 LAWRENCE STREET ALEXANDRIA		Residential Residential	0	SE SF	46	41	47	42	46	41	47	42	1.2	1.6	1.7	1.8	58	53 51	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_121	209 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	44	39	45	40	44	39	46	41	1.2	1.4	1.5	1.7	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_122	209 LAWRENCE STREET ALEXANDRIA		Residential	1	SE	45	40	47	42	45	40	47	42	1.2	1.5	1.6	1.8	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_123	211 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	44	39	45	40	44	39	45	41	1.1	1.4	1.5	1.7	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_124	213 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	44	39	45	40	44	39	46	41	1	1.3	1.5	1.6	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_124	213 LAWRENCE STREET ALEXANDRIA 213 LAWRENCE STREET ALEXANDRIA		Residential Residential	2	SE SE	45	40	47	42	45 47	40	47	42	1.2	1.4	1.7	2	57 59	52 54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_124 NCA01_125	213 LAWRENCE STREET ALEXANDRIA 215 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	44	39	48	40	44	39	49	41	0.9	1.2	1.4	1.6	56	51	NO NO	NO NO	NO	NO NO	NO NO
NCA01	NCA01_125	215 LAWRENCE STREET ALEXANDRIA		Residential	1	SE	46	41	47	42	46	41	47	42	0.9	1.2	1.7	1.8	58	53	NO NO	NO	NO	NO	NO
NCA01	NCA01_125	215 LAWRENCE STREET ALEXANDRIA		Residential	2	SE	47	42	48	43	47	42	49	44	1	1.3	1.8	1.9	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_126	217 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	45	39	45	41	44	39	46	41	0.8	1.1	1.4	1.5	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_126	217 LAWRENCE STREET ALEXANDRIA		Residential	1	SE	46	41	47	42	46	41	47	43	0.8	1.1	1.5	1.6	58	53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_127 NCA01_128	219 LAWRENCE STREET ALEXANDRIA 220-230 LAWRENCE STREET ALEXANDRIA		Residential Residential	0	SE NE	45 55	40 50	46 58	41 53	45 56	40 51	46 58	53	0.8	2.8	2	2.6	57 60	52 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_128	220-230 LAWRENCE STREET ALEXANDRIA		Residential	1	NE NE	57	51	59	54	57	52	59	54	2.1	2.8	2	2.6	60	55	NO	NO	NO	NO	NO NO
NCA01	NCA01_128	220-230 LAWRENCE STREET ALEXANDRIA		Residential	2	NE	57	52	59	55	58	52	60	55	2	2.8	2.1	2.6	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_129	221 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	45	40	46	41	45	40	46	41	0.8	1.1	1.3	1.5	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_130	223 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	45	40	46	41	45	40	46	41	0.7	1	1.3	1.4	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_130	223 LAWRENCE STREET ALEXANDRIA		Residential	1	SE	46	41	47	42	46 4E	41	47	43	0.7	0.9	1.3	1.4	58	53	NO NO	NO NO	NO	NO NO	NO NO
NCA01	NCA01_131 NCA01_132	225 LAWRENCE STREET ALEXANDRIA 227 LAWRENCE STREET ALEXANDRIA		Residential Residential	0	SE SE	45	40	46	41	45 45	40	46	41	0.6	0.9	1.2	1.3	57 57	52 52	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_132 NCA01_132	227 LAWRENCE STREET ALEXANDRIA 227 LAWRENCE STREET ALEXANDRIA		Residential	1	SE	46	41	47	41	46	41	46	43	0.5	0.9	1.2	1.3	58	53	NO NO	NO NO	NO	NO NO	NO NO
NCA01	NCA01_133	229 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	45	40	46	41	45	40	46	41	0.5	0.9	1.1	1.2	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_133	229 LAWRENCE STREET ALEXANDRIA		Residential	1	SE	47	41	47	42	46	41	47	43	0.6	0.8	1.2	1.3	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_134	231 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	45	40	46	41	45	40	46	41	0.4	0.8	1.1	1.2	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_134	231 LAWRENCE STREET ALEXANDRIA		Residential	1	SE	47	42	47	42	46	41	48	43	0.5	0.8	1.2	1.2	58	53	NO NO	NO NO	NO	NO NO	NO NO
NCA01	NCA01_135 NCA01_136	232 LAWRENCE STREET ALEXANDRIA 233 LAWRENCE STREET ALEXANDRIA		Residential Residential	0	NW SE	43	38 40	44	39 41	43	38 40	45	40	0.5	0.9	1.2	1.4	55 57	50 52	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_137	235 LAWRENCE STREET ALEXANDRIA		Residential	0	SE	46	40	46	41	45	40	46	41	0.4	0.7	0.9	1.1	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_137	235 LAWRENCE STREET ALEXANDRIA		Residential	1	NW	47	42	48	43	47	42	48	43	0.6	0.9	1.5	1.6	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_138	236 LAWRENCE STREET ALEXANDRIA		Residential	0	NW	43	38	44	39	43	38	45	40	0.4	0.7	1.8	1.9	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_138	236 LAWRENCE STREET ALEXANDRIA		Residential	1	NW	45	40	46	41	45	40	47	42	0.6	1	1.7	2	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_139	236A LAWRENCE STREET ALEXANDRIA		Residential	0	NW	43	38	44	39	43	38	45	40	0.4	0.7	1.7	1.9	55	50	NO NO	NO	NO	NO NO	NO NO
NCA01	NCA01_139 NCA01_140	236A LAWRENCE STREET ALEXANDRIA 237 LAWRENCE STREET ALEXANDRIA		Residential Residential	0	NW SE	45	40	46	41	45 45	40	47	42	0.6	0.7	0.9	1.9	57 57	52 52	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_140 NCA01_140	237 LAWRENCE STREET ALEXANDRIA 237 LAWRENCE STREET ALEXANDRIA		Residential	1	SE	45	41	48	41	45	40	48	41	0.3	0.7	1.1	1.1	59	54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_141	238 LAWRENCE STREET ALEXANDRIA		Residential	0	NW	43	38	44	39	43	38	45	40	0.4	0.7	1.7	1.9	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_141	238 LAWRENCE STREET ALEXANDRIA		Residential	1	NW	45	40	46	41	45	40	47	42	0.6	0.9	1.8	1.9	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_142	238A LAWRENCE STREET ALEXANDRIA		Residential	0	SE	45	40	45	40	45	40	45	40	-0.5	-0.2	0.6	0.6	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_142	238A LAWRENCE STREET ALEXANDRIA		Residential	1	NW	45	40	46	41	45	40	47	42	0.5	0.9	1.8	1.9	57	52	NO	NO	NO	NO	NO

					Facade		Opening	Year			Design Year	r		Increase (Buil	ld - No Build)		NCG noise	critoria	De redecteur le consendate a con	alaska Parka dah arabasa	ads Is the contribution from t	he road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Rece	ceiver Type	racaue	No E	Night	Build Day	Night	No Build Day Ni	ight	Build Day Night	Opening	Year Night	Design Y	ear Night	Day	Night	adding ≥2dB to the		Day		Consider further treatment?
					Floor Orientation	dB(A)	dB(A)	dB(A)	dB(A)			dB(A) dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA01	NCA01_143	239 LAWRENCE STREET ALEXANDRIA	Re	esidential	0 SE	46	41	46	42	46 4	41	47 42	0.5	0.8	1.1	1.2	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_143 NCA01_143	239 LAWRENCE STREET ALEXANDRIA 239 LAWRENCE STREET ALEXANDRIA		esidential esidential	1 SE	47	42	48 50	43		42	48 43 50 45	0.6	1.2	1.4	1.5	59 60	54 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_143 NCA01_144	240-272 LAWRENCE STREET ALEXANDRIA		esidential	0 SW	45	40	46	42		40	46 42	0.8	1.2	1.1	1.5	57	52	NO	NO	NO	NO	NO
NCA01	NCA01_144	240-272 LAWRENCE STREET ALEXANDRIA	Re	esidential	1 SW	47	42	48	43	47 4	42	48 44	0.8	1.2	1.2	1.4	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_144	240-272 LAWRENCE STREET ALEXANDRIA		esidential	2 SW	49	44	50 47	45			50 46	0.8	1.2	1.2	1.4	60	55	NO NO	NO NO	NO NO	NO NO	NO
NCA01	NCA01_145 NCA01_145	241 LAWRENCE STREET ALEXANDRIA 241 LAWRENCE STREET ALEXANDRIA		esidential esidential	0 SE 1 SE	48	41	49	42		41	47 42	0.8	1.3	1.5	1.6	58	53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_145	241 LAWRENCE STREET ALEXANDRIA		esidential	2 SW	50	45	53	48	49 4		53 48	3.3	3.8	3.5	3.6	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_146	243 LAWRENCE STREET ALEXANDRIA		esidential	0 SE	47	42	48	43			48 43	1.1	1.5	1.7	1.8	58	53	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_146 NCA01_147	243 LAWRENCE STREET ALEXANDRIA 245 LAWRENCE STREET ALEXANDRIA		esidential esidential	1 SE 0 SE	48	43	50 49	45			50 45 49 44	1.7	2.4	2.2	2.3	60 59	55 54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_148	247 LAWRENCE STREET ALEXANDRIA		esidential	0 SE	47	42	50	45		42	50 45	2.3	3	2.7	2.7	59	54	NO	NO	NO	NO	NO
NCA01	NCA01_149	251 LAWRENCE STREET ALEXANDRIA	Re	esidential	0 SE	48	43	51	46	48 4	43	51 46	2.6	3.2	2.9	2.9	60	55	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_149 NCA01_150	251 LAWRENCE STREET ALEXANDRIA 253 LAWRENCE STREET ALEXANDRIA		esidential esidential	1 SE	50	45	54	49			53 48 51 46	3.9 2.7	4.6 3.2	4.1	4	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_150	253 LAWRENCE STREET ALEXANDRIA		esidential	1 SE	50	46	54	50		-	54 49	3.9	4.5	4.1	3.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_151	255 LAWRENCE STREET ALEXANDRIA	Re	esidential	0 SE	49	44	52	47	48 4	44	51 47	2.6	3.3	3	3	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_151	255 LAWRENCE STREET ALEXANDRIA		esidential	1 SE	51	46	55	50			54 50	3.8	4.4	4	3.9	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_152 NCA01_152	257 LAWRENCE STREET ALEXANDRIA 257 LAWRENCE STREET ALEXANDRIA		esidential esidential	0 SE 1 SE	49 51	44	52 55	51			51 47 55 50	2.5	4.2	3.9	3.8	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_153	259 LAWRENCE STREET ALEXANDRIA	Re	esidential	0 SE	50	45	52	47	49 4	44	52 47	2.3	2.8	2.6	2.6	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_153	259 LAWRENCE STREET ALEXANDRIA		esidential	1 SE	52	47	55	51		46	55 50	3.5	4	3.7	3.6	60	55	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_154 NCA01_154	259A LAWRENCE STREET ALEXANDRIA 259A LAWRENCE STREET ALEXANDRIA		esidential esidential	0 SE 1 NW	44	39 43	45 47	40			45 40 48 43	-0.3	0	0.7	0.8	55 59	51 54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_155	261 LAWRENCE STREET ALEXANDRIA		esidential	0 SE	51	46	53	48			53 48	2.1	2.7	2.5	2.5	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_155	261 LAWRENCE STREET ALEXANDRIA		esidential	1 SE	52	48	56	51			55 50	3.2	3.7	3.4	3.3	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_156 NCA01_156	263 LAWRENCE STREET ALEXANDRIA 263 LAWRENCE STREET ALEXANDRIA		esidential esidential	0 SE	51 53	46	53	49 52		46	53 48 56 51	1.9	2.5	2.3 3.1	2.2	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_156 NCA01_157	263 LAWRENCE STREET ALEXANDRIA 265 LAWRENCE STREET ALEXANDRIA		esidential esidential	1 SE 0 SE	53	48	56	52		48 47	56 51	1.8	2.3	2.1	2.1	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_157	265 LAWRENCE STREET ALEXANDRIA		esidential	1 SE	54	49	56	52			56 51	2.5	3	2.8	2.7	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_158	269 LAWRENCE STREET ALEXANDRIA		esidential	0 SE	53	48	54	50			54 49	1.2	1.7	1.7	1.7	60	55	NO	NO NO	NO NO	NO NO	NO
NCA01	NCA01_158 NCA01_159	269 LAWRENCE STREET ALEXANDRIA 273 LAWRENCE STREET ALEXANDRIA		esidential esidential	1 SE	55	50	56	52		49 50	56 51 56 51	0.6	1.1	1.2	1.1	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_159	273 LAWRENCE STREET ALEXANDRIA		esidential	1 SE	57	52	58	53			57 53	0.9	1.4	1.4	1.3	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_160	274 LAWRENCE STREET ALEXANDRIA		esidential	0 SE	46	41	47	42			47 42	1	1.4	1.2	1.5	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_161 NCA01_161	275-277 LAWRENCE STREET ALEXANDRIA 275-277 LAWRENCE STREET ALEXANDRIA		esidential esidential	0 SE	57	52	58	53		52	57 52 59 54	0.3	0.9	0.8	0.7	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_161	276 LAWRENCE STREET ALEXANDRIA		esidential	0 SE	46	41	47	42			47 42	1	1.5	1.2	1.6	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_163	278 LAWRENCE STREET ALEXANDRIA	Re	esidential	0 SE	46	40	47	42	46 4	41	47 42	1	1.6	1.2	1.6	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_164	280 LAWRENCE STREET ALEXANDRIA		esidential	0 SE	45	40	46	42			47 42	1.2	1.7	1.3	1.7	57	52	NO	NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_165 NCA01_165	281 LAWRENCE STREET ALEXANDRIA 281 LAWRENCE STREET ALEXANDRIA		esidential esidential	0 SE 1 SE	59 60	54 55	59 60	54		53	58 54 60 55	0.2	0.7	0.6	0.6	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_166	282 LAWRENCE STREET ALEXANDRIA		esidential	0 SE	44	39	45	41	44 3	39	45 41	1.4	2	1.5	2	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_167	283 LAWRENCE STREET ALEXANDRIA		esidential	O SE	59	54	60	55			59 54	0.2	0.7	0.7	0.8	60	55	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_167 NCA01_168	283 LAWRENCE STREET ALEXANDRIA 284-286 LAWRENCE STREET ALEXANDRIA		esidential esidential	1 SE	52	56 47	61 54	57 49			55 56 53 48	1.5	2.4	2.2	1.1	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_168	284-286 LAWRENCE STREET ALEXANDRIA		esidential	1 SE	54	49	55	51		48	55 50	1.3	2.2	2	1.6	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_168	284-286 LAWRENCE STREET ALEXANDRIA	Re	esidential	2 SE	55	50	57	52	55 5	50	56 51	1.1	1.9	1.8	1.4	60	55	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_169 NCA01_169	285 LAWRENCE STREET ALEXANDRIA 285 LAWRENCE STREET ALEXANDRIA		esidential esidential	0 SE	60	55 57	60	56			60 55 62 57	-0.2	0.3	0.3	0.4	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_170	288-302 LAWRENCE STREET ALEXANDRIA		esidential	0 SW	65	60	65	60			64 60	-0.3	0.1	0.3	0.3	60	55	YES	YES	NO	NO	YES
NCA01	NCA01_170	288-302 LAWRENCE STREET ALEXANDRIA	Re	esidential	1 SW	66	61	66	62	65 6	61	66 61	-0.1	0.3	0.5	0.5	60	55	YES	YES	NO	YES	YES
NCA01	NCA01_170	288-302 LAWRENCE STREET ALEXANDRIA 69 MACDONALD STREET ERSKINEVILLE		esidential	2 SW	67 40	62	67	62 33			67 62 39 34	0	0.5	-0.7	-0.7	60 51	55 46	YES	YES	YES	YES	YES
NCA01 NCA01	NCA01_171 NCA01_171	69 MACDONALD STREET ERSKINEVILLE		esidential esidential	1 W	42	34	38 40	35		-	41 35	-1.3 -1.5	-1.3 -1.5	-0.7	-0.7	53	48	NO	NO NO	NO NO	NO NO	NO
NCA01	NCA01_171	69 MACDONALD STREET ERSKINEVILLE	Re	esidential	2 W	43	38	42	37	43 3	38	42 37	-1.3	-1.3	-0.6	-0.8	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_172	75-91 MACDONALD STREET ERSKINEVILLE		esidential	0 W	38	33	37	32			38 32	-0.8	-0.7	0.1	0	50	44	NO	NO	NO	NO	NO
NCA01	NCA01_172 NCA01_172	75-91 MACDONALD STREET ERSKINEVILLE 75-91 MACDONALD STREET ERSKINEVILLE		esidential esidential	1 W	39 41	34	38 40	33			39 34 40 35	-1	-0.9 -1.1	0.1	-0.2	51	46	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_172 NCA01_172	75-91 MACDONALD STREET ERSKINEVILLE		esidential	3 W	43	37	41	36			42 37	-1.3	-1.3	-0.3	-0.2	54	49	NO	NO	NO NO	NO	NO
NCA01	NCA01_172	75-91 MACDONALD STREET ERSKINEVILLE		esidential	4 W	44	39	43	37			43 38	-1.6	-1.7	-0.5	-0.7	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_172 NCA01_172	75-91 MACDONALD STREET ERSKINEVILLE 75-91 MACDONALD STREET ERSKINEVILLE		esidential esidential	5 W	46	41	44	39 41			45 40 47 42	-1.5	-1.7	-0.4	-0.6 0.2	57 59	52	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_172 NCA01_173	8 MADDOX STREET ALEXANDRIA		esidential	0 NE	47	42	49	44			47 42	2	2.6	2	2.4	60	55	NO NO	NO	NO NO	NO NO	NO
NCA01	NCA01_173	8 MADDOX STREET ALEXANDRIA		esidential	1 NE	48	43	50	46			50 46	1.9	2.6	1.9	2.5	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_173 NCA01_174	8 MADDOX STREET ALEXANDRIA 177-219 MITCHELL ROAD ERSKINEVILLE		esidential esidential	2 NE 0 S	50 74	45 69	52 70	47 65			52 47 70 65	1.8 -3.7	2.3	-2.6	2.3 -2.7	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_174 NCA01_174	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		esidential esidential	1 5	76	71	70	67			72 67	-3.7	-4	-2.6	-2.7	60	55	NO NO	NO NO	NO NO	NO NO	NO
NCA01	NCA01_174	177-219 MITCHELL ROAD ERSKINEVILLE	Re	esidential	2 S	76	70	72	66	74 6		72 67	-3.8	-4.1	-2.7	-2.8	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_174	177-219 MITCHELL ROAD ERSKINEVILLE		esidential	3 S	75	70	71	66			71 66	-3.8	-4.1	-2.8	-3	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_175 NCA01_175	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		esidential esidential	0 W	50 51	45 46	47	41			46 41 48 43	-3.3 -3.4	-3.7	-2.7 -2.8	-2.8 -2.8	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_175	177-219 MITCHELL ROAD ERSKINEVILLE		esidential	2 W	53	48	49	44			49 44	-3.5	-3.7	-2.7	-2.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_175	177-219 MITCHELL ROAD ERSKINEVILLE		esidential	3 W	54	49	51	45			51 46	-3.6	-3.9	-2.8	-3	60	55	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_175 NCA01_175	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		esidential esidential	4 W	55 57	50 51	52 54	46 48			52 47 54 48	-3.6 -2.7	-3.8 -2.6	-2.7	-2.8 -2.3	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_175 NCA01_175	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		esidential	6 S	59	53	56	51			56 51	-2.7	-2.8	-2.4	-2.5	60	55	NO	NO	NO NO	NO NO	NO NO
NCA01	NCA01_175	177-219 MITCHELL ROAD ERSKINEVILLE		esidential	7 S	61	56	58	52	60 5	55	58 52	-3.1	-3.2	-2.6	-2.8	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_176	177-219 MITCHELL ROAD ERSKINEVILLE		esidential	0 S	73	68	70	64			69 65	-3.6	-4	-2.6	-2.7	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_176 NCA01_176	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		esidential esidential	1 S	74	69	70	65			70 65 70 65	-3.7	-4	-2.6 -2.7	-2.7 -2.8	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_176	177-219 MITCHELL ROAD ERSKINEVILLE		esidential	3 S	73	68	70	64			69 65	-3.8	-4	-2.8	-2.8	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_176	177-219 MITCHELL ROAD ERSKINEVILLE		esidential	4 S	73	68	69	64			69 64	-3.7	-3.9	-2.8	-2.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_177 NCA01_177	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		esidential esidential	0 S	73	68	70 70	64			69 65 70 65	-3.6 -3.7	-3.8 -3.9	-2.5 -2.5	-2.6 -2.6	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_177 NCA01_177	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		esidential	2 S	74	69	70	65			70 65	-3.7	-3.9	-2.5	-2.6	60	55	NO	NO	NO NO	NO NO	NO
NCA01	NCA01_177	177-219 MITCHELL ROAD ERSKINEVILLE	Re	esidential	3 S	73	68	70	64	72 €	67	69 65	-3.7	-3.9	-2.7	-2.8	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_177	177-219 MITCHELL ROAD ERSKINEVILLE	Re	esidential	4 S	73	68	69	64	72 €	67	69 64	-3.7	-3.9	-2.7	-2.8	60	55	NO	NO	NO	NO	NO

					Fac	ade	N- B	Openin	g Year Bui	14	N- D	Design			Outside	Increase (Bui			NCG noise	criteria	Do noise levels exceed the cumlative	limit with project road	Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	5 1	2-1	No B	Night	Day	Night	No B Day	Night	Buil Day	Night	Opening Day	g Year Night	Design	Night	Day	Night	adding ≥2dB to the total r	oise levels?	Day	Night	Consider further treatment?
					Floor	Orientation	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA01	NCA01_177 NCA01_178	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential Residential	5	S	73	67	69	64 57	71 64	66 59	69	64 57	-3.7 -3.5	-3.8	-2.7 -2.5	-2.8 -2.6	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_178	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	1	S	66	61	63	57	65	60	62	57	-3.4	-3.5	-2.5	-2.5	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_178	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	2	S	66	61	63	58	65	60	63	58	-3.4	-3.5	-2.5	-2.5	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_178 NCA01_178	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	3	S	66	61	63	58	65	60	63	58	-3.4	-3.5	-2.5 -2.4	-2.5 -2.4	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_178	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	5	S	66	61	63	58	65	60	63	58	-3.3	-3.3	-2.3	-2.3	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_179	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	0	SW	54	48	50	44	52	48	50	45	-3.8	-4	-2.8	-3	60	55	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_179 NCA01_179	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	1	SW SW	54	49	50	45	53 53	48	50 51	45 46	-3.8 -3.7	-3.9 -3.9	-2.8 -2.8	-2.9 -2.9	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_179 NCA01_179	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	3	SW	55	50	51	45	54	48	51	46	-3.7	-3.9	-2.8	-2.9	60	55	NO NO	NO NO	NO	NO	NO
NCA01	NCA01_179	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	4	SW	55	50	52	46	54	49	52	46	-3.6	-3.7	-2.5	-2.7	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_179	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	5	SW	55	50	52	47	54	49	52	47	-3.3	-3.4	-2.2	-2.3	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_179 NCA01_179	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	7	SW	56 57	51	53	48	55	50	53	48 50	-2.8 -2.3	-3.1 -2.5	-1.7	-1.9	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_180	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	0	SW	51	45	47	42	50	45	47	42	-3.6	-3.8	-2.9	-2.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_180	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	1	SW	54	49	51	45	53	48	50	45	-3.7	-4	-2.8	-2.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_180 NCA01_180	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	2	SW	55	50	51	46	54	49	51	46	-3.8	-3.9	-2.8	-2.9	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_180 NCA01_180	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	4	SW	55	50	52	46	54	49	52	46	-3.6	-3.9	-2.7	-2.9 -2.7	60	55	NO NO	NO NO	NO NO	NO	NO
NCA01	NCA01_180	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	5	SW	56	50	52	47	55	50	52	47	-3.4	-3.6	-2.5	-2.6	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_180	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	6	SW	56	51	53	47	55	50	53	48	-3.2	-3.4	-2.1	-2.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_181 NCA01_181	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE	child care on ground floor child care on ground floor	Residential Residential	1	SE NE	46	40	46	41	45 46	40	45 46	40	1.6	1.6	0.5	0.6	57 58	52 54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_181	177-219 MITCHELL ROAD ERSKINEVILLE	child care on ground floor	Residential	2	NE	47	43	49	45	47	43	48	44	1.8	1.7	1.1	0.8	59	55	NO	NO	NO	NO	NO
NCA01	NCA01_181	177-219 MITCHELL ROAD ERSKINEVILLE	child care on ground floor	Residential	3	NE	48	44	49	45	48	44	49	44	1.7	1.5	1	0.8	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_181 NCA01_181	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE	child care on ground floor	Residential Residential	5	NE NE	48	44	50	46	48	44	49 50	45	1.6	1.5	1.1	0.8	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_181	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE	child care on ground floor	Residential	6	SE	51	46	52	47	50	46	52	47	1	1.3	1.4	1.3	60	55	NO NO	NO	NO	NO	NO
NCA01	NCA01_181	177-219 MITCHELL ROAD ERSKINEVILLE	child care on ground floor	Residential	7	SE	52	47	53	49	52	47	53	48	1.4	1.6	1.6	1.4	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_182 NCA01_182	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential Residential	0	SE SF	55	50	51	46	54 55	49 50	51 52	46 47	-3.4	-3.6 -3.5	-2.4	-2.6 -2.5	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_182 NCA01_182	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	2	SE SE	56	51	52	47	55	50	53	47	-3.4	-3.5	-2.4	-2.5	60	55	NO NO	NO NO	NO NO	NO NO	NO
NCA01	NCA01_182	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	3	SE	57	52	54	49	56	51	54	49	-2.8	-2.8	-1.9	-1.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_182	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	4	SE	57	52	55	50	56	51	55	50	-2.4	-2.2	-1.5	-1.6	60	55	NO NO	NO	NO	NO	NO
NCA01	NCA01_182 NCA01_183	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential Residential	0	SE S	46	53	56	51 39	57	52 41	56 44	51 39	-2.4	-1.9	-1.2	-1.2	58	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_183	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	1	S	49	43	46	40	48	43	46	41	-3	-3.1	-2.1	-2.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_183	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	2	S	49	44	46	41	48	43	46	41	-2.9	-3	-2	-2.1	60	55	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_183 NCA01_183	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	3	S	50	44	47	42	49	44	47	42	-2.7	-2.8	-1.8	-1.9 -1.6	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_183	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	5	S	51	45	49	43	50	45	49	44	-2	-2.1	-1	-1.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_183	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	6	S	51	46	50	44	50	45	50	45	-1.5	-1.7	-0.3	-0.6	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_184	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	0	S	48	43	45	40	47	42	45	40	-2.7	-2.7	-1.9 -1.9	-2	59 60	54 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_184 NCA01_184	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	2	S	50	45	47	41	48	44	47	41	-2.8	-2.9	-1.9	-2	60	55	NO NO	NO NO	NO NO	NO	NO NO
NCA01	NCA01_184	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	3	S	51	45	48	43	50	45	48	43	-2.6	-2.6	-1.5	-1.6	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_184	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	4	S	51	46	49	43	50	45	49	44	-2.3	-2.3	-1.2	-1.3	60	55	NO NO	NO	NO	NO	NO
NCA01	NCA01_184 NCA01_184	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	6	S	52	46	49 50	44	50	45	50	44	-1.5	-1.9	-0.7	-0.9	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_185	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	0	S	73	68	69	64	71	67	69	64	-3.6	-3.7	-2.5	-2.5	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_185	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	1	S	73	68	70	64	72	67	69	65	-3.6	-3.8	-2.5	-2.5	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_185 NCA01_185	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential Residential	2 3	S S	73	68	69	64	72	67	69	64	-3.6	-3.9	-2.6 -2.6	-2.6 -2.7	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_185	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	4	S	72	67	69	63	71	66	69	64	-3.6	-3.8	-2.6	-2.7	60	55	NO	NO NO	NO	NO	NO
NCA01	NCA01_185	177-219 MITCHELL ROAD ERSKINEVILLE		Residential	5	S	72	67	68	63	71	66	68	63	-3.5	-3.7	-2.6	-2.7	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_185	177-219 MITCHELL ROAD ERSKINEVILLE 177-219 MITCHELL ROAD ERSKINEVILLE		Residential	7	S	72	67	68	63	70	66	68	63	-3.5	-3.7	-2.5	-2.6	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_185 NCA01_186	177-219 MITCHELL ROAD ERSKINEVILLE 183-219 MITCHELL ROAD ERSKINEVILLE		Residential Residential	0	NW	45	40	42	36	44	39	42	63 37	-3.4	-3.6	-2.5 -2.4	-2.5 -2.6	56	55	NO NO	NO NO	NO NO	NO NO	NO
NCA01	NCA01_186	183-219 MITCHELL ROAD ERSKINEVILLE		Residential	1	NW	47	42	44	38	46	41	44	38	-3.4	-3.6	-2.5	-2.6	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_186	183-219 MITCHELL ROAD ERSKINEVILLE		Residential	2	NW	47	42	44	39	47 47	42	44	39	-3.3	-3.5	-2.4	-2.5	59	54 54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_186 NCA01_186	183-219 MITCHELL ROAD ERSKINEVILLE 183-219 MITCHELL ROAD ERSKINEVILLE		Residential Residential	4	NW	48	43	45	39 40	48	42	45 45	40	-3.3 -3.1	-3.4	-2.3 -2.1	-2.5 -2.2	59 60	54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_186	183-219 MITCHELL ROAD ERSKINEVILLE		Residential	5	NW	49	44	46	41	48	43	46	41	-2.8	-3	-1.7	-1.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_186	183-219 MITCHELL ROAD ERSKINEVILLE		Residential	6	NW	49	44	47	41	49	44	48	42	-2.5	-2.6	-1	-1.1	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_186 NCA01_187	183-219 MITCHELL ROAD ERSKINEVILLE 276 MITCHELL ROAD ALEXANDRIA		Residential Residential	0	NW NE	54 44	48 38	51 45	46	53	48	52 46	47	-2.3 1.8	-2.5 2.4	-0.6 1.8	-0.9 2.3	60 56	55 51	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_188	278-282 MITCHELL ROAD ALEXANDRIA		Residential	0	SE	43	38	44	40	43	38	44	39	1.6	1.9	1.9	1.8	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_189	284 MITCHELL ROAD ALEXANDRIA		Residential	0	NW	44	39	43	38	43	38	43	38	-1.3	-1.1	-0.3	-0.3	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_190 NCA01_191	286 MITCHELL ROAD ALEXANDRIA 288 MITCHELL ROAD ALEXANDRIA		Residential Residential	0	NW SE	44	39	42	37 40	43	38	43 45	38 40	-1.6 1.5	-1.4 1.8	-0.4	-0.4 1.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_191 NCA01_191	288 MITCHELL ROAD ALEXANDRIA 288 MITCHELL ROAD ALEXANDRIA		Residential	1	SE	45	40	44	42	43	40	45	40	1.8	2.2	2.1	2.1	55	52	NO NO	NO NO	NO NO	NO	NO
NCA01	NCA01_192	300-322 MITCHELL ROAD ALEXANDRIA		Residential	0	SE	44	39	46	41	44	39	46	41	1.7	2.1	2	2	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_192	300-322 MITCHELL ROAD ALEXANDRIA		Residential	1	SE	46	41	48 50	43	45	41	48 50	43	2.1	2.6	2.3	2.3	57	53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_192 NCA01_193	300-322 MITCHELL ROAD ALEXANDRIA 324 MITCHELL ROAD ALEXANDRIA		Residential Residential	0	SW	48	43	50 45	45 40	48	43	45	45	1.8 -2	-1.8	-0.9	-0.9	60 58	55 53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_194	326 MITCHELL ROAD ALEXANDRIA		Residential	0	SE	44	39	45	41	44	39	45	40	1.2	1.6	1.6	1.6	56	51	NO	NO	NO	NO	NO
NCA01	NCA01_195	328 MITCHELL ROAD ALEXANDRIA		Residential	0	SE	44	39	45	40	43	38	45	40	1.2	1.5	1.6	1.6	55	50	NO	NO	NO	NO	NO
NCA01	NCA01_195 NCA01_196	328 MITCHELL ROAD ALEXANDRIA 330 MITCHELL ROAD ALEXANDRIA		Residential Residential	0	SE NW	46	41	48	43	46	41	47	43	1.5	-1.5	-0.7	-0.7	58	53	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_196 NCA01_197	330 MITCHELL ROAD ALEXANDRIA 332 MITCHELL ROAD ALEXANDRIA		Residential	0	NW	47	42	45	40	46	41	45	40	-1.6	-1.5	-0.7	-0.7	58	53	NO NO	NO NO	NO	NO	NO NO
NCA01	NCA01_198	334 MITCHELL ROAD ALEXANDRIA		Residential	0	NW	47	42	45	40	46	41	45	40	-2.1	-2.1	-1.2	-1.2	58	53	NO	NO	NO	NO	NO
NCA01	NCA01_199 NCA01_199	336 MITCHELL ROAD ALEXANDRIA 336 MITCHELL ROAD ALEXANDRIA		Residential Residential	0	NW NW	47	42 44	45 47	40	46 48	41	45 47	40	-2.5 -1.7	-2.6 -1.6	-1.4 -0.7	-1.5 -0.8	58 60	53 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_199 NCA01_200	336 MITCHELL ROAD ALEXANDRIA 338-356 MITCHELL ROAD ALEXANDRIA		Residential	0	NW	49	44	45	42	48	43	47	42	-1.7	-1.6 -2.9	-0.7	-0.8	59	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_200	338-356 MITCHELL ROAD ALEXANDRIA		Residential	1	SE	46	41	47	43	45	41	47	42	1.4	1.7	1.8	1.8	57	53	NO	NO	NO	NO	NO
NCA01	NCA01_201	358 MITCHELL ROAD ALEXANDRIA		Residential	0	NW	49	43	46	41	48	43	46	41	-2.9	-2.9	-1.8	-1.9	60	55	NO NO	NO NO	NO	NO NO	NO
NCA01 NCA01	NCA01_201 NCA01_202	358 MITCHELL ROAD ALEXANDRIA 358A MITCHELL ROAD ALEXANDRIA		Residential Residential	0	NW	50	45	48	43	49	44	48	43	-2.2 -3	-2.1	-1.3 -1.9	-1.2	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
110.01		SSSMICHELE NOND NEUDINONIA													-		2.0	2.0						-1.0	

					Facade	No	Oper D Build	ning Year	ıild	No I	Design		uild	Opening	Increase (Build	l - No Build) Design	n Year	NCG noi	se criteria	Do noise levels exceed the cumlati		Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor Orientation	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	adding ≥2dB to the total	al noise levels? Night	Day ≥ 65dB LAeq,15h	Night Cons	der further treatment?
NCA01	NCA01_202	358A MITCHELL ROAD ALEXANDRIA		Residential	1 NW	50	45	48	43	49	44	48	43	-2.3	-2.3	-1.3	-1.4	60 60	55	NO	NO NO	NO NO	NO ON	NO
NCA01	NCA01_203	358B MITCHELL ROAD ALEXANDRIA		Residential	0 NW	49	44	46	41	48	43	46	41	-3.1	-3.1	-2	-2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_203 NCA01_204	358B MITCHELL ROAD ALEXANDRIA 358C MITCHELL ROAD ALEXANDRIA		Residential	1 NW 0 NW	50 49	45	47	42	49	44	47	42	-2.7 -3.1	-2.6 -3.1	-1.6 -2	-1.6 -2.1	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_204	358C MITCHELL ROAD ALEXANDRIA		Residential	1 NW	50	45	47	42	49	44	48	43	-2.8	-2.7	-1.7	-1.7	60	55	NO	NO	NO	NO NO	NO
NCA01	NCA01_205	360 MITCHELL ROAD ALEXANDRIA		Residential	0 NW	49	44	46	41	48	43	46	41	-3.1	-3.3	-2.1	-2.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_205	360 MITCHELL ROAD ALEXANDRIA		Residential	1 SE	46	41	48	43	46	41	48	43	1.3	1.8	1.6	1.7	58	53	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_206 NCA01_206	360A MITCHELL ROAD ALEXANDRIA 360A MITCHELL ROAD ALEXANDRIA		Residential	0 NW	50	44	46	41	49	44	46	41	-3.2 1.4	-3.3 1.8	-2.2 1.6	-2.2 1.7	59	55 54	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_207	360B MITCHELL ROAD ALEXANDRIA		Residential	0 NW	50	44	46	41	49	44	46	41	-3.3	-3.3	-2.2	-2.3	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_207	360B MITCHELL ROAD ALEXANDRIA		Residential	1 SE	48	43	50	45	48	43	49	45	1.5	1.8	1.8	1.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_208	360C MITCHELL ROAD ALEXANDRIA		Residential	0 SE	49	44	50	45	48	44	49	45	0.7	1	1	1.2	60	55	NO	NO NO	NO	NO	NO
NCA01	NCA01_208 NCA01_208	360C MITCHELL ROAD ALEXANDRIA 360C MITCHELL ROAD ALEXANDRIA		Residential	1 SW 2 SW	52	45	51	47	50	45	51 52	48	0.8	1.2	0.7	1.2	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_209	362 MITCHELL ROAD ALEXANDRIA		Residential	0 S	73	68	70	64	72	67	69	65	-3.6	-3.8	-2.4	-2.6	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_209	362 MITCHELL ROAD ALEXANDRIA		Residential	1 S	73	68	70	65	72	67	70	65	-3.4	-3.6	-2.1	-2.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_209	362 MITCHELL ROAD ALEXANDRIA 362 MITCHELL ROAD ALEXANDRIA		Residential	2 S	73	68	70 69	65	72	67	70 69	65	-3.3	-3.5	-2.3	-2.3	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_209 NCA01_209.5	362 MITCHELL ROAD ALEXANDRIA 362 MITCHELL ROAD ALEXANDRIA		Residential	0 S	73	67	69	64	71	66	69	64	-3.5 -3.1	-3.6 -3.4	-2.5 -2	-2.5 -2.1	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_209.5	362 MITCHELL ROAD ALEXANDRIA		Residential	1 S	73	68	70	65	72	67	70	65	-3.2	-3.4	-2	-2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_209.5	362 MITCHELL ROAD ALEXANDRIA		Residential	2 S	73	68	70	65	72	67	70	65	-3.2	-3.5	-2.1	-2.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_209.5	362 MITCHELL ROAD ALEXANDRIA 362 MITCHELL ROAD ALEXANDRIA		Residential	3 S	73	68	70 69	64	72	67	69	65	-3.3	-3.5 -3.5	-2.3	-2.3	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_209.5 NCA01_209.5	362 MITCHELL ROAD ALEXANDRIA 362 MITCHELL ROAD ALEXANDRIA		Residential Residential	5 S	73	67	69	64	71	66	69	64	-3.3	-3.5	-2.2 -2.3	-2.3 -2.3	60	55	NO NO	NO NO	NO NO	NO NO	NO
NCA01	NCA01_210	362 MITCHELL ROAD ALEXANDRIA		Residential	0 NW	58	53	55	49	57	52	55	50	-3.7	-4	-2.8	-2.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_210	362 MITCHELL ROAD ALEXANDRIA		Residential	1 NW	59	54	56	50	58	53	55	50	-3.7	-4	-2.8	-2.9	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_210 NCA01_211	362 MITCHELL ROAD ALEXANDRIA 362 MITCHELL ROAD ALEXANDRIA		Residential Residential	2 NW 0 SW	60 59	55 54	56 57	51	59	54	56	51	-3.7 -1.8	-4	-2.7 -1.1	-2.7 -1.1	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_211 NCA01_211	362 MITCHELL ROAD ALEXANDRIA		Residential	1 SE	60	55	59	54	59	55	58	53	-1.8	-1.6	-1.1	-1.1	60	55	NO	NO NO	NO	NO NO	NO
NCA01	NCA01_211	362 MITCHELL ROAD ALEXANDRIA		Residential	2 SE	62	57	60	56	61	56	60	55	-1.2	-0.9	-0.5	-0.5	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_211	362 MITCHELL ROAD ALEXANDRIA 362 MITCHELL ROAD ALEXANDRIA		Residential	3 SE	63	58	62	57	62	57	62	57	-0.7	-0.4	-0.1	-0.1	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01 NCA01	NCA01_211 NCA01_212	362 MITCHELL ROAD ALEXANDRIA 362 MITCHELL ROAD ALEXANDRIA		Residential Residential	4 SE 0 SW	51	58	50	58 45	62 50	58 45	62 49	58 44	-0.4	-0.1	-0.6	-0.6	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_212	362 MITCHELL ROAD ALEXANDRIA		Residential	1 NE	50	46	52	47	50	46	51	47	1.3	1.5	0.8	1	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_212	362 MITCHELL ROAD ALEXANDRIA		Residential	2 NE	51	47	53	49	51	47	52	48	1.4	1.5	0.9	1	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_212	362 MITCHELL ROAD ALEXANDRIA		Residential	3 NE	52	48	54	49	52	48	53	49	1.4	1.4	1.1	1.1	60	55	NO	NO NO	NO	NO	NO NO
NCA01	NCA01_213 NCA01_213	221-229 SYDNEY PARK ROAD ERSKINEVILLE 221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential Residential	1 W	43	44	40	35 40	42	43	41	41	-2.1	-2.2	-1.1 -2.1	-1.3 -2.1	54 60	49 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_213	221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	2 W	54	49	51	45	53	48	51	46	-3.5	-3.6	-2.8	-2.8	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_214	221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	0 S	69	64	66	60	68	63	65	60	-3.5	-4	-2.8	-2.9	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_214	221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	1 S	74	69	70	65	73	68	70	65	-3.8	-4.1	-2.7	-2.8	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_214 NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE 221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential Residential	0 SW	64	58	60	65 54	63	68 58	70 60	55	-3.8 -3.5	-4.1	-2.8 -3	-2.9	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	1 SW	68	63	65	59	67	62	64	59	-3.8	-4.1	-2.9	-3.1	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	2 SW	69	64	66	60	68	63	65	60	-3.8	-4.1	-2.9	-3	60	55	NO	NO	NO	NO	NO
NCA01 NCA01	NCA01_215 NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE 221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential Residential	3 SW 4 SW	70 69	64	66	60	68	63	66	60	-3.9	-4.1	-2.9 -2.9	-3.1	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE 221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	5 SW	69	64	65	60	68	63	65	60	-3.9	-4.2	-3	-3.1	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	6 SW	69	64	65	60	68	63	65	60	-3.9	-4.2	-3.1	-3.2	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	7 SW	69	64	65	60	68	63	65	60	-3.9	-4.2	-3	-3.2	60	55	NO NO	NO NO	NO	NO	NO
NCA01	NCA01_215 NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE 221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	8 SW 9 SW	69	64	65	59	68	63	65 65	60	-3.9	-4.2 -4.2	-3	-3.2	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	10 SW	68	63	65	59	67	62	65	59	-3.8	-4.1	-2.8	-3.1	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	11 SW	68	63	64	59	67	62	64	59	-3.8	-4.1	-2.8	-3	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential	12 SW	68	63	64	59	67	62	64	59	-3.7	-4	-2.8	-2.9	60	55	NO NO	NO NO	NO	NO NO	NO
NCA01	NCA01_215 NCA01_215	221-229 SYDNEY PARK ROAD ERSKINEVILLE 221-229 SYDNEY PARK ROAD ERSKINEVILLE		Residential Residential	13 SW 14 SW	68	62	64	58 58	66	62	64	59 59	-3.7	-4	-2.8 -2.7	-3	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_216	241-245 SYDNEY PARK ROAD ERSKINEVILLE		Residential	0 S	73	68	69	64	71	67	69	64	-3.4	-3.7	-2.2	-2.3	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_216	241-245 SYDNEY PARK ROAD ERSKINEVILLE		Residential	1 S	73	68	70	65	72	67	70	65	-3.5	-3.8	-2.3	-2.3	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_216 NCA01_216	241-245 SYDNEY PARK ROAD ERSKINEVILLE 241-245 SYDNEY PARK ROAD ERSKINEVILLE		Residential Residential	2 S	73 73	68	70 69	64	72 72	67	70 69	65 64	-3.6 -3.6	-3.9 -3.9	-2.4 -2.4	-2.5 -2.6	60	55 55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA01	NCA01_216 NCA01_216	241-245 SYDNEY PARK ROAD ERSKINEVILLE 241-245 SYDNEY PARK ROAD ERSKINEVILLE		Residential	4 S	73	67	69	63	72	66	69	64	-3.6	-3.9	-2.5	-2.7	60	55	NO NO	NO NO	NO NO	NO NO	NO
NCA01	NCA01_216	241-245 SYDNEY PARK ROAD ERSKINEVILLE		Residential	5 S	72	67	68	63	71	66	68	63	-3.6	-4	-2.6	-2.7	60	55	NO	NO	NO	NO	NO
NCA01	NCA01_216	241-245 SYDNEY PARK ROAD ERSKINEVILLE		Residential	6 S	72	66	68	63	70	66	68	63	-3.6	-3.9	-2.6	-2.7	60	55	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_001 NCA03_001	3 APPLEBEE STREET ST PETERS 3 APPLEBEE STREET ST PETERS		Residential Residential	0 W	60	54	58	49 51	61	55	56 57	48	-1.8	-4.9 -4.7	-4.8 -4.8	-7.2 -6.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_002	5 APPLEBEE STREET ST PETERS		Residential	0 NW	59	53	57	48	59	54	54	46	-1.8	-5	-5	-7.2	55	50	NO	NO NO	NO	NO NO	NO
NCA03	NCA03_002	5 APPLEBEE STREET ST PETERS		Residential	1 NW	60	54	58	49	60	55	55	48	-1.7	-4.7	-4.9	-6.9	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_002	5 APPLEBEE STREET ST PETERS 7 ADDIEDEE STREET ST PETERS		Residential	2 NW 0 NW	61 57	55 52	59 56	51	61	56	57 53	49	-1.8	-4.5 -4.9	-4.6	-6.5 -7.1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_003 NCA03_003	7 APPLEBEE STREET ST PETERS 7 APPLEBEE STREET ST PETERS		Residential Residential	1 NW	57 59	52	56 57	47	58 59	53 54	53	46	-1.7 -1.7	-4.9 -4.5	-4.8 -4.6	-7.1 -6.4	55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_004	7A APPLEBEE STREET ST PETERS		Residential	0 E	51	45	50	42	51	46	49	42	-1.1	-3.1	-2.5	-3.6	55	50	NO	NO NO	NO	NO	NO
NCA03	NCA03_004	7A APPLEBEE STREET ST PETERS		Residential	1 E	52	47	52	44	53	48	51	45	-0.9	-2.5	-2.1	-2.9	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_005	49 APPLEBEE STREET ST PETERS 51 APPLEBEE STREET ST PETERS		Residential	0 E	50	44	50	44	51	45	51	45	0.1	-0.7	1.3	-0.1 1.3	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_006 NCA03_007	51 APPLEBEE STREET ST PETERS 53 APPLEBEE STREET ST PETERS		Residential	0 E	48	42	49	43	49	43	50	44	0.9	0.9	1.3	1.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_007	53 APPLEBEE STREET ST PETERS		Residential	1 E	50	45	51	45	51	45	52	46	0.6	0.6	0.9	1	55	50	NO	NO NO	NO	NO	NO
NCA03	NCA03_008	55 APPLEBEE STREET ST PETERS		Residential	0 E	48	42	49	43	49	43	50	44	0.7	0.8	1.2	1.3	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_008 NCA03_009	55 APPLEBEE STREET ST PETERS 57 APPLEBEE STREET ST PETERS		Residential Residential	1 E	50	45 41	51 49	45 44	51 48	45	52 50	46 45	1.9	2.9	2	2.7	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_009 NCA03_009	57 APPLEBEE STREET ST PETERS 57 APPLEBEE STREET ST PETERS		Residential	1 S	50	41	52	44	48 51	42	52	45	1.7	2.6	1.8	2.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_010	63-65 CAMPBELL STREET ST PETERS		Residential	0 SW	67	58	70	67	68	58	70	66	2.7	8.6	1.4	7.9	55	50	YES	YES	YES	YES	YES
NCA03	NCA03_010	63-65 CAMPBELL STREET ST PETERS		Residential	1 SW	67	58	71	67	68	58	70	67	3.6	9.1	2.3	8.4	55	50	YES	YES	YES	YES	YES
NCA03	NCA03_011 NCA03_011	67 CAMPBELL STREET ST PETERS 67 CAMPBELL STREET ST PETERS		Residential	0 SW	67	58 58	70	66	68	58	69 70	66	3.4	8.3	2	7.7 8.2	55 55	50	YES	YES	YES	YES	YES
NCA03	NCA03_011 NCA03_012	1 COUNCIL STREET ST PETERS		Residential	0 S	74	68	71	64	74	69	68	61	-2.6	-4.8	-6.2	-7.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_012	1 COUNCIL STREET ST PETERS		Residential	1 S	73	68	71	63	74	69	68	61	-2.4	-4.8	-6.1	-8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_013	3 COUNCIL STREET ST PETERS		Residential	0 W	69	63	66	59	69	64	63	57	-2.4	-4.7	-5.9	-7.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_013	3 COUNCIL STREET ST PETERS		Residential	1 W	69	64	67	59	70	65	64	57	-2.4	-4.6	-5.9	-7.3	55	50	NO	NO	NO	NO	NO

					Fac	ade	No B	Openir	-	ıild	No I	Design	Year Bui	14		Increase (Build		V	NCG noise	riteria I	Do noise levels exceed the cumlative	limit with project road	s Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor	Orientation	Day	Night	Day	Night	Day	Night	Day	Night	Opening	Night	Design	Night	Day	Night	adding ≥2dB to the total r	noise levels?	Day	Night	Consider further treatment?
					FIOOI	Orientation	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h							
NCA03 NCA03	NCA03_014 NCA03_014	5 COUNCIL STREET ST PETERS 5 COUNCIL STREET ST PETERS		Residential Residential	1	w	67	62	65	57	68	62	62	55 56	-2.4	-4.7 -4.7	-5.7 -5.6	-7.2 -7.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_015	7 COUNCIL STREET ST PETERS		Residential	0	w	66	60	63	56	66	61	61	54	-2.3	-4.6	-5.5	-7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_015	7 COUNCIL STREET ST PETERS		Residential	1	w	66	61	64	57	67	62	62	55	-2.3	-4.6	-5.6	-7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_016 NCA03_016	9 COUNCIL STREET ST PETERS 9 COUNCIL STREET ST PETERS		Residential Residential	1	w	65	59 60	63	55	65	60	60	53	-2.2	-4.6 -4.6	-5.4	-6.9 -6.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_017	11 COUNCIL STREET ST PETERS		Residential	0	w	64	59	62	54	65	59	59	53	-2.2	-4.6	-5.3	-6.8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_017	11 COUNCIL STREET ST PETERS		Residential	1	w	65	59	63	55	65	60	60	53	-2.2	-4.4	-5.3	-6.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_018	13 COUNCIL STREET ST PETERS		Residential	0	W	63	58	61	53	64	58	58	51	-2.2	-4.6	-5.2	-6.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_018 NCA03_019	13 COUNCIL STREET ST PETERS 15 COUNCIL STREET ST PETERS		Residential Residential	0	w	64	59	62	54	65	59	59	53	-2.2	-4.4	-5.3 -5.1	-6.6 -6.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_019	15 COUNCIL STREET ST PETERS		Residential	1	w	63	58	61	54	64	59	59	52	-2.1	-4.4	-5.2	-6.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_020	17 COUNCIL STREET ST PETERS		Residential	0	w	61	56	59	51	62	56	57	50	-2	-4.4	-4.8	-6.3	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_020	17 COUNCIL STREET ST PETERS		Residential	1	w	63	57	61	53	63	58	58	52	-2.1	-4.3	-5.1	-6.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_021 NCA03_021	19 COUNCIL STREET ST PETERS 19 COUNCIL STREET ST PETERS		Residential Residential	0	w	60	55 57	59 60	51	61	56 57	56 58	49 51	-1.9 -2.1	-4.2	-4.7	-6.2 -6.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_021 NCA03_022	1 GOODSELL STREET ST PETERS		Residential	0	S	56	50	52	46	56	51	52	46	-4.1	-4.4	-4	-4.8	55	50	NO NO	NO	NO NO	NO NO	NO NO
NCA03	NCA03_022	1 GOODSELL STREET ST PETERS		Residential	1	S	57	52	53	47	58	52	54	48	-4	-4.3	-4	-4.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_022	1 GOODSELL STREET ST PETERS		Residential	2	S	58	52	54	48	58	53	55	49	-3.7	-4.1	-3.7	-4.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_022	1 GOODSELL STREET ST PETERS		Residential	3	E	60	54	56	50	60	54	56	51	-3.7	-4.1	-3.3	-3.8	55	50	NO NO	NO	NO NO	NO NO	NO NO
NCA03	NCA03_022 NCA03_023	1 GOODSELL STREET ST PETERS 3 GOODSELL STREET ST PETERS		Residential Residential	0	E N	62 52	57 47	58	53	62 51	57 47	59	53	-3.9	-4.3	-3.5 -1.7	-4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_024	4 GOODSELL STREET ST PETERS		Residential	0	N	52	47	48	42	52	47	49	43	-3.9	-4.2	-3.8	-4.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_024	4 GOODSELL STREET ST PETERS		Residential	1	s	53	48	51	44	54	49	50	44	-2.7	-4	-3.6	-4.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_024	4 GOODSELL STREET ST PETERS		Residential	2	S	56	51	53	47	57	51	53	47	-3	-4	-3.6	-4.4	55	50	NO	NO NO	NO	NO	NO NO
NCA03	NCA03_025 NCA03_026	5 GOODSELL STREET ST PETERS 6 GOODSELL STREET ST PETERS		Residential Residential	0	N	52	47	49	44	51	47	49	45	-2.7	-3.1	-1.7 -3.6	-1.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_026 NCA03_026	6 GOODSELL STREET ST PETERS		Residential	1	SE	52	46	49	42	53	46	48	42	-3.7	-3.9	-3.6	-4.2	55	50	NO	NO NO	NO NO	NO	NO
NCA03	NCA03_026	6 GOODSELL STREET ST PETERS		Residential	2	SE	55	49	52	45	55	50	52	46	-2.9	-3.7	-3.3	-4.1	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_027	7 GOODSELL STREET ST PETERS		Residential	0	N	52	47	49	44	51	46	49	45	-2.7	-3.1	-1.7	-1.8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_028 NCA03_029	9 GOODSELL STREET ST PETERS 10 GOODSELL STREET ST PETERS		Residential Residential	0	N F	52	47	49	44	51 51	46 45	49	44	-2.6	-3	-1.6 -3.3	-1.8 -4.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_029	10 GOODSELL STREET ST PETERS		Residential	1	E	53	47	50	43	53	48	50	44	-3	-3.9	-3.3	-4.2	55	50	NO NO	NO	NO NO	NO	NO NO
NCA03	NCA03_029	10 GOODSELL STREET ST PETERS		Residential	2	E	56	50	53	46	56	51	53	47	-2.9	-3.9	-3.2	-3.9	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_030	11 GOODSELL STREET ST PETERS		Residential	0	N	52	47	49	44	51	46	49	44	-2.6	-3	-1.6	-1.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_031	13 GOODSELL STREET ST PETERS		Residential	0	N	51	46	49	44	51	46	49	44	-2.6	-2.9	-1.6	-1.7	55	50	NO NO	NO	NO	NO	NO
NCA03	NCA03_032 NCA03_033	15 GOODSELL STREET ST PETERS 16 GOODSELL STREET ST PETERS		Residential Residential	0	N N	48	46	49	43	50	46	49	44	-2.5 -2.3	-2.9 -2.5	-1.6 -2.5	-1.7 -2.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_034	17 GOODSELL STREET ST PETERS		Residential	0	N	51	46	49	43	50	46	49	44	-2.5	-2.9	-1.6	-1.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_035	18 GOODSELL STREET ST PETERS		Residential	0	N	49	43	46	41	49	44	47	41	-2.5	-2.8	-2.6	-2.8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_036	19 GOODSELL STREET ST PETERS		Residential	0	N	51	46	49	43	50	46	49	44	-2.5	-2.9	-1.6	-1.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_037 NCA03_038	20 GOODSELL STREET ST PETERS 21 GOODSELL STREET ST PETERS		Residential Residential	0	N e	48	43	46	40 39	49	43	46	39	-2.3	-2.6 -1.7	-2.5 -2	-2.7 -2.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_038	21 GOODSELL STREET ST PETERS 21 GOODSELL STREET ST PETERS		Residential	1	S	49	43	48	41	49	44	47	42	-1.2	-1.7	-2.1	-2.2	55	50	NO NO	NO	NO	NO	NO NO
NCA03	NCA03_039	21 GOODSELL STREET ST PETERS		Residential	0	N	51	46	48	43	50	45	49	44	-2.5	-2.9	-1.6	-1.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_040	22 GOODSELL STREET ST PETERS		Residential	0	N	48	43	46	40	49	43	46	41	-2.3	-2.7	-2.4	-2.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_041	23 GOODSELL STREET ST PETERS		Residential	0	N	51	46	48	43	50	45	48	44	-2.5	-2.9	-1.6	-1.8	55	50	NO NO	NO	NO	NO	NO NO
NCA03	NCA03_042 NCA03_042	24 GOODSELL STREET ST PETERS 24 GOODSELL STREET ST PETERS		Residential	1	S S	50	42	48	40	50	43	46	40	-1.5 -1.5	-2.1	-2.2	-2.6 -2.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_043	25 GOODSELL STREET ST PETERS		Residential	0	N	51	46	49	44	51	46	49	44	-2.4	-2.7	-1.7	-1.8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_044	27 GOODSELL STREET ST PETERS		Residential	0	S	49	43	48	42	49	44	48	42	-0.9	-1.2	-1.6	-1.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_045	29 GOODSELL STREET ST PETERS		Residential	0	S	49	43	48	42	49	44	48	42	-0.8	-0.9	-1.5	-1.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_046 NCA03_046	30 GOODSELL STREET ST PETERS 30 GOODSELL STREET ST PETERS		Residential	1	N N	50	42	45	40	50	42	45 47	40	-2.5 -2.3	-2.6 -2.6	-2.6 -2.5	-2.6 -2.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_047	31 GOODSELL STREET ST PETERS		Residential	0	S	49	43	48	43	49	44	48	43	-0.7	-0.8	-1.6	-1.3	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_048	33 GOODSELL STREET ST PETERS		Residential	0	S	49	44	48	43	50	44	48	43	-0.7	-0.6	-1.5	-1.1	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_049	34 GOODSELL STREET ST PETERS		Residential	0	N	47	42	45	40	48	42	45	40	-2.4	-2.4	-2.5	-2.5	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_049 NCA03_050	34 GOODSELL STREET ST PETERS 35 GOODSELL STREET ST PETERS		Residential	0	N S	49	44	47 49	42	50	44	47	42	-2.2	-2.4	-2.4 -1.4	-2.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_050 NCA03_051	36 GOODSELL STREET ST PETERS 36 GOODSELL STREET ST PETERS		Residential	0	s	49	44	49	39	47	45	49	39	-0.5	-0.4	-1.4	-1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_051	36 GOODSELL STREET ST PETERS		Residential	1	s	49	44	48	42	50	44	47	42	-1.3	-2	-2.2	-2.5	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_052	37 GOODSELL STREET ST PETERS		Residential	0	s	50	44	50	44	50	45	49	44	-0.3	-0.1	-1.4	-0.8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_053 NCA03_053	38 GOODSELL STREET ST PETERS 38 GOODSELL STREET ST PETERS		Residential Residential	1	N	47	42	45 47	39 42	47 50	42	45 47	40	-2.3 -2.1	-2.3 -2.3	-2.4 -2.4	-2.4 -2.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_053 NCA03_054	38 GOODSELL STREET ST PETERS 39 GOODSELL STREET ST PETERS		Residential	0	N S	50	45	50	42	50	44	47	44	-2.1	-2.3	-2.4	-2.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_055	40 GOODSELL STREET ST PETERS		Residential	0	s	47	42	46	40	48	42	45	40	-1.4	-1.9	-2.2	-2.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_055	40 GOODSELL STREET ST PETERS		Residential	1	S	49	44	48	42	50	44	48	42	-1.4	-1.9	-2.2	-2.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_056	41 GOODSELL STREET ST PETERS		Residential	0	S	50	45	50	45	51	45	49	45	-0.2	-0.1	-1.4	-0.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_057 NCA03_057	42 GOODSELL STREET ST PETERS 42 GOODSELL STREET ST PETERS		Residential Residential	1	S S	47	41	46	40	47	42	45	39 42	-1.2	-1.7 -1.8	-2.1 -2	-2.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_057	43 GOODSELL STREET ST PETERS		Residential	0	S	50	45	50	45	51	46	50	45	-0.3	-0.1	-1.4	-0.8	55	50	NO	NO NO	NO	NO	NO
NCA03	NCA03_059	44 GOODSELL STREET ST PETERS		Residential	0	N	47	42	45	39	47	42	45	40	-2.1	-2.1	-2.3	-2.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_059	44 GOODSELL STREET ST PETERS		Residential	1	N	49	44	47	42	49	44	47	42	-1.9	-2	-2.1	-2.1	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_060	45 GOODSELL STREET ST PETERS		Residential	0	S N	51 47	45 41	50 45	45	51 47	46	50	45 40	-0.3	0.1	-1.5	-0.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_061 NCA03_061	46 GOODSELL STREET ST PETERS 46 GOODSELL STREET ST PETERS		Residential Residential	1	N N	47	41	45	39 42	47	42	45 47	40	-1.9	-2 -1.9	-2.3 -2.1	-2.1 -2.1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_062	47 GOODSELL STREET ST PETERS		Residential	0	S	51	45	50	45	51	46	50	45	-0.2	0.1	-1.4	-0.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_063	48 GOODSELL STREET ST PETERS		Residential	0	s	47	42	46	40	48	42	46	40	-1.3	-1.8	-2.2	-2.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_063	48 GOODSELL STREET ST PETERS		Residential	1	S	49	44	48	42	50	44	48	42	-1.3	-1.7	-2.1	-2.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_064	49 GOODSELL STREET ST PETERS		Residential	0	S N	51	46 42	51	46	52	46	50	46	-0.3	0.1	-1.5	-0.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_065 NCA03_065	50 GOODSELL STREET ST PETERS 50 GOODSELL STREET ST PETERS		Residential Residential	1	N N	47	42	45 48	40	47 50	42	45 48	40	-1.9 -1.5	-1.8 -1.7	-2.1	-1.9 -1.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_066	51 GOODSELL STREET ST PETERS		Residential	0	s	51	46	51	46	52	46	50	46	-0.2	0.1	-1.5	-0.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_067	52 GOODSELL STREET ST PETERS		Residential	0	s	47	42	46	40	48	42	46	40	-1.1	-1.7	-1.9	-2.1	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_067	52 GOODSELL STREET ST PETERS		Residential	1	N	49	44	48	42	50	44	48	43	-1.4	-1.6	-1.8	-1.7	55	50	NO	NO NO	NO	NO	NO
NCA03	NCA03_068 NCA03_069	53 GOODSELL STREET ST PETERS 54 GOODSELL STREET ST PETERS		Residential Residential	0	S S	51 47	46	51 46	46	52 48	47	51 46	46	-0.2 -1.1	-1.8	-1.5 -1.8	-0.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_069	54 GOODSELL STREET ST PETERS		Residential	1	s	50	44	48	42	50	45	48	43	-1.1	-1.6	-1.7	-1.8	55	50	NO	NO NO	NO	NO	NO
NCA03	NCA03_070	55 GOODSELL STREET ST PETERS		Residential	0	S	52	47	52	47	53	47	51	47	0.1	0.3	-1.3	-0.4	55	50	NO	NO	NO	NO	NO

				Facade		Opening Y	ear		Desig	n Year		Increase (I	Build - No Build)		NCG noise	ritoria			. Is the contribution from t	he read project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Receiver Type	racade	No Day	Build Night	Build Day	Night Da	No Build ay Night	Build Day N	ight Da	Opening Year ay Night	Desig	n Year Night	Day	Night	adding ≥2dB to the to	otal noise levels?	Is the contribution from to	Night	Consider further treatment?
				Floor Orientatio	n dB(A)	dB(A)			(A) dB(A)		B(A) dB		dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA03	NCA03_071	56 GOODSELL STREET ST PETERS	Residential	0 N	47	41	45	40 4	7 42	45	40 -1	.6 -1.6	-1.9	-1.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_071 NCA03_072	56 GOODSELL STREET ST PETERS 57 GOODSELL STREET ST PETERS	Residential Residential	1 N	49	44	48	42 5			43 -1 47 -0	1.3 -1.5	-1.7 -1.6	-1.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_073	58 GOODSELL STREET ST PETERS	Residential	0 S	48	42	47	40 4				1 -1.9	-2	-2.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_073	58 GOODSELL STREET ST PETERS	Residential	1 S	50	45	49	43 5	1 45		43 -	1 -1.7	-1.8	-1.8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_074 NCA03_075	59 GOODSELL STREET ST PETERS 60 GOODSELL STREET ST PETERS	Residential Residential	0 S	53	48	53 45	48 5		*-	48 (40 -1	0 0	-1.5 -1.8	-0.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_075	60 GOODSELL STREET ST PETERS	Residential	1 S	50	44	49	43 5				1.9 -1.4	-1.8	-1.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_076	61 GOODSELL STREET ST PETERS	Residential	0 S	51	46	50	44 5	2 46	49	43 -1	.1 -2.1	-2.9	-3	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_077	62 GOODSELL STREET ST PETERS	Residential Residential	0 S	48	43 50	47	41 49				.1 -1.8	-2.1	-2.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_078 NCA03_078	63 GOODSELL STREET ST PETERS 63 GOODSELL STREET ST PETERS	Residential	1 W	57	51	56	51 5		**		0.4 -0.5	-2.1 -2.2	-1.4	55	50	NO NO	NO NO	NO NO	NO	NO
NCA03	NCA03_079	64 GOODSELL STREET ST PETERS	Residential	0 N	48	42	47	41 4			41 -1		-1.7	-1.5	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_080	66 GOODSELL STREET ST PETERS	Residential	0 N	48	42	47	41 4				.1 -1.2	-1.6	-1.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_081 NCA03_082	68 GOODSELL STREET ST PETERS 70 GOODSELL STREET ST PETERS	Residential Residential	0 N	48	42	47	41 4			41 -: 41 -1		-1.6 -1.6	-1.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_083	72 GOODSELL STREET ST PETERS	Residential	0 S	49	43	48	41 4	9 44	47	41 -0).9 -1.9	-2	-2.3	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_084	74 GOODSELL STREET ST PETERS	Residential	0 N	48	42	47	41 4			41 -	1 -1	-1.6	-1.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_085 NCA03_086	76 GOODSELL STREET ST PETERS 78 GOODSELL STREET ST PETERS	Residential Residential	0 S	50 51	45	49	42 5:	- ''			2 -2.9	-3 -3.3	-3.7 -4.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_087	80 GOODSELL STREET ST PETERS	Residential	0 S	50	45	49	41 5				4 -3.5	-3.2	-4.3	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_088	82 GOODSELL STREET ST PETERS	Residential	0 S	51	46	50	43 5	2 46	49	42 -1	3 -2.8	-3.1	-3.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_089 NCA03_090	84 GOODSELL STREET ST PETERS 86 GOODSELL STREET ST PETERS	Residential Residential	0 S	50	44	49	42 5			42 -0	1 -2.3	-2.8 -2.3	-3.3 -2.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_090 NCA03_090	86 GOODSELL STREET ST PETERS 86 GOODSELL STREET ST PETERS	Residential	1 S	51	45	50	42 49			42 -0 44 -0		-2.3	-2.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_091	88 GOODSELL STREET ST PETERS	Residential	0 S	49	43	48	42 4	9 44		42 -0		-2	-1.8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_092	90 GOODSELL STREET ST PETERS 92 GOODSELL STREET ST PETERS	Residential	0 S	49	43	48	42 4			42 -0		-1.9	-1.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_093 NCA03_094	92 GOODSELL STREET ST PETERS 94 GOODSELL STREET ST PETERS	Residential Residential	0 S	49	43	48	42 49			42 -0 42 -0		-2.1 -2.3	-2.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_095	96 GOODSELL STREET ST PETERS	Residential	0 N	48	42	47	42 4	•			0.6 -0.4	-1.2	-0.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_096	98 GOODSELL STREET ST PETERS	Residential	0 S	51	45	50	44 5			43 -	1 -1.9	-2.8	-2.9	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_097 NCA03_098	100 GOODSELL STREET ST PETERS 102 GOODSELL STREET ST PETERS	Residential Residential	0 S	53	47	52	45 5: 45 5:			44 -1 44 -1	1 -2.6	-3.2 -3.6	-3.7 -4.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_099	104 GOODSELL STREET ST PETERS	Residential	0 N	47	42	47	42 4			42 -0		-3.0	-0.1	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_099	104 GOODSELL STREET ST PETERS	Residential	1 W	56	51	55	49 5	7 52	54	48 -1	.1 -1.9	-3.2	-3.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_100	106 GOODSELL STREET ST PETERS	Residential	0 S	55 57	50	54	47 5i		52		.4 -2.9	-3.7	-4.3	55	50	NO	NO NO	NO	NO	NO NO
NCA03	NCA03_101 NCA03_102	108 GOODSELL STREET ST PETERS 9 HUTCHINSON STREET ST PETERS	Residential Residential	0 W	47	42	48	49 5			48 -1 43 0.	.7 0.9	-3.8	-4.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO
NCA03	NCA03_103	11 HUTCHINSON STREET ST PETERS	Residential	0 SE	47	42	48	43 4	8 42	49	44 1	1 1.6	1	1.5	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_104	19 HUTCHINSON STREET ST PETERS	Residential	0 N	72	66	70	61 7				8 -5.1	-5.5	-8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_104 NCA03_104	19 HUTCHINSON STREET ST PETERS 19 HUTCHINSON STREET ST PETERS	Residential Residential	1 N	71	66	69	61 7:		**		9 -5	-5.4 -5.3	-7.8 -7.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_104	19 HUTCHINSON STREET ST PETERS	Residential	3 N	70	65	68	60 7			58 -1		-5.2	-7.6	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_105	43 HUTCHINSON STREET ST PETERS	Residential	0 S	46	40	48	44 4	6 40	48	44 2.	.4 4.2	2	3.6	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_105 NCA03_106	43 HUTCHINSON STREET ST PETERS 48 HUTCHINSON STREET ST PETERS	Residential Residential	1 S	48	43	50 49	46 49 45 49	- "	**	46 2 45 1.	.5 2.8	0.9	2.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_100 NCA03_107	50 HUTCHINSON STREET ST PETERS	Residential	0 N	48	42	49	45 45			45 1.		0.8	2.4	55	50	NO	NO	NO NO	NO	NO
NCA03	NCA03_108	52 HUTCHINSON STREET ST PETERS	Residential	0 N	48	42	49	45 4	8 43	49	45 1.	.6 3	0.9	2.5	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_109	54 HUTCHINSON STREET ST PETERS	Residential	0 N	48	42	50	45 49	- "		45 1.	.7 3.3	0.9	2.6	55	50	NO	NO	NO	NO	NO
NCA03 NCA03	NCA03_110 NCA03_111	55 HUTCHINSON STREET ST PETERS 57 HUTCHINSON STREET ST PETERS	Residential Residential	0 S	48	42	51	47 49			47 £	.1 5.4	2.4	4.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_112	58 HUTCHINSON STREET ST PETERS	Residential	0 N	48	42	50	46 49	9 43	50	46 1.	.8 3.5	1	2.8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_113	59 HUTCHINSON STREET ST PETERS	Residential	0 S	49	42	52	48 4	9 43	52	48 3.	.2 5.7	2.6	5	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_114 NCA03_114	60-68 HUTCHINSON STREET ST PETERS 60-68 HUTCHINSON STREET ST PETERS	Residential Residential	0 SW 1 SW	55 56	48	60	56 5: 57 5:			56 4. 57 4.	.8 8.5	3.9	7.8	55 55	50	YES	YES	NO NO	NO NO	YES
NCA03	NCA03_114 NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residential	2 SW	57	50	61	58 5				.6 7.9	3.7	7.2	55	50	YES	YES	NO	NO	YES
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residential	3 SW	57	51	62	58 5	8 51	61	58 4.	.3 7.4	3.4	6.6	55	50	YES	YES	NO	NO	YES
NCA03	NCA03_115	61 HUTCHINSON STREET ST PETERS	Residential	0 S	49	43	52	48 49				.4 5.9	2.7	5.3	55	50	NO	NO	NO	NO	NO NO
NCA03	NCA03_116 NCA03_117	63 HUTCHINSON STREET ST PETERS 65 HUTCHINSON STREET ST PETERS	Residential Residential	0 S	49	43	53	49 5i			49 3. 49 4	.7 6.4 4 6.9	2.8	5.6 6.1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_118	67 HUTCHINSON STREET ST PETERS	Residential	0 S	50	43	54	50 5			50 4.		3.3	6.6	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_119	69 HUTCHINSON STREET ST PETERS	Residential	0 S	50	43	55	51 5				.6 8	3.6	7.2	55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA03	NCA03_120 NCA03_120	71 HUTCHINSON STREET ST PETERS 71 HUTCHINSON STREET ST PETERS	Residential Residential	0 S	51 52	44	56	52 5: 53 5:			52 4. 53 4.	.9 8.5 .6 8	3.9	7.8	55 55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA03	NCA03_121	73 HUTCHINSON STREET ST PETERS	Residential	0 S	52	45	57	54 5			53 5		4	8.1	55	50	NO	NO	NO	NO	YES
NCA03	NCA03_121	73 HUTCHINSON STREET ST PETERS	Residential	1 S	53	46	58	54 5				.8 8.3	3.8	7.5	55	50	NO	NO	NO	NO	YES
NCA03	NCA03_122 NCA03_123	77 HUTCHINSON STREET ST PETERS 79 HUTCHINSON STREET ST PETERS	Residential Residential	0 S	54 55	47	59	56 55 56 55				.9 8.6 .8 8.6	4	7.9	55 55	50	NO NO	YES	NO NO	NO NO	YES
NCA03	NCA03_124	81 HUTCHINSON STREET ST PETERS	Residential	0 S	55	48	60	56 5			56 4.		4	8	55	50	YES	YES	NO	NO	YES
NCA03	NCA03_125	83 HUTCHINSON STREET ST PETERS	Residential	0 S	55	48		57 5				.9 8.7	4	8.1	55	50	YES	YES	NO	NO	YES
NCA03	NCA03_126	85 HUTCHINSON STREET ST PETERS	Residential Residential	0 S	56 56	49	61	57 5° 58 5°				.9 8.8	4	8.1	55	50	YES	YES	NO NO	NO NO	YES YES
NCA03	NCA03_127 NCA03_128	87 HUTCHINSON STREET ST PETERS 3 LACKEY STREET ST PETERS	Residential	0 SW	48	49	50	45 49			46 1.		1.8	2.7	55 55	50	NO YES	NO	NO NO	NO NO	NO
NCA03	NCA03_129	5 LACKEY STREET ST PETERS	Residential	0 SW	48	42	50	45 49			46 1.		1.7	2.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_130	6 LACKEY STREET ST PETERS	Residential	0 SW	46	40	49	45 4			45 3.		3.1	4.6	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_130 NCA03_131	6 LACKEY STREET ST PETERS 7 LACKEY STREET ST PETERS	Residential Residential	1 SW 0 SW	49	43	52	48 49			48 3. 46 2	.4 5.2	3.3	4.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_131 NCA03_132	8 LACKEY STREET ST PETERS	Residential	0 SW	46	40	49	45 4				.2 4.7	3.1	4.5	55	50	NO	NO	NO	NO NO	NO
NCA03	NCA03_132	8 LACKEY STREET ST PETERS	Residential	1 SW	49	43	52	48 4			48 3.		3.3	4.7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_133	9 LACKEY STREET ST PETERS	Residential	0 SW 0 SW	48	42 39	50 48	46 4			46 2. 44	.3 3.7	2.2	3.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_134 NCA03_134	10 LACKEY STREET ST PETERS 10 LACKEY STREET ST PETERS	Residential Residential	0 SW 1 SW	45	39 42	48 51	44 4				.2 4.8	3.2	4.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_135	11 LACKEY STREET ST PETERS	Residential	0 SW	48	42	51	47 4		51	47 2.	.6 4.4	2.3	3.9	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_135	11 LACKEY STREET ST PETERS	Residential	1 SW	50	44	53	49 5				.8 4.6	2.5	4.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_136 NCA03_136	12 LACKEY STREET ST PETERS 12 LACKEY STREET ST PETERS	Residential Residential	0 SW 1 SW	45	39 42	48	43 4			44 2. 47 §	.9 4.3	3.3	4.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_137	13 LACKEY STREET ST PETERS	Residential	0 SW	49	43	52	48 49			48 2.		2.6	4.6	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_137	13 LACKEY STREET ST PETERS	Residential	1 SW	51	45	54	50 5	1 45	54	50 3.	.1 5.1	2.8	4.6	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_138	14 LACKEY STREET ST PETERS	Residential	0 SE	45	39	47	42 4	6 40	48	43 2	2 3.3	2.4	3.3	55	50	NO	NO	NO	NO	NO

					Faca	de	N- P-	Opening	<u> </u>	14	N- D	Design				Increase (Build		W	NCG noise	criteria	Do noise levels exceed the cumlative	limit with project road	s Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Receiv	iver Type	Floor	rioutation -	No Bu Day	Night	Buil Day	Night	No B Day	Night	Day	Night	Opening	Night	Design	Night	Day	Night	adding ≥2dB to the total r	noise levels?	Day	Night	Consider further treatment?
					FIOOI C	rientation	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA03 NCA03	NCA03_138 NCA03_139	14 LACKEY STREET ST PETERS 15-17 LACKEY STREET ST PETERS		sidential sidential	0	SE	48	42	50	46 49	48	43	51	47	4.2	7.1	2.8 3.7	6.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_139	15-17 LACKEY STREET ST PETERS	Resid	sidential	1	SW	51	44	55	51	51	45	55	51	4	6.6	3.5	6	55	50	NO	NO	NO	NO	YES
NCA03	NCA03_140	16 LACKEY STREET ST PETERS		sidential	0	NW	56	48	60	57	56 57	48	60	56	4.4	8.4	3.6	7.8	55	50	YES	YES	NO	NO	YES
NCA03	NCA03_140 NCA03_141	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS		sidential	0	NW SW	57	49	61 55	57 51	57	49	61 55	57 51	4.4	7.1	3.6	7.5 6.4	55 55	50	YES NO	YES NO	NO NO	NO NO	YES YES
NCA03	NCA03_141	19 LACKEY STREET ST PETERS	Resid	sidential	1	SW	52	46	56	53	53	46	56	53	4	6.9	3.4	6.3	55	50	NO	NO	NO	NO	YES
NCA03	NCA03_142	21 LACKEY STREET ST PETERS		sidential	0	SW	52	45	57	53	53	46	56	53	4.4	7.8	3.6	7.1	55	50	NO	NO	NO	NO	YES
NCA03	NCA03_142 NCA03_143	21 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS		sidential	0	SW	53	47	58	54	54	47	58	54	4.3	7.5 8.2	3.6	7.5	55 55	50	NO NO	NO NO	NO NO	NO NO	YES YES
NCA03	NCA03_143	23 LACKEY STREET ST PETERS		sidential	1	SW	54	47	59	55	55	48	59	55	4.5	7.9	3.7	7.3	55	50	NO	YES	NO	NO	YES
NCA03	NCA03_144	25 LACKEY STREET ST PETERS	Resid	sidential	0	SW	53	46	58	55	54	47	58	54	4.7	8.3	3.9	7.6	55	50	NO	YES	NO	NO	YES
NCA03	NCA03_144 NCA03_145	25 LACKEY STREET ST PETERS 27 LACKEY STREET ST PETERS		sidential	1	SW	54	47	59	55 55	55	48	59	55 54	4.5	8.3	3.8	7.4	55 55	50	NO NO	YES	NO NO	NO NO	YES
NCA03	NCA03_145	27 LACKEY STREET ST PETERS		sidential	1	SW	54	48	59	56	55	48	59	55	4.6	8	3.8	7.4	55	50	NO NO	YES	NO	NO	YES
NCA03	NCA03_146	29 LACKEY STREET ST PETERS	Resid	sidential	0	SW	54	47	58	55	54	47	58	54	4.7	8.3	3.8	7.7	55	50	NO	YES	NO	NO	YES
NCA03	NCA03_146	29 LACKEY STREET ST PETERS 31 LACKEY STREET ST PETERS		sidential	1	SW	55	48 47	59 59	56 55	55 54	48	59 58	55 55	4.6	8.1	3.8	7.5	55 55	50	NO NO	YES	NO NO	NO NO	YES YES
NCA03	NCA03_147 NCA03_147	31 LACKEY STREET ST PETERS 31 LACKEY STREET ST PETERS		sidential sidential	1	SW	55	48	59	56	55	48	59	55	4.7	8.4	3.9	7.8	55	50	NO NO	YES	NO	NO NO	YES
NCA03	NCA03_148	33 LACKEY STREET ST PETERS	Resid	sidential	0	SW	54	47	59	55	55	47	58	55	4.7	8.3	3.9	7.7	55	50	NO	YES	NO	NO	YES
NCA03	NCA03_148	33 LACKEY STREET ST PETERS		sidential	1	SW	55	48	59	56	55	48	59	56	4.6	8.1	3.8	7.5	55	50	NO	YES	NO	NO	YES
NCA03	NCA03_149 NCA03_149	35 LACKEY STREET ST PETERS 35 LACKEY STREET ST PETERS		sidential	1	SW	54	47	59 60	55	55	47	59	55	4.7	8.4	3.9	7.7	55	50	NO YES	YES	NO NO	NO NO	YES YES
NCA03	NCA03_150	37 LACKEY STREET ST PETERS		sidential	0	sw	54	47	59	55	55	47	59	55	4.8	8.4	3.9	7.8	55	50	NO	YES	NO	NO	YES
NCA03	NCA03_150	37 LACKEY STREET ST PETERS		sidential	1	SW	55	48	60	56	56	48	60	56	4.6	8.2	3.8	7.5	55	50	YES	YES	NO	NO	YES
NCA03	NCA03_151 NCA03_151	39 LACKEY STREET ST PETERS 39 LACKEY STREET ST PETERS		sidential sidential	1	SW	54	47	59	55	55	47	59 60	55	4.8	8.4	3.9	7.8	55 55	50	NO YES	YES	NO NO	NO NO	YES YES
NCA03	NCA03_151 NCA03_152	41 LACKEY STREET ST PETERS		sidential	0	SW	54	47	59	56	55	47	59	55	4.7	8.4	3.9	7.9	55	50	NO NO	YES	NO NO	NO	YES
NCA03	NCA03_152	41 LACKEY STREET ST PETERS		sidential	1	SW	55	48	60	56	56	48	60	56	4.6	8.3	3.8	7.6	55	50	YES	YES	NO	NO	YES
NCA03	NCA03_153	43 LACKEY STREET ST PETERS 43 LACKEY STREET ST PETERS		sidential sidential	0	SW	54 55	47	59	56 57	55 56	47	59 60	55	4.8	8.5	4 3.8	7.8	55 55	50	NO YES	YES	NO NO	NO NO	YES
NCA03	NCA03_153 NCA03_154	43 LACKEY STREET ST PETERS 45 LACKEY STREET ST PETERS		sidential	0	SW	54	48	60 59	56	55	48	59	56 55	4.7	8.3	3.8	7.7	55	50	NO	YES	NO NO	NO NO	YES YES
NCA03	NCA03_154	45 LACKEY STREET ST PETERS		sidential	1	SW	55	48	60	57	56	48	60	56	4.7	8.3	3.8	7.7	55	50	YES	YES	NO	NO	YES
NCA03	NCA03_155	47 LACKEY STREET ST PETERS		sidential	0	SW	54	47	59	56	55	48	59	55	4.8	8.5	4	7.8	55	50	NO	YES	NO	NO	YES
NCA03	NCA03_155 NCA03_156	47 LACKEY STREET ST PETERS 49 LACKEY STREET ST PETERS		sidential	0	SW	55	48	60 59	57	56 55	49	60 59	56 55	4.7	8.3	3.9	7.7	55 55	50	YES NO	YES	NO NO	NO NO	YES YES
NCA03	NCA03_156	49 LACKEY STREET ST PETERS	Resid	sidential	1	SW	55	48	60	57	56	49	60	56	4.7	8.3	3.9	7.7	55	50	YES	YES	NO	NO	YES
NCA03	NCA03_157	51 LACKEY STREET ST PETERS		sidential	0	SW	55	47	59	56	55	48	59	55	4.8	8.6	4	7.9	55	50	NO	YES	NO	NO	YES
NCA03	NCA03_157 NCA03_158	51 LACKEY STREET ST PETERS 53 LACKEY STREET ST PETERS		sidential	0	SW	55	48	59	57	56	49	59	56	4.8	8.3	3.9	7.7	55	50	YES NO	YES	NO NO	NO NO	YES
NCA03	NCA03_158	53 LACKEY STREET ST PETERS		sidential	1	SW	55	48	60	57	56	49	60	56	4.8	8.3	3.9	7.7	55	50	YES	YES	NO	NO	YES
NCA03	NCA03_159	55 LACKEY STREET ST PETERS	Resid	sidential	0	SW	55	47	59	56	55	47	59	56	4.9	8.8	4.1	8.1	55	50	NO	YES	NO	NO	YES
NCA03	NCA03_159 NCA03_159	55 LACKEY STREET ST PETERS 55 LACKEY STREET ST PETERS		sidential	1	SW	55	48	60	57 57	56 57	48	60	56 57	4.9	8.5 8.1	3.8	7.9	55 55	50	YES YES	YES	NO NO	NO NO	YES
NCA03	NCA03_159 NCA03_160	9 MAY STREET ST PETERS		sidential	0	S	73	68	71	63	74	68	68	60	-2.4	-4.8	-5.9	-8	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA03	NCA03_160	9 MAY STREET ST PETERS	Resid	sidential	1	s	73	68	71	62	74	68	68	60	-2.3	-5.1	-5.8	-8.1	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_161	11 MAY STREET ST PETERS		sidential	0	S	73	67	70	63	73	68	67	60	-2.4	-4.8	-6	-8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_161 NCA03_162	11 MAY STREET ST PETERS 20 MAY STREET ST PETERS		sidential sidential	0	N N	73	67	70	62	73	68	67	60 59	-2.3 -1.5	-5.5	-5.9 -5.3	-8.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_163	22 MAY STREET ST PETERS	Resid	sidential	0	N	72	67	71	61	73	67	68	59	-1.5	-5.4	-5.3	-8.3	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_164	24 MAY STREET ST PETERS		sidential	0	N	72	66	71	61	73	67	68	59	-1.5	-5.3	-5.3	-8.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_165 NCA03_165	26 MAY STREET ST PETERS 26 MAY STREET ST PETERS		sidential sidential	1	N N	73	67	71	62	74	68	68	60	-1.7	-4.9	-5.5 -5.5	-7.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_166	27 MAY STREET ST PETERS		sidential	0	s	73	68	71	63	74	69	68	61	-2.4	-5	-6.1	-8.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_167	29 MAY STREET ST PETERS	Resid	sidential	0	S	73	68	71	63	74	69	68	61	-2.4	-4.9	-6.1	-8.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_167	29 MAY STREET ST PETERS		sidential	1	S	73	68	71	63	74	69	68	60	-2.3	-5	-6	-8.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_168 NCA03_169	36 MAY STREET ST PETERS 37 MAY STREET ST PETERS		sidential sidential	0	N S	73	66	71 69	62	74	68	68	60 59	-1.6 -2.6	-5.2 -5.3	-5.5 -6.2	-8.2 -8.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_170	39 MAY STREET ST PETERS		sidential	0	S	71	66	69	61	72	67	66	58	-2.6	-5.4	-6.2	-8.4	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_171	40 MAY STREET ST PETERS		sidential	0	N	73	67	71	62	74	68	68	60	-1.6	-5.3	-5.5	-8.2	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA03	NCA03_172 NCA03_172	42 MAY STREET ST PETERS 42 MAY STREET ST PETERS		sidential sidential	1	N N	72	66	70 70	61	73 73	67	67	59 59	-1.5 -1.6	-5.2 -5.1	-5.3 -5.3	-8.2 -8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_173	43 MAY STREET ST PETERS		sidential	0	S	73	68	70	63	74	68	67	60	-2.6	-5.1	-6.3	-8.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_173	43 MAY STREET ST PETERS		sidential	1	S	73	68	71	63	74	68	68	60	-2.4	-5	-6.2	-8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_174 NCA03_174	45 MAY STREET ST PETERS 45 MAY STREET ST PETERS		sidential sidential	1	s s	73 73	68	70 71	63	74	68	67 68	60	-2.6 -2.5	-5 -5	-6.2 -6.1	-8.2 -8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_175	47 MAY STREET ST PETERS		sidential	0	S	72	67	70	62	73	68	67	60	-2.7	-5.1	-6.3	-8.1	55	50	NO NO	NO	NO	NO	NO NO
NCA03	NCA03_175	47 MAY STREET ST PETERS		sidential	1	S	73	67	70	62	73	68	67	60	-2.6	-5	-6.2	-8	55	50	NO	NO	NO	NO	NO
NCA03 NCA03	NCA03_176 NCA03_176	49 MAY STREET ST PETERS 49 MAY STREET ST PETERS		sidential sidential	0	s	72	67	69 70	62 62	73 73	68	66	59 60	-2.6 -2.5	-5 -5	-6.1	-8 -7.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_176 NCA03_177	49 MAY STREET ST PETERS 55 MAY STREET ST PETERS		sidential	0	s	73	67	70	62	73	68	67	60	-2.5	-5	-6.4	-7.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_177	55 MAY STREET ST PETERS	Resid	sidential	1	s	73	68	70	63	74	68	67	60	-2.7	-5	-6.3	-8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_178	57 MAY STREET ST PETERS		sidential	0	S	73	67	70	62	73	68	67	60	-2.7	-5	-6.3	-8	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA03	NCA03_178 NCA03_179	57 MAY STREET ST PETERS 62 MAY STREET ST PETERS		sidential sidential	0	S N	73 72	68	70 70	63	73 73	68	67	60 59	-2.6 -1.7	-5 -5.3	-6.2 -5.5	-8.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_180	64 MAY STREET ST PETERS		sidential	0	N	72	67	71	62	73	68	68	59	-1.8	-5.2	-5.5	-8.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_181	66 MAY STREET ST PETERS		sidential	0	N	72	67	70	61	73	67	67	59	-1.8	-5.2	-5.6	-8.1	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_182 NCA03_182	76 MAY STREET ST PETERS 76 MAY STREET ST PETERS		sidential	1	N N	73	67	71	62	73	68	68	59 60	-1.6 -1.8	-5.4 -5.2	-5.4 -5.4	-8.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_183	78 MAY STREET ST PETERS		sidential	0	N	73	67	71	62	73	68	68	59	-1.6	-5.4	-5.4	-8.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_183	78 MAY STREET ST PETERS		sidential	1	N	73	67	71	62	73	68	68	60	-1.8	-5.2	-5.5	-8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_184	80 MAY STREET ST PETERS		sidential	0	N	73 73	67	71	62	73	68	68	59	-1.6	-5.4	-5.4	-8.2	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA03	NCA03_184 NCA03_185	80 MAY STREET ST PETERS 92 MAY STREET ST PETERS		sidential sidential	0	N N	73	68	71	62	73 74	68	68	60	-1.8 -1.7	-5.2 -5.1	-5.5 -5.6	-8 -8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_186	94 MAY STREET ST PETERS		sidential	0	N	73	68	71	62	74	68	68	60	-1.8	-5.2	-5.6	-8	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_187	105 MAY STREET ST PETERS		sidential	0	s	73	68	71	64	74	69	68	61	-2.6	-4.4	-6.2	-7.5	55	50	NO NO	NO	NO	NO	NO NO
NCA03	NCA03_187 NCA03_188	105 MAY STREET ST PETERS 107 MAY STREET ST PETERS		sidential sidential	0	s s	73 73	68	71	63	74	69	68	61	-2.5 -2.4	-4.6 -4.3	-6.1	-7.5 -7.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_188	107 MAY STREET ST PETERS		sidential	1	s	73	68	71	63	74	69	68	61	-2.5	-4.5	-6	-7.4	55	50	NO	NO	NO	NO	NO NO

					Facade	No	Open	ing Year	ıild	No E	Design		aild	Opening	Increase (Buil		n Year	NCG no	ise criteria	Do noise levels exceed the cumlat	ive limit with project roa	ls the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor Orientation	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	adding ≥2dB to the tot Day	al noise levels? Night	Day ≥ 65dB LAeq,15h	Night Con ≥ 60dB LAeq,9h	nsider further treatment?
NCA03	NCA03_189	109 MAY STREET ST PETERS		Residential	0 S	73	68	71	63	74	68	68	61	-2.3	-4.1	-5.9	-7.3	55	50	NO	NO NO	NO NO	NO NO	NO
NCA03	NCA03_189	109 MAY STREET ST PETERS		Residential	1 S	73	68	71	63	74	68	68	61	-2.4	-4.4	-5.9	-7.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_190 NCA03_190	111 MAY STREET ST PETERS 111 MAY STREET ST PETERS		Residential Residential	1 \$	73	67	71	63	73	68	68	61	-2.2 -2.3	-4.3	-5.8 -5.8	-7.1 -7.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_191	113 MAY STREET ST PETERS		Residential	0 S	73	67	71	64	73	68	68	61	-2.1	-3.9	-5.7	-7	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_191	113 MAY STREET ST PETERS		Residential	1 S	73	68	71	63	74	68	68	61	-2.2	-4.3	-5.9	-7.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_192 NCA03_192	115 MAY STREET ST PETERS 115 MAY STREET ST PETERS		Residential Residential	0 S	73	68	71	64	74	68	68	61	-2.1 -2.3	-4.4	-5.8 -5.8	-7.1 -7.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_192 NCA03_193	117 MAY STREET ST PETERS		Residential	0 S	73	68	71	64	74	68	68	61	-2.2	-4.1	-5.8	-7.2	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_193	117 MAY STREET ST PETERS		Residential	1 S	73	68	71	63	74	68	68	61	-2.3	-4.4	-5.9	-7.3	55	50	NO	NO	NO	NO	NO
NCA03	NCA03_194	119 MAY STREET ST PETERS		Residential	0 S	73	68	71	64	74	68	68	61	-2.3	-4.1	-5.8	-7.1 -7.3	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_194 NCA03_195	119 MAY STREET ST PETERS 124 MAY STREET ST PETERS		Residential Residential	0 N	73	66	70	61	72	68	68	60	-2.3 -1.2	-4.4 -5	-5.9 -4.5	-7.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA03	NCA03_195	124 MAY STREET ST PETERS		Residential	0 S	54	47	63	60	55	48	63	59	9.3	12.5	8.2	11.7	55	50	YES	YES	NO	YES	YES
NCA03	NCA03_196	126 MAY STREET ST PETERS		Residential	0 N	72	66	70	61	72	66	68	60	-1.2	-4.8	-4.5	-6.5	55	50	NO	NO	NO	NO	NO
NCA03 NCA03	NCA03_196 NCA03_197	126 MAY STREET ST PETERS 128 MAY STREET ST PETERS		Residential Residential	0 S	55 72	48	70	61	55 73	67	68	60	9.6	-4.2	-4.5	-5.9	55 55	50	YES NO	YES NO	NO NO	YES NO	YES NO
NCA03	NCA03_197	128 MAY STREET ST PETERS		Residential	0 S	56	49	66	63	56	49	66	62	10.7	14.2	9.7	13.3	55	50	YES	YES	YES	YES	YES
NCA03	NCA03_198	130 MAY STREET ST PETERS		Residential	0 W	66	60	70	66	66	60	69	65	4.2	6	2.9	5	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_001 NCA04_001	2 CAMPBELL ROAD ALEXANDRIA 2 CAMPBELL ROAD ALEXANDRIA		Residential Residential	0 SW	66	58	72	68	67	62	71 72	67	5.3	10.2	4.1	5.2	55	50	YES YES	YES	YES	YES	YES YES
NCA04	NCA04_001	2 CAMPBELL ROAD ALEXANDRIA		Residential	2 SW	66	58	73	69	67	62	72	68	6.6	10.9	5.4	6.4	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_002	4 CAMPBELL ROAD ALEXANDRIA		Residential	0 SW	66	58	72	68	67	62	71	67	5.3	10.2	4	5.2	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_002 NCA04_002	4 CAMPBELL ROAD ALEXANDRIA 4 CAMPBELL ROAD ALEXANDRIA		Residential Residential	1 SW 2 SW	67	58 58	73 73	69	67	62	72 72	68	6.5	10.7	4.7 5.3	6.5	55 55	50 50	YES YES	YES	YES	YES YES	YES YES
NCA04	NCA04_002 NCA04_003	6 CAMPBELL ROAD ALEXANDRIA		Residential	0 SW	66	58	72	68	67	62	71	67	5.3	10.3	4.1	5.3	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW	67	58	73	69	67	62	72	68	6	10.7	4.8	5.9	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_004 NCA04_004	8 CAMPBELL ROAD ALEXANDRIA 8 CAMPBELL ROAD ALEXANDRIA		Residential Residential	0 SW 1 SW	66	58 58	72 73	68 69	67 67	62 62	71 72	67 68	5.3	10.2	4.7	5.2	55 55	50 50	YES YES	YES	YES	YES YES	YES
NCA04	NCA04_004 NCA04_004	8 CAMPBELL ROAD ALEXANDRIA 8 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW	66	58	73	69	67	62	72	68	6.5	10.8	5.4	6.5	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_005	10 CAMPBELL ROAD ALEXANDRIA		Residential	0 SW	67	58	72	68	67	62	71	67	5.3	10.2	4.1	5.3	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_005	10 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW	67	58	73	69	67	62	72	68	6.1	10.8	4.8	6	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_005 NCA04_006	10 CAMPBELL ROAD ALEXANDRIA 12 CAMPBELL ROAD ALEXANDRIA		Residential	2 SW 0 SW	66	58	73	69	67	62	72 71	68	6.5 5.3	10.1	5.4	6.5 5.2	55 55	50	YES YES	YES	YES	YES YES	YES YES
NCA04	NCA04_006	12 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW	67	58	73	69	67	62	72	68	6.1	10.8	4.8	6	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_006	12 CAMPBELL ROAD ALEXANDRIA		Residential	2 SW	66	58	73	69	67	62	72	68	6.6	11	5.4	6.5	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_007 NCA04_007	14 CAMPBELL ROAD ALEXANDRIA 14 CAMPBELL ROAD ALEXANDRIA		Residential Residential	0 SW 1 SW	67	58	72	68	67	62	71	67	5.2	10.2	4.8	5.2	55 55	50	YES YES	YES	YES	YES YES	YES
NCA04	NCA04_007	16 CAMPBELL ROAD ALEXANDRIA		Residential	0 SW	67	58	72	68	67	62	71	67	5.2	10.1	3.9	5.1	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_008	16 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW	67	58	73	69	67	62	72	68	6	10.8	4.8	6	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_009	18 CAMPBELL ROAD ALEXANDRIA		Residential	0 SW	67	58	72	68	67	62	71	67	5.2	10.1	3.9	5.1	55 55	50 50	YES	YES	YES	YES	YES
NCA04	NCA04_009 NCA04_009	18 CAMPBELL ROAD ALEXANDRIA 18 CAMPBELL ROAD ALEXANDRIA		Residential Residential	2 SW	66	58	73	69	67	62	72 72	68	6.6	10.8	5.5	6.6	55	50	YES YES	YES	YES	YES YES	YES YES
NCA04	NCA04_010	20 CAMPBELL ROAD ALEXANDRIA		Residential	0 SW	67	58	72	68	67	62	71	67	5.2	10	3.9	5.1	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_010	20 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW	67	58	73	69	67	62	72	68	6	10.8	4.9	6	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_010 NCA04_011	20 CAMPBELL ROAD ALEXANDRIA 22 CAMPBELL ROAD ALEXANDRIA		Residential Residential	2 SW 0 SW	66	58	73	69	67	62	72	68	5.1	10.1	3.9	6.6	55	50	YES YES	YES	YES	YES	YES
NCA04	NCA04_011	22 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW	67	58	73	69	67	62	72	68	6.1	10.8	4.9	6	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_011	22 CAMPBELL ROAD ALEXANDRIA		Residential	2 SW	66	58	73	69	67	62	72	68	6.7	11	5.5	6.5	55	50	YES	YES	YES	YES	YES
NCA04 NCA04	NCA04_012 NCA04_012	24 CAMPBELL ROAD ALEXANDRIA 24 CAMPBELL ROAD ALEXANDRIA		Residential Residential	0 SW 1 SW	67	58	72	68	68	62	71	68	6.1	10.8	3.9 4.8	5.1	55	50	YES YES	YES	YES	YES YES	YES
NCA04	NCA04_013	26 CAMPBELL ROAD ALEXANDRIA		Residential	0 SW	67	58	72	68	68	63	71	68	5.2	10.0	3.9	5	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_013	26 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW	67	58	73	69	67	62	72	68	6.1	10.8	4.9	6	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_014 NCA04_014	28 CAMPBELL ROAD ALEXANDRIA 28 CAMPBELL ROAD ALEXANDRIA		Residential	0 SW	67	58 58	72	68	68	63	71 72	68	5.2	10.8	3.9	5	55 55	50 50	YES	YES	YES	YES YES	YES
NCA04	NCA04_014 NCA04_015	30 CAMPBELL ROAD ALEXANDRIA		Residential	0 SW	67	58	72	68	68	63	71	67	5.1	10.8	3.9	4.9	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_015	30 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW	67	58	73	69	68	62	72	68	6	10.7	4.8	5.9	55	50	YES	YES	YES	YES	YES
NCA04 NCA04	NCA04_016 NCA04_016	32 CAMPBELL ROAD ALEXANDRIA 32 CAMPBELL ROAD ALEXANDRIA		Residential Residential	0 SW 1 SW	67	58 58	72 73	68 69	67 67	62 62	71 72	67	5.2	9.9	4	5.9	55 55	50 50	YES YES	YES	YES	YES YES	YES
NCA04 NCA04	NCA04_016 NCA04_017	32 CAMPBELL ROAD ALEXANDRIA 34 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW 0 SW	66	58	73	69	67	62	72	68	5.3	9.9	4.9	5.9	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_017	34 CAMPBELL ROAD ALEXANDRIA		Residential	1 SW	67	58	73	69	67	62	72	68	6	10.6	4.9	5.9	55	50	YES	YES	YES	YES	YES
NCA04	NCA04_018	641 KING STREET ST PETERS		Residential	0 E	74	69	70	64	75	70	71	65	-4.2	-4.6	-3.9	-4.6	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA04	NCA04_018 NCA04_019	641 KING STREET ST PETERS 643 KING STREET ST PETERS		Residential Residential	0 E	74	69 69	70	64	75 75	70	71 71	65 65	-4.3 -4.2	-4.8 -4.7	-3.9 -3.9	-4.7 -4.6	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA04	NCA04_019	643 KING STREET ST PETERS		Residential	1 E	74	69	70	64	75	70	71	65	-4.3	-4.8	-4	-4.7	55	50	NO	NO	NO	NO	NO
NCA04	NCA04_020	665 KING STREET ST PETERS		Residential	0 E	72	66	67	61	72	67	68	62	-4.4	-4.9	-4.1	-5	55	50	NO	NO	NO	NO	NO
NCA04 NCA04	NCA04_020 NCA04_021	665 KING STREET ST PETERS 667 KING STREET ST PETERS		Residential Residential	0 E	73	67	68	62	73 72	68	69	63	-4.5 -4.4	-5 -5	-4.2 -4.2	-5.1 -5	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA04	NCA04_021	667 KING STREET ST PETERS		Residential	1 E	72	67	68	62	73	67	68	62	-4.5	-5	-4.3	-5	55	50	NO	NO	NO	NO	NO
NCA04	NCA04_022	669 KING STREET ST PETERS		Residential	0 E	74	69	70	64	75	70	71	65	-4.2	-4.9	-4	-4.9	55	50	NO	NO	NO	NO	NO
NCA04	NCA04_022 NCA04_023	669 KING STREET ST PETERS 671 KING STREET ST PETERS		Residential Residential	1 E	74	69 69	70 70	64	75 75	70 70	71 71	65 65	-4.3 -4.2	-5.1 -4.9	-4.1	-5.1 -4.9	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA04	NCA04_023 NCA04_023	671 KING STREET ST PETERS		Residential	1 E	74	69	70	64	75	70	71	65	-4.2	-4.9	-4.1	-4.9	55	50	NO NO	NO NO	NO NO	NO	NO NO
NCA04	NCA04_024	673 KING STREET ST PETERS		Residential	0 E	74	69	70	64	75	70	71	65	-4.2	-5	-4	-4.9	55	50	NO	NO	NO	NO	NO
NCA04	NCA04_024	673 KING STREET ST PETERS		Residential	1 E	74	69	70	64	75	70	71	65	-4.3	-5.1	-4.1	-5.1	55	50	NO NO	NO NO	NO NO	NO	NO NO
NCA04 NCA04	NCA04_025 NCA04_025	675 KING STREET ST PETERS 675 KING STREET ST PETERS		Residential Residential	0 E	74 74	69 69	70 70	64	75 75	70 70	71 71	65 65	-4.1 -4.2	-5 -5.1	-4	-4.9 -5.1	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA04	NCA04_026	677 KING STREET ST PETERS		Residential	0 E	74	69	70	64	75	70	71	65	-4.1	-4.9	-3.9	-4.8	55	50	NO	NO	NO	NO	NO
NCA04	NCA04_026	677 KING STREET ST PETERS		Residential	1 E	74	69	70	64	75	70	71	65	-4.1	-5.1	-4	-5.1	55	50	NO	NO	NO	NO	NO
NCA04 NCA04	NCA04_027 NCA04_027	679 KING STREET ST PETERS 679 KING STREET ST PETERS		Residential Residential	0 E	74	69 69	70 70	64	75 75	70 70	71 71	65 65	-3.8 -3.9	-5 -5.2	-3.7 -3.8	-4.9 -5	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA04 NCA04	NCA04_027 NCA04_028	679 KING STREET ST PETERS 681 KING STREET ST PETERS		Residential	0 E	74	69	70	64	75	70	71	65	-3.9	-5.2 -5	-3.8	-4.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA04	NCA04_028	681 KING STREET ST PETERS		Residential	1 E	74	69	71	64	75	70	71	64	-3.6	-5.3	-3.7	-5.2	55	50	NO	NO	NO	NO	NO
NCA04	NCA04_029	1 MAY STREET ST PETERS		Residential	0 S	73	67	70	63	73	68	68	61	-2.5	-4.8	-5.6	-7.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA04	NCA04_030 NCA04_031	3 MAY STREET ST PETERS 5 MAY STREET ST PETERS		Residential Residential	0 S	71	66	68 70	61	71	66	66	59 60	-2.6 -2.5	-4.9 -4.8	-5.6 -5.8	-7.6 -7.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA04	NCA04_032	7 MAY STREET ST PETERS		Residential	0 S	72	67	69	62	72	67	67	59	-2.6	-4.8	-5.9	-7.8	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_001	3 BROWN STREET ST PETERS		Residential	0 NE	50	44	70	66	51	45	69	66	19.4	22.3	18.4	21.3	55	50	YES	YES	YES	YES	YES
NCA06A	NCA06A_002	5 BROWN STREET ST PETERS		Residential	0 SE	55	48	65	61	56	48	64	61	9.6	13.4	8.8	12.7	55	50	YES	YES	YES	YES	YES

					Fac	nde -	No B	Openin	ng Year Bui	114	No.	Design	ı Year Buil	ш	Opening Y	ncrease (Build - N	Io Build) Design	Year	NCG noise	riteria D	o noise levels exceed the cumlative	limit with project road	s Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor	Orientation	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	adding ≥2dB to the total		Day	Night	Consider further treatment?
NCA06A	NCA06A 003	6 BROWN STREET ST PETERS		Residential	0	NE NE	dB(A)	dB(A) 42	68	dB(A) 65	dB(A) 49	43	dB(A) 68	dB(A) 65	20.1		dB(A)	dB(A) 21.9	dB(A)	dB(A) 50	Day YES	Night YES	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h YES	YES
NCA06A	NCA06A_003	6 BROWN STREET ST PETERS		Residential	1	NE	56	50	69	66	56	50	69	65	13.3		12.4	15.5	55	50	YES	YES	YES	YES	YES
NCA06A	NCA06A_004	7 BROWN STREET ST PETERS		Residential	0	SE	53	46	61	58	54	47	61	58	8.1	11.7	7.3	10.9	55	50	YES	YES	NO	NO	YES
NCA06A	NCA06A_004	7 BROWN STREET ST PETERS		Residential	1	NE	56	50	62	58	57	50	62	58	6.1		4.9	7.5	55	50	YES	YES	NO	NO	YES
NCA06A NCA06A	NCA06A_005 NCA06A_005	8 BROWN STREET ST PETERS 8 BROWN STREET ST PETERS		Residential Residential	1	SE SE	47 51	41	64	62	48 52	42	64	60	16.7		15.8	18.6	55	50	YES	YES	NO YES	YES	YES
NCA06A	NCA06A_006	9 BROWN STREET ST PETERS		Residential	0	SE	52	46	60	56	53	46	59	56	7.2		6.4	9.9	55	50	YES	YES	NO	NO	YES
NCA06A	NCA06A_007	10 BROWN STREET ST PETERS		Residential	0	SE	48	42	61	58	49	43	61	58	13.3	16	12.3	15.1	55	50	YES	YES	NO	NO	YES
NCA06A	NCA06A_008	11 BROWN STREET ST PETERS		Residential	0	SE	52	45	58	55	52	45	58	54	6.6		5.8	9	55	50	NO	YES	NO	NO	YES
NCA06A NCA06A	NCA06A_009 NCA06A_010	12 BROWN STREET ST PETERS 13 BROWN STREET ST PETERS		Residential Residential	0	NE SE	49 51	43	57	58	50	44	57	57 53	11.5 6.1		10.6 5.2	13.5	55	50	YES NO	YES NO	NO NO	NO NO	YES
NCA06A NCA06A	NCA06A_010	75 CHURCH STREET ST PETERS		Residential	0	NE NE	52	45	68	64	52	47	67	64	16	17.9	15	16.9	55	50	YES	YES	YES	YES	YES
NCA06A	NCA06A_011	75 CHURCH STREET ST PETERS		Residential	1	NE	54	49	69	65	54	49	68	65	14.9	16.7	13.9	15.8	55	50	YES	YES	YES	YES	YES
NCA06A	NCA06A_012	77 CHURCH STREET ST PETERS		Residential	0	SE	57	50	64	60	57	51	64	60	7.4	10	6.4	8.8	55	50	YES	YES	NO	YES	YES
NCA06A	NCA06A_012	77 CHURCH STREET ST PETERS		Residential	1	SE	58	52	65	62	59	53	65	61	7.2		6.3	8.6	55	50	YES	YES	YES	YES	YES
NCA06A NCA06A	NCA06A_013 NCA06A_013	79 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS		Residential Residential	1	NE NW	48 50	42	64	60	49 51	42	64	60	15.9		15.1	18.1	55	50	YES YES	YES	NO NO	YES	YES
NCA06A	NCA06A_014	81 CHURCH STREET ST PETERS		Residential	0	NW	48	42	63	60	49	42	63	59	14.4		13.6	16.7	55	50	YES	YES	NO	NO	YES
NCA06A	NCA06A_014	81 CHURCH STREET ST PETERS		Residential	1	NW	51	45	64	61	51	45	64	60	13	16	12.2	15.1	55	50	YES	YES	NO	YES	YES
NCA06A	NCA06A_015	7 FLORENCE STREET ST PETERS		Residential	0	NE	46	40	67	64	46	40	66	63	21.2	23.7	20.3	22.7	55	50	YES	YES	YES	YES	YES
NCA06A	NCA06A_015	7 FLORENCE STREET ST PETERS		Residential	1	NE	51	45	68	64	52	46	67	64	16.7		15.8	18.4	55	50	YES	YES	YES	YES	YES
NCA06A NCA06A	NCA06A_016 NCA06A_016	9 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS		Residential Residential	1	SE SE	49 51	42	63	58	50	43	62	58 59	12.4		11.5	15	55	50	YES YES	YES	NO NO	NO NO	YES
NCA06A	NCA06A_017	4 ST PETERS STREET ST PETERS		Residential	0	NE	48	42	66	63	48	43	66	62	18.4		17.4	19.7	55	50	YES	YES	YES	YES	YES
NCA06A	NCA06A_017	4 ST PETERS STREET ST PETERS		Residential	1	NE	52	46	67	64	53	46	67	63	15.2	18.1	14.2	16.9	55	50	YES	YES	YES	YES	YES
NCA06A	NCA06A_018	6 ST PETERS STREET ST PETERS		Residential	0	NW	53	46	63	60	54	46	62	59	9.5		8.7	12.7	55	50	YES	YES	NO	NO	YES
NCA06A NCA06A	NCA06A_018 NCA06A_019	6 ST PETERS STREET ST PETERS 4 UNWINS BRIDGE ROAD ST PETERS		Residential Residential	0	NW N	73	67	72	60	55 74	48 68	63 71	60	-0.9		-2.5	-1	55	50	YES NO	YES NO	NO NO	YES NO	YES
NCA06A NCA06A	NCA06A_019	4 UNWINS BRIDGE ROAD ST PETERS 4 UNWINS BRIDGE ROAD ST PETERS		Residential	1	N	73	68	72	68	74	68	71	67	-0.6		-2.2	-0.8	55	50	NO NO	NO NO	NO	NO	NO
NCA06A	NCA06A_020	6 UNWINS BRIDGE ROAD ST PETERS		Residential	0	N	73	68	72	67	74	68	71	67	-0.8		-2.4	-1	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_020	6 UNWINS BRIDGE ROAD ST PETERS		Residential	1	N	73	68	72	68	74	68	71	67	-0.6		-2.1	-0.7	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_020	6 UNWINS BRIDGE ROAD ST PETERS 8 UNWINS BRIDGE ROAD ST PETERS		Residential	1	SE N	50 73	45 68	56 72	53 67	51 74	46 68	56 71	52 67	6	7.6	5	6.8	55 55	50	NO NO	NO NO	NO NO	NO NO	YES NO
NCA06A NCA06A	NCA06A_021 NCA06A_021	8 UNWINS BRIDGE ROAD ST PETERS 8 UNWINS BRIDGE ROAD ST PETERS		Residential Residential	1	N N	73	68	72	68	74	68	72	68	-0.6		-2.3 -2.1	-0.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A	NCA06A_021	8 UNWINS BRIDGE ROAD ST PETERS		Residential	1	SE	51	45	56	52	52	46	56	52	5.1		4.2	6	55	50	NO	NO	NO	NO	YES
NCA06A	NCA06A_022	10 UNWINS BRIDGE ROAD ST PETERS		Residential	0	N	73	68	73	68	74	68	72	68	-0.4	0.1	-2.1	-0.6	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_022	10 UNWINS BRIDGE ROAD ST PETERS		Residential	1	N	73	68	73	68	74	68	72	68	-0.3	0.2	-1.9	-0.5	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_022	10 UNWINS BRIDGE ROAD ST PETERS		Residential	1	SE	51	46	55	51	52	46	55	51	3.8		2.9	4.5	55	50	NO	NO	NO	NO	YES
NCA06A NCA06A	NCA06A_023 NCA06A_023	12 UNWINS BRIDGE ROAD ST PETERS 12 UNWINS BRIDGE ROAD ST PETERS		Residential	1	N N	73	68	73	68	74	68	72	68	-0.1		-1.8	-0.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A	NCA06A_024	14 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	68	73	68	74	68	72	68	0.2	0.7	-1.4	0.1	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_024	14 UNWINS BRIDGE ROAD ST PETERS		Residential	1	NW	73	68	73	68	74	68	72	68	0.2	0.6	-1.4	0	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_024	14 UNWINS BRIDGE ROAD ST PETERS		Residential	1	SE	52	46	55	51	52	47	55	51	3.1		2.2	3.8	55	50	NO	NO	NO	NO	YES
NCA06A NCA06A	NCA06A_025 NCA06A_025	16 UNWINS BRIDGE ROAD ST PETERS 16 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	68	73	69	74	68	73	69	0.5		-1.1	0.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A	NCA06A_026	18 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	67	73	69	73	68	72	69	0.4		-0.8	0.6	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_026	18 UNWINS BRIDGE ROAD ST PETERS		Residential	1	NW	73	67	73	69	73	68	72	69	0.6	1.2	-0.9	0.4	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_026	18 UNWINS BRIDGE ROAD ST PETERS		Residential	1	SE	53	48	55	51	54	48	55	51	2.1	3.2	1	2.4	55	50	NO	NO	NO	NO	YES
NCA06A	NCA06A_027	20 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	67	74	69	73	68	73	69	0.9		-0.7	0.8	55	50	NO	NO	NO	NO	NO NO
NCA06A NCA06A	NCA06A_028 NCA06A_029	22 UNWINS BRIDGE ROAD ST PETERS 24 UNWINS BRIDGE ROAD ST PETERS		Residential Residential	0	NW	72	67	73	68	73	68	72 72	68	0.8		-0.7	0.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A	NCA06A_030	26 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	67	72	68	0.8		-0.8	0.7	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_031	28 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	67	72	68	0.8	1.3	-0.8	0.7	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_032	32 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NE	54	49	55	51	55	49	55	51	1.3		0.3	1.7	55	50	NO	NO	NO	NO	YES
NCA06A NCA06A	NCA06A_033 NCA06A_034	34 UNWINS BRIDGE ROAD ST PETERS 36 UNWINS BRIDGE ROAD ST PETERS		Residential Residential	0	NW	71	66	72 73	67	72 73	67	71 72	67	0.7		-0.8	0.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A	NCA06A_035	38 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	67	72	68	0.5		-1.2	0.4	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_036	40 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	67	72	68	0.4		-1.3	0.3	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_037	42 UNWINS BRIDGE ROA ST PETERS		Residential	0	NW	73	68	74	69	74	68	73	69	0.8		-0.8	0.6	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_038	44 UNWINS BRIDGE ROAD ST PETERS 46 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	68	74	69	74	68	73	69	0.8		-0.8	0.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A NCA06A	NCA06A_039 NCA06A_040	48 UNWINS BRIDGE ROAD ST PETERS 48 UNWINS BRIDGE ROAD ST PETERS		Residential Residential	0	NW NW	73 73	68	74 74	69	74 74	68	73 73	69	0.7		-0.8	0.6	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A	NCA06A_041	50 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	68	74	69	74	68	73	69	0.8		-0.8	0.7	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_042	52 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	68	74	69	74	68	73	69	0.7		-0.8	0.6	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_043	54 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	68	74	69	74	68	73	69	0.8		-0.8	0.6	55	50	NO	NO NO	NO	NO	NO NO
NCA06A NCA06A	NCA06A_044 NCA06A_045	58 UNWINS BRIDGE ROAD ST PETERS 60 UNWINS BRIDGE ROAD ST PETERS		Residential Residential	0	NW	73	68	74	69	74	68	73	69	0.7		-0.8	0.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A NCA06A	NCA06A_046	62 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	68	74	69	74	68	73	69	0.8		-0.9	0.7	55	50	NO NO	NO NO	NO	NO	NO
NCA06A	NCA06A_047	64 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	67	72	68	0.8		-0.9	0.7	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_047	64 UNWINS BRIDGE ROAD ST PETERS		Residential	1	NW	72	66	72	68	72	67	71	68	0.8		-0.9	0.5	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_048	66 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	68	74	69	74	69	73	69	0.8		-0.9	0.6	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA06A NCA06A	NCA06A_049 NCA06A_050	68 UNWINS BRIDGE ROAD ST PETERS 70 UNWINS BRIDGE ROAD ST PETERS		Residential Residential	0	NW	73	68	74	69	74	69	73	69	0.8		-0.9	0.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A NCA06A	NCA06A_051	72 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	67	72	68	0.8		-0.8	0.6	55	50	NO NO	NO NO	NO	NO	NO
NCA06A	NCA06A_052	74 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	67	72	68	0.8	1.3	-0.9	0.6	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_052	74 UNWINS BRIDGE ROAD ST PETERS		Residential	1	NW	72	67	73	68	73	67	72	68	0.6		-0.9	0.4	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_053	76 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	67	72	68	0.8		-0.9	0.5	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA06A NCA06A	NCA06A_053 NCA06A_054	76 UNWINS BRIDGE ROAD ST PETERS 78 UNWINS BRIDGE ROAD ST PETERS		Residential Residential	0	NW	72	67	73 72	68	73 72	68	72 71	68	0.7		-0.9	0.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A NCA06A	NCA06A_055	80 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	72	68	72	67	71	68	0.7		-0.9	0.4	55	50	NO NO	NO NO	NO	NO	NO
NCA06A	NCA06A_056	82 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	68	72	68	0.7	1.3	-0.9	0.4	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_057	84 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	68	72	68	0.7		-0.9	0.4	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_058	86 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	73	67 67	73	69	73	68	72	68	0.7		-0.9	0.3	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA06A NCA06A	NCA06A_059 NCA06A_060	88 UNWINS BRIDGE ROAD ST PETERS 90 UNWINS BRIDGE ROAD ST PETERS		Residential Residential	0	NW	72	67	72	68	72	67	72 72	68	0.7	1.2	-0.9	0.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A NCA06A	NCA06A_061	92 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	67	72	68	0.7	1.2	-1	0.4	55	50	NO NO	NO NO	NO	NO	NO
NCA06A	NCA06A_062	94 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	72	67	73	68	73	67	72	68	0.7	1.2	-1	0.3	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_063	96 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	71	66	72	67	72	67	71	67	0.6	1.2	-1	0.3	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_064	98 UNWINS BRIDGE ROAD ST PETERS		Residential	0	NW	71	66	72	68	72	67	71	67	0.7	1.2	-1	0.3	55	50	NO	NO	NO	NO	NO

				Facade		Opening	Year		Desi	gn Year		Inc	rease (Build - No Bui	ld)	NCG nois	e criteria Do		anti Parity and the area to an	Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Receiver Type	racaue	Day	Build Night	Build Day		No Build Day Night	Build	Night	Opening Yea	r (Pesign Year Night	Day	Night	o noise levels exceed the cumla adding ≥2dB to the to	otal noise levels?	Day	Night	Consider further treatment?
				Floor Orientat		dB(A)	dB(A)		dB(A) dB(A)	dB(A)	dB(A)	·	iB(A) dB(A)		dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA06A	NCA06A_065	100 UNWINS BRIDGE ROAD ST PETERS	Residential	0 NW	72	67	72	68	72 67	71	68	0.6	1.2 -0.9	0.3	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_066	102 UNWINS BRIDGE ROAD ST PETERS	Residential	0 NW 0 NW	72	67	72		72 67 72 67	71	68		1.2 -1	0.3	55 55	50	NO NO	NO	NO NO	NO NO	NO NO
NCA06A NCA06A	NCA06A_067 NCA06A_068	104 UNWINS BRIDGE ROAD ST PETERS 106 UNWINS BRIDGE ROAD ST PETERS	Residential Residential	0 NW	72	66	72		72 67	71	68	0.5	1.1 -1.1	0.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06A	NCA06A_069	108 UNWINS BRIDGE ROAD ST PETERS	Residential	0 NW	72	67	72	68	73 68	71	68	0.3	0.7 -1.3	0	55	50	NO	NO	NO	NO	NO
NCA06A	NCA06A_070	110 UNWINS BRIDGE ROAD ST PETERS	Residential	0 NW	72	67	71 56		72 67	70 56	67 52		-0.2 -2	-0.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO YES
NCA06B NCA06B	NCA06B_041 NCA06B_042	15 BROWN STREET ST PETERS 16 BROWN STREET ST PETERS	Residential Residential	0 NW	50	44	57		51 44	56	52		8.3 4.8 7.6 3.8	7.6	55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA06B	NCA06B_043	17 BROWN STREET ST PETERS	Residential	0 SE	50	44	55		51 44	55	51	5.1	7.8 4.4	7	55	50	NO	NO	NO	NO	YES
NCA06B	NCA06B_044	19 BROWN STREET ST PETERS	Residential	0 NW	53	47	55		54 48	54	51		3.6 0.9	2.8	55	50	NO	NO	NO	NO	YES
NCA06B NCA06B	NCA06B_045 NCA06B_046	21 BROWN STREET ST PETERS 22 BROWN STREET ST PETERS	Residential Residential	0 SE 0 SE	49	43	54		50 44 49 43	54	50		6.6 3.7 10.7 7.4	9.9	55	50	NO NO	NO NO	NO NO	NO NO	NO YES
NCA06B	NCA06B_047	23 BROWN STREET ST PETERS	Residential	0 SE	49	43	53		50 44	53	49		6.1 3.4	5.6	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_048	24 BROWN STREET ST PETERS	Residential	0 SE	48	42	56	52	49 43	56	52	-	9.9 6.7	9.1	55	50	NO	NO	NO	NO	YES
NCA06B NCA06B	NCA06B_049 NCA06B_050	25 BROWN STREET ST PETERS 26 BROWN STREET ST PETERS	Residential Residential	0 SE 0 NW	49	43	53		50 44	53	49 50		5.8 3.2 5.1 2.2	5.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_050	28 BROWN STREET ST PETERS	Residential	0 NW	50	45	53		51 45	53	49		4.9 2	4.1	55	50	NO NO	NO	NO NO	NO	NO
NCA06B	NCA06B_052	30 BROWN STREET ST PETERS	Residential	0 SE	48	42	54	50	49 43	54	50	5.6	7.8 5	7.1	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_053	32 BROWN STREET ST PETERS	Residential	0 SE	48	42	53		48 43	54	50		7.8 5.1	7.1	55	50	NO	NO	NO	NO	NO NO
NCA06B NCA06B	NCA06B_054 NCA06B_055	33 BROWN STREET ST PETERS 34-36 BROWN STREET ST PETERS	Residential Residential	0 SE 0 NW	50	43	52		49 44 51 45	52 52	48		5.4 3 4.1 1.5	4.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_056	35 BROWN STREET ST PETERS	Residential	0 SE	49	43	52	48	49 43	52	48	3.5	5.4 3.1	4.9	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_057	37 BROWN STREET ST PETERS	Residential	0 NW	52	47	53		53 47	52	48		1.7 -0.2	1	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_058 NCA06B_059	38 BROWN STREET ST PETERS 40 BROWN STREET ST PETERS	Residential	0 NW	50	44	52		50 45	52 52	48		4.1 1.5	3.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_059 NCA06B_060	40 BROWN STREET ST PETERS 41 BROWN STREET ST PETERS	Residential Residential	0 NW 0 SE	50 48	44	52		50 45 49 43	52	48	3.3	3.9 1.4 5 2.7	4.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_061	42 BROWN STREET ST PETERS	Residential	0 SE	47	41	51	47	47 42	52	47		5.7 4.1	5.5	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_061	42 BROWN STREET ST PETERS	Residential	1 NE	51	45	54		52 46	54	50		4.6 2.3	4	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_062 NCA06B_063	43 BROWN STREET ST PETERS 44 BROWN STREET ST PETERS	Residential Residential	0 NW 0 SE	51 46	45 41	52 51		51 46 47 41	52 51	48		2.3 0.2 5.9 4.4	1.5 5.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_063	44 BROWN STREET ST PETERS 44 BROWN STREET ST PETERS	Residential	1 SE	48	41	53		49 43	53	49	4.2	6 4.2	5.7	55	50	NO	NO	NO NO	NO NO	NO
NCA06B	NCA06B_064	45 BROWN STREET ST PETERS	Residential	0 NW	51	46	52	48	52 46	52	48	1.2	2 0	1.3	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_065	46 BROWN STREET ST PETERS	Residential	0 SE	47	41	51		47 42	51	47		5.9 4.1	5.7	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_065 NCA06B_066	46 BROWN STREET ST PETERS 47 BROWN STREET ST PETERS	Residential Residential	1 SE 0 NW	48	43	53		49 43 53 47	53	49		5.9 4 1.8 -0.2	5.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_067	48 BROWN STREET ST PETERS	Residential	0 NW	48	43	50		49 44	49	45		2.3 0.2	1.6	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_067	48 BROWN STREET ST PETERS	Residential	1 NW	51	45	52	48	51 46	52	48	1.4	2.5 0.7	1.9	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_068	49 BROWN STREET ST PETERS	Residential	0 NW	51	46	52	-	52 46	52	48	1.2	2 0	1.3	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_069 NCA06B_070	50 BROWN STREET ST PETERS 51 BROWN STREET ST PETERS	Residential Residential	0 NW	49 51	43	51		50 44	50 52	46	1.8	2.9 0.9	2.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_071	53 BROWN STREET ST PETERS	Residential	0 NW	51	46	52		52 46	51	47		1.7 -0.2	1.1	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_072	54 BROWN STREET ST PETERS	Residential	0 SE	47	42	51	47	48 42	51	47	3.3	4.8 3.4	4.7	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_073 NCA06B_074	55 BROWN STREET ST PETERS	Residential	0 NW	52	46	53		52 47	52 51	48		1.9 -0.1		55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_074 NCA06B 075	56 BROWN STREET ST PETERS 57 BROWN STREET ST PETERS	Residential Residential	0 SE	47 52	42	53		48 42 52 47	53	47	1.2	5 3.5 1.9 0.3	1.5	55	50	NO NO	NO NO	NO NO	NO NO	NO
NCA06B	NCA06B_076	58 BROWN STREET ST PETERS	Residential	0 SE	47	41	50	46	47 42	51	47	3.5	5 3.7	5	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_076	58 BROWN STREET ST PETERS	Residential	1 SE	49	43	52		49 44	53	48		4.8 3.4	4.7	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_077 NCA06B_077	59 BROWN STREET ST PETERS 59 BROWN STREET ST PETERS	Residential Residential	0 SE	46 52	41	49 53		47 41 52 47	49 53	45		3.8 2.6 2.8 1	2.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_078	61 BROWN STREET ST PETERS	Residential	0 NW	49	44	50		50 44	49	45		1.6 -0.4		55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_078	61 BROWN STREET ST PETERS	Residential	1 NW	51	46	52	48	52 47	52	48	1	1.8 -0.1	1.1	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_079	62 BROWN STREET ST PETERS	Residential	0 NW	48	43	49	45	49 43	49	45	1.3	2 0.5	1.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_080 NCA06B 080	63 BROWN STREET ST PETERS	Residential	1 NW	52	47	53	48	52 47	52	48	1.1	1.9 -0.2	1.1	55	50	NO NO	NO NO	NO NO	NO NO	NO
NCA06B	NCA06B_080	63 BROWN STREET ST PETERS	Residential	2 NE	52	47	54		53 48	54	50		3.1 1.4		55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_081	63A BROWN STREET ST PETERS	Residential	0 NW	51	46	52		51 46	51	47		1.6 -0.5		55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_081 NCA06B_081	63A BROWN STREET ST PETERS 63A BROWN STREET ST PETERS	Residential Residential	1 NW 2 NW	52 54	48	53		53 48 54 49	53	49 50		1.7 -0.4	0.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_082	64 BROWN STREET ST PETERS	Residential	0 SE	47	42	49		48 42	50	46		2.8 2.8		55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_083	65 BROWN STREET ST PETERS	Residential	0 NW	48	43	49		49 44	49	45		1.4 0.1		55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_084 NCA06B_085	66 BROWN STREET ST PETERS 67 BROWN STREET ST PETERS	Residential Residential	0 SE 0 NW	47 50	42 45	49 51		48 42 50 45	51 51	46 46		3.2 2.9 1.7 0.1		55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_086	68 BROWN STREET ST PETERS	Residential	0 NW	47	42	49		48 42	50	46		2.7 2.7	3.2	55	50	NO NO	NO	NO NO	NO	NO
NCA06B	NCA06B_087	69 BROWN STREET ST PETERS	Residential	0 NW	50	45	51	47	51 46	51	47	1	1.7 -0.1		55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_088	70 BROWN STREET ST PETERS	Residential	0 SE	47	42	49		48 42	50	46		2.7 2.7		55	50	NO NO	NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_089 NCA06B_090	71 BROWN STREET ST PETERS 83 CHURCH STREET ST PETERS	Residential Residential	0 NW 0 NW	51 47	46	52 60		52 47 47 41	52 60	48 57		1.6 -0.3 16.5 12.7		55 55	50	NO YES	NO YES	NO NO	NO NO	NO YES
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	1 NW	49	43	61		50 43	61	58		15.3 11.6		55	50	YES	YES	NO	NO	YES
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	2 NW	52	46	62		53 47	62	59		12.7 9.2		55	50	YES	YES	NO	NO	YES
NCA06B	NCA06B_091	85 CHURCH STREET ST PETERS	Residential Recidential	0 NW 1 NW	47	41	59 61		47 41 49 43	59 60	56 57		15.6 11.9		55 55	50	NO YES	YES	NO NO	NO NO	YES YES
NCA06B NCA06B	NCA06B_091 NCA06B_091	85 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential Residential	1 NW 2 NW	52	43	62		49 43 53 47	61	58		14.5 10.8 11.9 8.5		55	50	YES	YES	NO NO	NO NO	YES
NCA06B	NCA06B_092	87 CHURCH STREET ST PETERS	Residential	0 NW	47	41	58	55	47 41	58	55	11.8	14.5 10.9	13.6	55	50	NO	YES	NO	NO	YES
NCA06B	NCA06B_092	87 CHURCH STREET ST PETERS	Residential	1 NW	49	43	60		50 44	60	56		13.4 10	12.5	55	50	YES	YES	NO	NO	YES
NCA06B NCA06B	NCA06B_092 NCA06B_093	87 CHURCH STREET ST PETERS 89 CHURCH STREET ST PETERS	Residential Residential	2 NW 0 NW	52 47	46	58		53 47 48 41	61 57	57		11.5 8.1 13.5 9.9		55 55	50	YES NO	YES NO	NO NO	NO NO	YES YES
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS	Residential	1 NW	50	44	59		50 44	59	56		12.4 9	11.6	55	50	NO NO	YES	NO NO	NO	YES
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS	Residential	2 NW	52	46	61	57	52 46	60	57	8.6	11.1 7.9	10.3	55	50	YES	YES	NO	NO	YES
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	0 NW	46	40	55		46 40	54	51		11.3 8.1	10.3	55	50	NO	NO	NO	NO	YES
NCA06B NCA06B	NCA06B_094 NCA06B_095	91A CHURCH STREET ST PETERS 91B CHURCH STREET ST PETERS	Residential Residential	1 NW 0 NW	49	43	56 55		49 43	56 55	52		9.8 7 11.7 8.5	9	55 55	50	NO NO	NO NO	NO NO	NO NO	YES YES
NCA06B	NCA06B_095	91B CHURCH STREET ST PETERS	Residential	1 NW	48	43	57		49 43	57	53		10.2 7.5		55	50	NO NO	NO	NO NO	NO NO	YES
NCA06B	NCA06B_096	91C CHURCH STREET ST PETERS	Residential	0 NW	46	41	56		47 41	55	52		11.3 8.3	10.6	55	50	NO	NO	NO	NO	YES
NCA06B	NCA06B_096	91C CHURCH STREET ST PETERS	Residential	1 NW	50	44	58		50 44	58	54		10.3 7.3		55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA06B NCA06B	NCA06B_097 NCA06B_097	91D CHURCH STREET ST PETERS 91D CHURCH STREET ST PETERS	Residential Residential	0 SE 1 NW	49 50	43	55		50 43	55 57	51		9.5 6.7		55 55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA06B	NCA06B_098	95 CHURCH STREET ST PETERS	Residential	0 SE	51	46	53		52 47	55	50		2.5 2.6	3.1	55	50	NO	NO	NO NO	NO	NO NO
NCA06B	NCA06B_098	95 CHURCH STREET ST PETERS	Residential	1 SE	54	49	55		54 49	57	52		1.7 2.5		55	50	NO	NO	NO	NO	YES
NCA06B	NCA06B_099	97 CHURCH STREET ST PETERS	Residential	0 SE	50	45	52	47	50 45	54	49	2.2	2.4 3.5	3.9	55	50	NO	NO	NO	NO	NO

					Facade		0	pening Year			Design	n Year			Increase (Build	- No Build)		NCG noise	criteria	Do noise levels exceed the cumlative	limit with project road	Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Receiver Type	-		Day	No Build Night	t Day	Build Night	Day	Build Night	Bui Day	ild Night	Opening	Year Night	Design	Year Night	Day	Night	adding ≥2dB to the total		Day	Night	Consider further treatment?
				Floo	or Orientatio	dB(A)	dB(A)		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA06B	NCA06B_099	97 CHURCH STREET ST PETERS	Residential	1	SE	54	49	55	50	54	49	57	52	1.6	1.5	2.6	2.9	55	50	NO NO	NO	NO	NO	YES
NCA06B NCA06B	NCA06B_100 NCA06B_101	99 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS	Residential Residential	0	SE SE	54	49 51	55 57	50 52	55 56	50	56	52	1.2	0.7	1.5	1.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_101	101 CHURCH STREET ST PETERS	Residential	1	SE SE	58	53	59	54	59	53	60	55	0.9	0.9	1.2	1.5	55	50	YES	YES	NO	NO	YES
NCA06B	NCA06B_102	103 CHURCH STREET ST PETERS	Residential	0	SE	56	51	57	52	57	52	58	53	0.8	1.3	1.3	1.5	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_102	103 CHURCH STREET ST PETERS	Residential	1	SE	59	54	59	54	59	54	61	56	0.8	0.6	1.2	1.5	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_103 NCA06B_104	1A CONWAY PLACE ST PETERS 3 CONWAY PLACE ST PETERS	Residential Residential	0	NE SW	54	49	55	50 46	55	49	54	50 46	0.9	1.4	-0.1	0.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_104	3 CONWAY PLACE ST PETERS	Residential	1	SW	52	47	53	48	53	48	52	48	0.8	1.4	-0.4	0.6	55	50	NO NO	NO	NO	NO	NO NO
NCA06B	NCA06B_105	7 CONWAY PLACE ST PETERS	Residential	0	NE	49	44	51	47	50	45	51	47	1.6	2.7	1.3	2.2	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_105	7 CONWAY PLACE ST PETERS	Residential	1	NE	51	46	53	48	52	47	53	49	1.5	2.5	1.2	2.2	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_106	9 CONWAY PLACE ST PETERS 9 CONWAY PLACE ST PETERS	Residential	0	NE NE	48	43	49 52	45	49 51	44	50	46	1.2	1.8	1.4	2.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_106 NCA06B_107	3 EDITH STREET ST PETERS	Residential Residential	0	SW	61	56	61	56	61	56	61	56	-0.1	-0.2	-0.9	-0.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_108	5 EDITH STREET ST PETERS	Residential	0	SW	58	54	58	53	59	54	58	53	-0.2	-0.7	-0.8	-0.6	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_109	8 EDITH STREET ST PETERS	Residential	0	SE	55	50	55	50	56	51	57	52	0.2	0.4	0.8	0.9	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_110	10 EDITH STREET ST PETERS 11 EDITH STREET ST PETERS	Residential	0	NE SW	50	45 48	51	46	51 54	46	53	48	0.8	0.9	0.4	0.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_111 NCA06B 111	11 EDITH STREET ST PETERS	Residential Residential	1	SE	53	50	53	48	55	50	55	50	-0.2	-0.6	0.4	0.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_112	12 EDITH STREET ST PETERS	Residential	0	SW	52	47	52	47	53	48	53	48	0.1	0.1	0.5	0.6	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_113	14 EDITH STREET ST PETERS	Residential	0	NE	49	44	50	45	50	45	53	48	0.7	1.1	2.7	2.7	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_114	18 EDITH STREET ST PETERS	Residential	0	NE	49	44	50	45	49	44	52	47	0.8	0.7	2.8	2.8	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_115 NCA06B 116	20 EDITH STREET ST PETERS 22 EDITH STREET ST PETERS	Residential Residential	0	NE NE	48	43	49	44	49	44	52 52	47	0.8	1.2	2.8	2.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_117	32 EDITH STREET ST PETERS	Residential	0	NE NE	48	43	49	44	49	44	51	46	0.9	1.1	2.8	2.9	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_118	32 EDITH STREET ST PETERS	Residential	0	NE	48	43	49	45	49	44	52	47	1.2	1.7	2.7	2.8	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_119	33 EDITH STREET ST PETERS	Residential	0	SW SW	47	43	47	42	48 50	43	49 51	44	-0.3 0.1	-0.8 0.4	1.3	1.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_119 NCA06B 120	33 EDITH STREET ST PETERS 34 EDITH STREET ST PETERS	Residential Residential	0	SW NE	49	44	49	44	50 48	45	51	46	0.1	0.4	2.9	1.6	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_120	36 EDITH STREET ST PETERS	Residential	0	NE NE	47	43	48	44	48	43	51	46	0.9	0.7	2.9	2.9	55	50	NO NO	NO NO	NO	NO	NO
NCA06B	NCA06B_122	38 EDITH STREET ST PETERS	Residential	0	NE	47	42	48	43	48	43	51	46	0.9	1.5	2.9	2.9	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_123	40 EDITH STREET ST PETERS	Residential	0	NE NE	47	42	48	43	47	42	50	45	0.9	1.1	2.7	2.8	55	50	NO NO	NO NO	NO	NO	NO
NCA06B NCA06B	NCA06B_124 NCA06B_125	42 EDITH STREET ST PETERS 43 EDITH STREET ST PETERS	Residential Residential	0	NE SW	47	42	48	43	48	43	50 49	45	-0.6	-0.9	2.6	2.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_125	43 EDITH STREET ST PETERS	Residential	1	SW	49	44	48	44	49	45	51	46	-0.3	-0.1	1.3	1.2	55	50	NO NO	NO NO	NO	NO	NO
NCA06B	NCA06B_126	44 EDITH STREET ST PETERS	Residential	0	NE	46	42	47	43	47	42	50	45	0.9	0.7	2.7	2.8	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_127	45 EDITH STREET ST PETERS	Residential	0	SW	47	43	47	42	48	43	49	44	-0.7	-0.7	0.6	0.5	55	50	NO	NO	NO	NO	NO NO
NCA06B NCA06B	NCA06B_127 NCA06B_128	45 EDITH STREET ST PETERS 46 EDITH STREET ST PETERS	Residential Residential	1	SW NE	49	45 42	49	44	50	45	50	46	-0.1	-0.6	2.7	2.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_128 NCA06B_129	48 EDITH STREET ST PETERS 48 EDITH STREET ST PETERS	Residential	0	NE NE	47	42	47	43	47	42	50	45	0.8	0.7	2.7	2.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_130	50 EDITH STREET ST PETERS	Residential	0	NE	46	41	47	42	46	41	49	44	0.9	1.2	2.4	2.5	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_131	52 EDITH STREET ST PETERS	Residential	0	NE	46	41	47	42	47	42	49	44	0.9	1.6	2.5	2.6	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_132 NCA06B_132	59 EDITH STREET ST PETERS 59 EDITH STREET ST PETERS	Residential Residential	0	SW SW	48	44	49	44	49 51	44	50 52	45	0.5	0.4	0.9	1.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_132 NCA06B_133	59 EDITH STREET ST PETERS 61 EDITH STREET ST PETERS	Residential Residential	0	SW	50 48	46	51 49	46	51 49	46	52 49	47	0.6	0.4	0.9	0.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_133	61 EDITH STREET ST PETERS	Residential	1	SW	50	46	51	46	51	46	52	47	0.6	0.6	0.6	1.1	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_134	63 EDITH STREET ST PETERS	Residential	0	SW	49	44	49	45	49	44	49	45	0.6	0.8	-0.2	0.5	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_135 NCA06B_135	65 EDITH STREET ST PETERS 65 EDITH STREET ST PETERS	Residential Residential	0	SW SW	49	45 47	50 52	46	50 52	45 47	50	46	0.5	0.7	-0.3	0.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_135 NCA06B_136	65 EDITH STREET ST PETERS 75 EDITH STREET ST PETERS	Residential Residential	0	SW	55	50	52	51	52 56	51	52 55	48 51	0.6	1.2	-0.7	0.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_136	75 EDITH STREET ST PETERS	Residential	1	SW	57	52	58	53	58	53	57	53	0.6	1.4	-0.6	0.4	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_137	78 EDITH STREET ST PETERS	Residential	0	NE	46	41	48	43	47	42	50	45	1.8	2.6	3.2	3.6	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_137 NCA06B_138	78 EDITH STREET ST PETERS 4 FLORENCE STREET ST PETERS	Residential Residential	0	NE NE	48	43	50 65	45 62	49	43	52 65	47 61	1.7	2.3	2.9	20.2	55 55	50	NO YES	NO YES	NO YES	NO YES	NO YES
NCA06B NCA06B	NCA06B_138 NCA06B_139	4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS	Residential Residential	0		46	41	65	62 58	50	41	65	57	18.8	20.8	17.8	14.2	55	50	YES	YES	YES NO	YES NO	YES
NCA06B	NCA06B_139	6 FLORENCE STREET ST PETERS	Residential	1		51	45	64	61	52	45	64	60	12.5	15.7	11.6	14.8	55	50	YES	YES	NO	YES	YES
NCA06B	NCA06B_140	8 FLORENCE STREET ST PETERS	Residential	0		50	44	59	56	51	44	59	55	8.8	11.8	8	11.3	55	50	NO	YES	NO	NO	YES
NCA06B	NCA06B_140	8 FLORENCE STREET ST PETERS	Residential	1	SE	52	45	60	57	52	45	60	57	8.9	12.3	8 7.1	11.3	55	50	YES	YES	NO	NO	YES
NCA06B NCA06B	NCA06B_141 NCA06B 141	8A FLORENCE STREET ST PETERS 8A FLORENCE STREET ST PETERS	Residential Residential	1	SE SE	50 51	43	58 59	54	50 52	43 45	57 59	54	7.9	11.5	7.1	10.5	55 55	50	NO NO	NO YES	NO NO	NO NO	YES YES
NCA06B	NCA06B_141	10 FLORENCE STREET ST PETERS	Residential	0		48	42	56	52	49	43	55	52	7.4	10.5	6.5	9.2	55	50	NO	NO	NO	NO	YES
NCA06B	NCA06B_142	10 FLORENCE STREET ST PETERS	Residential	1	NW	51	45	58	54	52	45	57	54	6.5	9.2	5.7	8.2	55	50	NO	NO	NO	NO	YES
NCA06B	NCA06B_143	11 FLORENCE STREET ST PETERS	Residential	0		51	45	61	58	51	45	61	57	10.7	13.1	9.7	12.7	55	50	YES	YES	NO	NO NO	YES
NCA06B NCA06B	NCA06B_144 NCA06B_144	12 FLORENCE STREET ST PETERS 12 FLORENCE STREET ST PETERS	Residential Residential	1	NW NW	48 51	42 45	55 57	52 53	49 51	42	55 57	53	7.1 6.3	9.8	6.2 5.5	8.8	55 55	50	NO NO	NO NO	NO NO	NO NO	YES YES
NCA06B	NCA06B_145	13 FLORENCE STREET ST PETERS	Residential	0		49	43	58	54	50	44	57	54	8.5	11.5	7.6	10.1	55	50	NO	NO	NO	NO	YES
NCA06B	NCA06B_146	14 FLORENCE STREET ST PETERS	Residential	0		48	42	55	51	49	42	54	51	6.7	9.3	5.7	8.4	55	50	NO	NO	NO	NO	YES
NCA06B	NCA06B_146	14 FLORENCE STREET ST PETERS	Residential	1	NW	50	44	57	53	51	45	56	53	6.4	9.1	5.6	7.9	55	50	NO NO	NO NO	NO	NO	YES
NCA06B NCA06B	NCA06B_147 NCA06B_148	15 FLORENCE STREET ST PETERS 16 FLORENCE STREET ST PETERS	Residential Residential	0		49	43	56 54	52 51	49	43	56 54	52 50	7.1 6.3	9.6	5.3	7.9	55 55	50	NO NO	NO NO	NO NO	NO NO	YES YES
NCA06B	NCA06B_148	16 FLORENCE STREET ST PETERS	Residential	1		50	44	56	52	51	44	56	52	6.1	8.5	5.1	7.6	55	50	NO	NO NO	NO	NO	YES
NCA06B	NCA06B_149	17 FLORENCE STREET ST PETERS	Residential	0	NW	49	43	55	52	49	44	55	51	6.5	8.9	5.6	7.8	55	50	NO	NO	NO	NO	YES
NCA06B	NCA06B_150	18 FLORENCE STREET ST PETERS	Residential	0		48	42	54	50	48	42	53	50	6.1	8.3	5	7.6	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_150	18 FLORENCE STREET ST PETERS	Residential Residential	0	NW NW	50	44	56 55	52	50	44	55	52 51	5.8	8.1 7.6	5 4.7	7.3	55 55	50	NO NO	NO NO	NO NO	NO NO	YES YES
NCA06B NCA06B	NCA06B_151 NCA06B_151	19 FLORENCE STREET ST PETERS 19 FLORENCE STREET ST PETERS	Residential Residential	1		49 51	44	55	51 52	50 51	44	55 56	51	5.7	7.6	4.7	6.4	55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA06B	NCA06B_152	20 FLORENCE STREET ST PETERS	Residential	0		48	42	53	50	48	42	53	49	5.7	7.9	4.8	7.1	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_152	20 FLORENCE STREET ST PETERS	Residential	1	NW	50	44	55	52	50	44	55	51	5.5	7.7	4.7	7	55	50	NO	NO	NO	NO	YES
NCA06B	NCA06B_153	21 FLORENCE STREET ST PETERS	Residential	0		49	43	55	51	50	44	54	51	5.4	8.1	4.5	6.8	55	50	NO NO	NO NO	NO	NO NO	YES
NCA06B NCA06B	NCA06B_154 NCA06B_155	22 FLORENCE STREET ST PETERS 23 FLORENCE STREET ST PETERS	Residential Residential	0		48	42	54	51 48	49	43	54	50 48	5.7 4.6	6.8	5.1 4.4	7.8 6.1	55 55	50	NO NO	NO NO	NO NO	NO NO	YES NO
NCA06B NCA06B	NCA06B_155 NCA06B_156	24 FLORENCE STREET ST PETERS 24 FLORENCE STREET ST PETERS	Residential	0		47	41	54	50	47	42	54	50	5.5	8.4	5	7.5	55	50	NO NO	NO NO	NO	NO	NO NO
NCA06B	NCA06B_157	25 FLORENCE STREET ST PETERS	Residential	0	SE	47	41	51	48	48	42	52	48	4.4	6.9	4.2	6	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_158	26 FLORENCE STREET ST PETERS	Residential	0		48	42	54	50	49	43	53	50	5.2	8.2	4.5	7.2	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_159 NCA06B_160	27 FLORENCE STREET ST PETERS 28 FLORENCE STREET ST PETERS	Residential Residential	0		47	41	51 52	48	48	42	52 51	48	4.3 3.7	6.7 5.9	4.1	5.9 4.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_160 NCA06B_161	28 FLORENCE STREET ST PETERS 29 FLORENCE STREET ST PETERS	Residential Residential	0		48	42	52	48	48	43	51	48	3.7	5.9	2.7	4.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_162	30 FLORENCE STREET ST PETERS	Residential	0	NW	48	42	51	47	48	43	51	47	3.4	5.3	2.7	4.5	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_163	31 FLORENCE STREET ST PETERS	Residential	0	SE	47	41	50	46	47	42	51	47	3.6	5.6	3.8	5.1	55	50	NO	NO	NO	NO	NO

No. Section Property Prop								Openir	ng Year			Design	Year			Increase (Buil	ld - No Build)								
	2102	NCA ID	Described Address			Facade	No B			ild	No E			uild	Openin			gn Year	NCG noi:	se criteria			ls the contribution from t	he road project Acute?	C
State Stat	NCA	NCA ID	Receiver Address	Receiver Description Receiver Type	Floor	Orientation										-		-							Consider further treatment?
Second Second Secon									. , ,												,	-			
Mary					0		47					·-													
Column C					0	NW	47		50		47			45	3					50		NO		NO	NO
March Marc	NCA06B	NCA06B_166	34 FLORENCE STREET ST PETERS	Residential	1	NE	50	45	53	49	51	45	53	49	2.9	3.9	2.7	4.2	55	50	NO	NO	NO	NO	NO
Mary	NCA06B	NCA06B_167	35 FLORENCE STREET ST PETERS	Residential	0	SE	47	41	50	46	47	41	50	46	3.4	5.1	3.4	4.8	55	50	NO	NO	NO	NO	NO
March Marc					0		47		50																
Mary					1		48		51		49														
Second Column					0		48				48					4.0									
March Marc					0	NE	48									4.6									NO
Mary	NCA06B	NCA06B_172	40 FLORENCE STREET ST PETERS	Residential	0	SE	47	42	49	44	48	43	51	46	1.6	2.2	2.9	3.2	55	50	NO	NO	NO	NO	NO
March Marc	NCA06B	NCA06B_173		Residential	0	SE	47	42	50	45	47	42	51	46	2.7	3.6	3.2	4.2	55	50	NO	NO	NO	NO	
March Marc					0		47											3.3							
Mary					0													2.1							
Second S					0																				
Mathematical Content				Residential	0	SE	47	42	49		48			46	1.8		3			50	NO	NO	NO	NO	
Second Continue	NCA06B	NCA06B_179	48 FLORENCE STREET ST PETERS	Residential	0	SE	47	42	49	45	48	43	51	46	1.8	2.8	3	3.3	55	50	NO	NO	NO	NO	NO
Mary				Residential	0		47		49	45	47	42		46			3								***
See					0				-																
March Marc					1									48	1.9	2.8									
March Marc					0		71							57	-11.3	-10				50					
Mary					1		71													50					NO
Column C			7 MARY STREET ST PETERS	Residential	0	SW	71	67	57	55	71	67	61	56	-13.5	-11.5	-10.1		55	50	NO	NO	NO	NO	NO
Mary					1		70		58																NO
Column C					0	***	70		56																
March Marc					0																				
					1	***																			NO NO
May Color Color					0		70																		
Memory M	NCA06B	NCA06B_276		Residential	1	SW	70	66	58	56	71	66	61	56	-12.1	-10.3	-9.6	-10.2	55	50	NO	NO	NO	NO	NO
March Marc					0		70	66			71			56						50					
March Marc					1				-																
Month Mont					0	***			- 50																
March Marc					1		70																		
Model Mode					0	SW	71	67	55	54	71	67	61	56					55	50	NO	NO	NO	NO	NO
Money Mone	NCA06B	NCA06B_281	23 MARY STREET ST PETERS	Residential	1	SW	70	67	57	55	71	67	61	56	-13.4	-12	-9.9	-10.5	55	50	NO	NO	NO	NO	NO
March Marc					0																				
Mary 10 Mary					0		71					**													
Sect					0		71													50					
Marie Mari					0		71													50					
Model Mode	NCA06B	NCA06B_294	43 MARY STREET ST PETERS	Residential	0	SW	71	67	53	54	71	67	61	56	-17.2	-13.3	-10.6	-11.3	55	50	NO	NO	NO	NO	NO
Model Mode					0		70				71														
MAIL AND MAIL AND					0		71				71														
March Marc					1		68		-																
March Marc					0	SW	69	65	51		69			55						50					NO
Model Mode	NCA06B	NCA06B_299	51 MARY STREET ST PETERS	Residential	1	SW	69	65	53	53	69	65	59	55	-15.8	-12.1	-10.1	-10.2	55	50	NO	NO	NO	NO	NO
Marie Mari					0		69	65	51					55		-12.4				50					NO
Second Marked Second Private properties Marked Second Second					1		69	65	53					55		-12				50					NO
Note Color Color																									
Model Mode					0	***																			NO
Mode	NCA06B	NCA06B_307	67 MARY STREET ST PETERS	Residential	0	SW	70	67	53	53	71	67	60	56	-17.3	-13.5	-10.5	-10.9	55	50	NO	NO	NO	NO	NO
Model Mode				Residential	0		70							56											NO
Model Mode																									
Model Mode																									
Model Mode					0											0									NO
Model Mode					0	NE	47	42	47	42						0.5			55		NO				NO
Model Mode					0																				NO
Models M					1																				
Models M																									
MCARIB MCARIB MCARIB SEGRETISTRIETS PETERS Residential 0 NE 46 42 46 41 47 42 49 44 -0 47 24 22 25 55 50 NO NO NO NO NO NO NO N																									NO
NACAGIR NACAGIR 319 SPACERTS TRITES Residential O NE 48 43 49 44 49 44 51 46 0.7 0.8 2.4 2.3 55 50 NO																									
NACAGE 10 10 10 10 10 10 10 1	NCA06B	NCA06B_318	8 ROBERTS STREET ST PETERS	Residential	0	NE	46	42	46	41	47	42	49	44	0	-0.7	2.4	2.2	55	50	NO	NO	NO	NO	NO
NCAMBB NCAMBB 321 17 ROBERTS STREET ST PETERS Residential 0 NE 49 44 50 45 49 44 52 47 1 0.7 2.9 2.8 55 50 NO					0																				
MCADBB MCADBB, 322 39 ROBERTS STREET ST FETERS Reidential 0 NE 49 44 50 44 49 44 52 47 1 0.6 3.1 2.9 55 50 NO NO NO NO NO NO NO N					0		46								0										NO NO
NCA068 NCA068_323 23 ROBERTS STRETS FETERS Reidential 0 NE 49 44 50 44 52 47 1 0.6 3 3 3 55 50 NO							49								1										
NCAOGE NCAOGE 324 25 ROBERTS STREET ST PETERS Residential 0 NE 48 43 49 44 49 44 52 47 0.9 1.2 3.2 3.1 55 50 NO															1			3							
NCA068 NCA068_326 29 ROBERTS STREET ST PETERS Residential 0 NE 48 43 49 44 48 43 52 47 0.8 0.7 3.2 3.2 55 50 NO	NCA06B	NCA06B_324		Residential	0	NE	48	43	49	44	49	44	52	47	0.9	1.2	3.2	3.1	55	50	NO	NO	NO	NO	NO
NCA068 NCA068_327 31 ROBERTS STREET ST PETERS Residential 0 NE 47 43 48 43 48 43 51 46 0.7 0.3 3.1 3 55 50 NO																1		3							
NCA068 NCA068 328 33 ROBERTS STREET S PETERS Residential 0 NE 45 41 46 41 48 43 0.6 0.2 2.2 2.2 55 50 NO																		3.2							NO
NCA068 NCA068 NCA068 329 35 ROBERTS STREET ST PETERS Residential 0 NE 47 42 47 42 50 45 0.6 0.6 3 3 55 50 NO																		3							
NCA066 NCA066 330 37 ROBERTS STREET ST PETERS Residential 0 NE 45 41 46 41 48 43 0.6 0.2 1.9 1.9 55 50 NO																									
NCA066 NCA066_331 39 ROBERTS STREET ST PETERS Residential 0 NE 46 41 47 42 47 42 50 44 0.7 1 2.9 2.8 55 50 NO																									NO NO
NCA066 NCA068_333 43 ROBERTS STREET ST PETERS Residential 0 SE 47 42 46 41 47 43 49 44 -1 -1 1.6 1.2 55 50 NO					0		46									1									NO
NCA068 NCA068_334 6 SILVER STREET ST PETERS Residential 0 NE 52 47 53 48 52 47 54 49 0.7 0.7 1.4 1.5 55 50 NO	NCA06B	NCA06B_332	41 ROBERTS STREET ST PETERS	Residential	0	NE	46	42	47	42	47	42	50	45	0.6	0.1	2.9	2.9	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B_335 8 SILVER STREET ST PETERS Residential 0 NE 51 47 52 47 52 47 53 49 0.8 0.3 1.5 1.6 55 50 NO					0											-1									
NCA06B NCA06B_336 10 SILVER STREET ST PETERS Residential 0 NE 51 46 52 47 52 46 53 48 0.9 0.8 1.6 1.8 55 50 NO NO NO NO NO					0																				NO NO
					0																	***			***
					0																				NO
		_																							

					Face	de -		Openin	-			Design	Year			Increase (Bui	ild - No Build)		NCG noise	criteria	Do noise levels exceed the cumlative	limit with project road	Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Receiver	eiver Type			No Bu	nild Night	Bui Day	ild Night	No B	uild Night	Bui Day	ild Night	Opening	Year Night	Design	Night	Day	Night	adding ≥2dB to the total		Day	Night	Consider further treatment?
					Floor (rientation	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA06B	NCA06B_338	12 SILVER STREET ST PETERS		sidential	0	NE	50	46	51	46	51	46	53	48	0.9	0.4	1.9	1.9	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_339 NCA06B_339	13 SILVER STREET ST PETERS 13 SILVER STREET ST PETERS		sidential sidential	1	NE NE	50	45	52	47	51	46	54	49 51	1.4	1.7	2.8	3.3 2.9	55	50	NO NO	NO NO	NO NO	NO NO	NO YES
NCA06B	NCA06B_340	14 SILVER STREET ST PETERS	Resi	sidential	0	SW	50	45	50	45	51	46	52	46	0.1	0.2	0.9	0.7	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_341	21-23 SILVER STREET ST PETERS		sidential	0	NE	49	44	51	46	49	44	53	48	1.8	2	3.4	3.6	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_341 NCA06B_342	21-23 SILVER STREET ST PETERS 24 SILVER STREET ST PETERS		sidential sidential	0	NE SW	51	46	52	47	51	46	55 52	50	0.1	0.1	3.3	3.5 0.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_343	26 SILVER STREET ST PETERS		sidential	0	NE	48	44	50	45	49	44	52	47	1.1	0.8	2.7	2.8	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_344	28 SILVER STREET ST PETERS	Resi	sidential	0	NE	48	44	50	45	49	44	52	47	1.1	0.8	2.7	2.7	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_345 NCA06B_346	30 SILVER STREET ST PETERS 34 SILVER STREET ST PETERS		sidential sidential	0	NE NE	48	43	50	45	49	44	52 51	47	1.2	1.7	2.7	2.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_347	37 SILVER STREET ST PETERS		sidential	0	SW	49	44	49	44	50	45	51	46	0.3	0.6	1.4	1.2	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_347	37 SILVER STREET ST PETERS	Resi	sidential	1	SW	51	47	52	47	52	47	54	49	0.7	0.4	1.7	1.6	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_348 NCA06B_349	38 SILVER STREET ST PETERS 39 SILVER STREET ST PETERS		sidential sidential	0	NE NE	48	43	49	44	49	43	51 51	46	1.3	1.5	2.7	2.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_349 NCA06B 350	40 SILVER STREET ST PETERS		sidential	0	NE NE	48	43	49	44	48	43	51	46	1.7	1.3	2.9	2.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_351	41 SILVER STREET ST PETERS	Resi	sidential	0	NE	48	43	50	45	49	43	52	47	1.7	2.2	3.2	3.6	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_352	42 SILVER STREET ST PETERS		sidential	0	NE	46	41	48	43	47	42	50	45	1.4	2.1	2.9	3	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_353 NCA06B_354	43 SILVER STREET ST PETERS 44 SILVER STREET ST PETERS		sidential sidential	0	NE NF	47	42	49	44	48	42	50	46	1.7	1.1	2.7	2.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_355	45 SILVER STREET ST PETERS		sidential	0	NE	47	42	49	44	48	43	51	46	1.8	2.4	3	3.3	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_356	46 SILVER STREET ST PETERS		sidential	0	NE	47	42	49	44	48	43	51	46	1.3	2	2.7	2.9	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_357 NCA06B_358	47 SILVER STREET ST PETERS 49 SILVER STREET ST PETERS		sidential sidential	0	NE NF	48	43	49	45 45	48	43	52 51	47	1.7	1.9	3.2	3.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_358 NCA06B_359	49 SILVER STREET ST PETERS 51 SILVER STREET ST PETERS		sidential	0	NE NE	48	43	49	45	48	43	51	46	1.8	1.9	3.1	3.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_360	53 SILVER STREET ST PETERS		sidential	0	sw	47	43	48	43	48	43	50	45	0.6	0.2	1.9	1.9	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_361	55 SILVER STREET ST PETERS		sidential	0	NE NE	47	42	49	45	48	43	51	46	2	2.8	3.2	3.6	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_362 NCA06B_363	61 SILVER STREET ST PETERS 63 SILVER STREET ST PETERS		sidential sidential	0	NE NE	4/	42	48	44	47	42	50 49	45	1.8	2.4	2.7	2.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_364	66 SILVER STREET ST PETERS	Resi	sidential	0	SE	48	43	48	43	49	44	51	46	0.5	0.6	2	2	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_364	66 SILVER STREET ST PETERS		sidential	1	SE	50	45	50	45	50	45	52	47	0.6	0.4	1.9	1.9	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_365 NCA06B_366	66 SILVER STREET ST PETERS 68 SILVER STREET ST PETERS		sidential sidential	0	NE NE	47	42	49	44	48	43	51	46	1.3	2	2.7	2.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_367	70 SILVER STREET ST PETERS		sidential	0	NE	47	42	48	44	48	42	50	45	1.4	1.8	2.7	2.9	55	50	NO	NO	NO	NO	NO NO
NCA06B	NCA06B_368	70 SILVER STREET ST PETERS		sidential	0	NE	46	42	48	43	47	42	50	45	1.5	1.4	2.7	3.1	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_369 NCA06B_370	72 SILVER STREET ST PETERS 73 SILVER STREET ST PETERS		sidential sidential	0	NE NF	47	42	48	44	47	42	50	45	1.4	2.4	2.7	3.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_370	75 SILVER STREET ST PETERS		sidential	0	NE NE	47	42	49	44	48	43	51	46	1.6	2.6	2.6	3.1	55	50	NO NO	NO	NO	NO	NO NO
NCA06B	NCA06B_372	76 SILVER STREET ST PETERS	Resi	sidential	0	NE	47	42	48	43	47	42	50	45	1.4	1.6	2.7	3	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_373	77 SILVER STREET ST PETERS		sidential	0	NE	48	43	50	45	48	43	51	46	2	2.3	2.7	3.5	55	50	NO NO	NO	NO	NO	NO NO
NCA06B NCA06B	NCA06B_374 NCA06B_375	79 SILVER STREET ST PETERS 80 SILVER STREET ST PETERS		sidential sidential	0	NE NE	48	42	49	45	48	43	50	46	1.5	1.6	2.4	3.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_375	80 SILVER STREET ST PETERS		sidential	1	NE	49	44	50	46	49	44	52	47	1.7	2	2.4	3	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_376	81 SILVER STREET ST PETERS		sidential	0	NE	47	42	49	45	48	43	50	46	1.8	2.8	2.4	2.9	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_377 NCA06B_377	82 SILVER STREET ST PETERS 82 SILVER STREET ST PETERS		sidential sidential	1	NE NF	47	42	49 50	44	48	43	50 52	46	1.6	2.6	2.2	2.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_378	82A SILVER STREET ST PETERS		sidential	0	NE	47	42	48	44	47	42	49	44	1.5	1.9	1.6	2.3	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_379	84 SILVER STREET ST PETERS		sidential	0	NE	47	42	49	44	48	43	50	45	1.4	2.3	1.9	2.5	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_380 NCA06B_381	85 SILVER STREET ST PETERS 86 SILVER STREET ST PETERS		sidential	0	NE NE	47	42	49	44	48	43	50	46	1.7	2.5	2.5	2.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_382	88 SILVER STREET ST PETERS		sidential	0	NE	48	43	49	44	48	43	50	45	1.4	1.5	1.9	2.3	55	50	NO	NO	NO	NO	NO NO
NCA06B	NCA06B_383	89 SILVER STREET ST PETERS		sidential	0	SW	50	45	51	46	51	46	51	47	0.8	1.4	0.5	1.2	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_384 NCA06B_385	90 SILVER STREET ST PETERS 91 SILVER STREET ST PETERS		sidential sidential	0	NE NE	48	43	49	45	48	43	50	46 45	1.3	1.7	1.8	2.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_386	92 SILVER STREET ST PETERS		sidential	0	NE NE	48	43	49	45	49	43	50	46	1.3	1.8	1.7	2.3	55	50	NO NO	NO	NO	NO	NO NO
NCA06B	NCA06B_387	93 SILVER STREET ST PETERS	Resi	sidential	0	SW	49	44	50	45	50	45	50	46	0.7	1.4	0.1	0.9	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_387	93 SILVER STREET ST PETERS		sidential	1	SW	52	47	52	48	52	47	53	48	0.7	1.1	0.3	1.1	55	50	NO NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_388 NCA06B_388	93A SILVER STREET ST PETERS 93A SILVER STREET ST PETERS		sidential sidential	1	NE SW	47 51	42	48 52	48	47 52	42	49 52	44	0.7	1.2	0.3	1.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_389	94 SILVER STREET ST PETERS	Resi	sidential	0	NE	48	43	49	45	49	44	50	46	1.2	1.9	1.6	2.2	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_390	95 SILVER STREET ST PETERS		sidential	0	NE	51	46	52	47	52	47	51	47	0.8	1.6	-0.5	0.7	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_391 NCA06B_392	96 SILVER STREET ST PETERS 98 SILVER STREET ST PETERS		sidential sidential	0	NE NE	48	43	50	45	49	44	50	46	1.2	2.1	1.4	2.1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_393	100 SILVER STREET ST PETERS		sidential	0	NE	49	44	50	45	49	44	50	46	1.2	1.3	1.2	1.9	55	50	NO NO	NO	NO	NO	NO NO
NCA06B	NCA06B_394	101 SILVER STREET ST PETERS		sidential	0	SW	54	50	55	51	55	50	55	51	0.8	0.8	-0.4	0.7	55	50	NO	NO	NO	NO	NO
NCA06B NCA06B	NCA06B_395 NCA06B_396	103 SILVER STREET ST PETERS 112 SILVER STREET ST PETERS		sidential sidential	0	SW NE	56 51	51 46	57 52	52 47	57 51	52 46	56 52	52 48	0.8	1.6	-0.6	0.6 1.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_396	114 SILVER STREET ST PETERS		sidential	0	NE	50	45	51	46	50	45	51	47	1.1	1.3	0.7	1.6	55	50	NO NO	NO	NO	NO	NO NO
NCA06B	NCA06B_397	114 SILVER STREET ST PETERS		sidential	1	NE	52	47	53	49	53	48	53	49	1	1.8	0.4	1.3	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_398	116 SILVER STREET ST PETERS		sidential	0	SW	50	45	50	46	50	45	50	46	0.7	0.9	-0.5	0.6	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B NCA06B	NCA06B_399 NCA06B_400	118 SILVER STREET ST PETERS 120 SILVER STREET ST PETERS		sidential sidential	0	NE NE	55 56	50 51	56 57	51 52	56 56	50 51	55 56	51 52	0.9	1.3	-0.3 -0.6	0.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_400	120 SILVER STREET ST PETERS		sidential	1	NE	58	53	58	54	58	53	58	54	0.7	0.9	-0.5	0.6	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_401	1 ST PETERS STREET ST PETERS		sidential	0	NE	55	48	66	62	56	48	65	62	10.8	14.6	9.8	13.8	55	50	YES	YES	YES	YES	YES
NCA06B NCA06B	NCA06B_402 NCA06B_402	5 ST PETERS STREET ST PETERS 5 ST PETERS STREET ST PETERS		sidential sidential	1	NW NE	52 54	45 47	62	58 60	52 54	45 47	63	58	9.4	13.6 12.9	9.1	12.8	55 55	50	YES YES	YES	NO NO	NO NO	YES YES
NCA06B	NCA06B_402 NCA06B_403	7 ST PETERS STREET ST PETERS		sidential	0	SE	48	42	56	53	49	43	56	53	8	11.1	7.4	10.1	55	50	NO NO	NO NO	NO	NO	YES
NCA06B	NCA06B_403	7 ST PETERS STREET ST PETERS		sidential	1	SE	50	44	58	55	51	44	58	54	7.9	10.7	7.2	9.9	55	50	NO	YES	NO	NO	YES
NCA06B NCA06B	NCA06B_404 NCA06B_405	8 ST PETERS STREET ST PETERS		sidential sidential	0	SE NW	48	42	61 56	57 52	49	43	60 56	57 52	12.7 9.6	15.6 11.6	11.8 8.8	14.2	55 55	50	YES NO	YES NO	NO NO	NO NO	YES
NCA06B NCA06B	NCA06B_405 NCA06B_406	9 ST PETERS STREET ST PETERS 11 ST PETERS STREET ST PETERS		sidential sidential	0	NW	46	41	56	52	48	41	56	52	9.6	11.6	8.8	10.8	55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA06B	NCA06B_407	12 ST PETERS STREET ST PETERS		sidential	0	NW	51	45	58	55	52	45	58	55	7	10.1	6.1	9.6	55	50	NO	YES	NO	NO	YES
NCA06B	NCA06B_408	13 ST PETERS STREET ST PETERS		sidential	0	NW	49	43	57	53	50	43	57	53	7.7	10.6	6.8	9.8	55	50	NO NO	NO	NO	NO	YES
NCA06B NCA06B	NCA06B_409 NCA06B_409	15 ST PETERS STREET ST PETERS 15 ST PETERS STREET ST PETERS		sidential sidential	1	SE NE	50	41	53	49 54	48 51	42	53 57	49	5.4 7	9.2	6.2	7.2 8.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO YES
NCA06B	NCA06B_409	16 ST PETERS STREET ST PETERS		sidential	0	SE	46	41	55	51	47	41	55	51	8.7	10.5	8	10.1	55	50	NO NO	NO	NO	NO	YES
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS		sidential	1	NE	50	44	57	54	51	45	57	53	6.8	9.7	6	8.7	55	50	NO	NO	NO	NO	YES
NCA06B NCA06B	NCA06B_411 NCA06B_411	17 ST PETERS STREET ST PETERS 17 ST PETERS STREET ST PETERS		sidential	0	SE	47	41	52 54	48	47 49	41	52 54	48 50	5.2	7.5	4.9	6.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCAU6B	NCHU08_411	17 ST PETERS STREET ST PETERS	Resi	sidential	1	SE	49	45	54	50	49	43	54	50	5	7	4.8	6.7	55	50	NU	NU	NU	NO	NU

				Facade	No B	Opening Year	Build	No Build	Design Yea	r Build	Incre.	se (Build - No Bu	ld) Design Year	NCG noise	e criteria	Do noise levels exceed the cumla		ls the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Receiver Type	Floor Orientation	Day dB(A)	Night Day	Night dB(A)			Day Night	Day Nig			Day dB(A)	Night dB(A)	adding ≥2dB to the to	otal noise levels? Night	Day ≥ 65dB LAeq,15h	Night ≥ 60dB LAeq,9h	Consider further treatment?
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residential	0 NE	49	43 59	55	49	43	58 55	10.1 12	.4 9.2	11.8	55	50	NO	YES	NO	NO	YES
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residential	1 NE	51	46 61	57	52	46	60 57	9.4 11		11	55	50	YES	YES	NO	NO	YES
NCA06B NCA06B	NCA06B_413 NCA06B_414	19 ST PETERS STREET ST PETERS 21 ST PETERS STREET ST PETERS	Residential Residential	0 NW	47	41 52 42 53	49		42	52 48	5.5 7.		6.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_414 NCA06B 415	23 ST PETERS STREET ST PETERS	Residential	0 NW	47	42 53	49			53 49	4.8	5 5.3	7.3 6.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA06B	NCA06B_416	25 ST PETERS STREET ST PETERS	Residential	0 SE	47	41 51	47			51 47	4.4 6.		5.9	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_417	27-31 ST PETERS STREET ST PETERS	Residential	0 NE	46	40 51	47	46	40	51 47	4.9 6.	9 4.6	6.4	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_417	27-31 ST PETERS STREET ST PETERS	Residential	1 NE	48	42 52	48	48	43	53 49	4.4 6.	6 4.3	5.9	55	50	NO	NO	NO	NO	NO
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residential	0 NE	49	43 55	52			55 51	5.8 8.		7.8	55	50	NO	NO	NO	NO	YES
NCA06B NCA06B	NCA06B_418 NCA06B_419	27-31 ST PETERS STREET ST PETERS 27-31 ST PETERS STREET ST PETERS	Residential Residential	1 NE	51	45 56 41 51	53		45	56 53 51 47	5.8 8.		7.7 6.6	55	50	NO NO	NO NO	NO NO	NO NO	YES NO
NCA06B	NCA06B_419	27-31 ST PETERS STREET ST PETERS	Residential	1 NE	49	44 54	50	50	44	54 50	4.7 6.		6.2	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_001	2 APPLEBEE STREET ST PETERS	Residential	0 NW	71	66 70	60	72	66	67 58	-1.5 -5	9 -5.2	-8.6	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_001	2 APPLEBEE STREET ST PETERS	Residential	1 NW	71	66 69	60	72	66	67 58	-1.6 -6	1 -5.2	-8.3	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_001	2 APPLEBEE STREET ST PETERS	Residential	2 NW	70	65 69	59		66	66 58	-1.6 -5		-8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_001 NCA07_001	2 APPLEBEE STREET ST PETERS 2 APPLEBEE STREET ST PETERS	Residential Residential	3 NW 4 NW	70	65 68	59 59	71	65	66 57 65 57	-1.8 -5 -1.9 -5		-7.8 -7.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_002	4 APPLEBEE STREET ST PETERS	Residential	0 N	63	58 62	52		58	59 51	-1.7 -5			55	50	NO NO	NO	NO	NO	NO
NCA07	NCA07_002	4 APPLEBEE STREET ST PETERS	Residential	1 N	64	59 62	53	65	59	60 51	-1.8 -5		-7.8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_002	4 APPLEBEE STREET ST PETERS	Residential	2 N	64	59 62	53	65	59	60 52	-1.8 -5	4 -5.1	-7.7	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_002	4 APPLEBEE STREET ST PETERS	Residential	3 N	64	59 62	54		59	60 52	-1.9 -5			55	50	NO	NO	NO	NO	NO
NCA07	NCA07_002	4 APPLEBEE STREET ST PETERS 6 APPLEBEE STREET ST PETERS	Residential Residential	4 N 0 NW	64	59 62 54 58	54 49	65	55	55 47	-1.8 -4 -1.8 -5		-7.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_003 NCA07_003	6 APPLEBEE STREET ST PETERS	Residential Residential	1 NW	60	55 58	50		55	56 48	-1.8 -5 -1.8 -5		-7.6 -7.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_003	6 APPLEBEE STREET ST PETERS	Residential	2 NW	61	55 59	50		56	56 49	-1.8 -4		-7.2	55	50	NO NO	NO	NO	NO	NO
NCA07	NCA07_003	6 APPLEBEE STREET ST PETERS	Residential	3 NW	61	56 59	51	62	56	57 49	-1.8	-4.9	-7	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_003	6 APPLEBEE STREET ST PETERS	Residential	4 NW	62	56 60	52		57	58 50	-1.8 -4		-6.5	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_004	8 APPLEBEE STREET ST PETERS 8 APPLEBEE STREET ST PETERS	Residential	0 NW	55	50 54	45		51	51 44	-1.7 -4		-7 -6.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_004 NCA07_004	8 APPLEBEE STREET ST PETERS 8 APPLEBEE STREET ST PETERS	Residential Residential	1 NW 2 NW	56	51 55 52 55	46			52 45	-1.7 -4 -1.6 -4		-6.7 -6.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_004	8 APPLEBEE STREET ST PETERS	Residential	3 NW	58	53 56	48		-	54 47	-1.7 -4	-	-6.1	55	50	NO NO	NO	NO	NO	NO
NCA07	NCA07_004	8 APPLEBEE STREET ST PETERS	Residential	4 NW	59	54 57	50	60	54	55 49	-1.7 -4	3 -4.2	-5.6	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_005	62 APPLEBEE STREET ST PETERS	Residential	0 NW	47	41 49	44		42	49 44	1.6	1.4	2.3	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_006	64 APPLEBEE STREET ST PETERS	Residential	0 S	52	47 52	45		47	53 46	-0.2 -1		-0.8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_007 NCA07_008	66 APPLEBEE STREET ST PETERS 68 APPLEBEE STREET ST PETERS	Residential Residential	0 E	53 52	47 52 46 51	44			53 46 52 45	-0.7 -2 -0.6 -2		-2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_009	70 APPLEBEE STREET ST PETERS	Residential	0 SE	53	47 52	44		47	53 45	-0.7	-0.8		55	50	NO	NO	NO	NO	NO
NCA07	NCA07_010	72 APPLEBEE STREET ST PETERS	Residential	0 E	51	45 51	44	51	46	51 45	-0.1	. 0	-0.4	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_011	112 CHURCH STREET ST PETERS	Residential	0 NW	51	44 61	58	51	44	61 57	10 13	8 9.2	12.8	55	50	YES	YES	NO	NO	YES
NCA07	NCA07_011	112 CHURCH STREET ST PETERS	Residential	1 NW	53	46 62	58		47	62 58	9 12		11.5	55	50	YES	YES	NO	NO	YES
NCA07 NCA07	NCA07_012 NCA07_012	134 CHURCH STREET ST PETERS 134 CHURCH STREET ST PETERS	Residential Residential	0 SE 1 SE	56	51 56 52 58	51		51	57 52 58 53	0.6 0.		0.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_012 NCA07_013	136 CHURCH STREET ST PETERS	Residential	0 SE	54	50 55	50		50	56 51	0.7 0.		1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_013	136 CHURCH STREET ST PETERS	Residential	1 SE	56	51 57	52	57	51	58 53	0.9 0.		1.2	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_014	138 CHURCH STREET ST PETERS	Residential	0 SE	52	47 53	48	53	48	54 49	1 1	4 1.3	1.5	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_014	138 CHURCH STREET ST PETERS	Residential	1 SE	54	49 55	50			56 51	1.2 1		1.9	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_015 NCA07_015	140 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS	Residential Residential	0 SE 1 SE	51	46 52 48 54	47	51	46	53 48	1.2 1		2.1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO YES
NCA07	NCA07_015 NCA07_016	142 CHURCH STREET ST PETERS	Residential	0 SE	50	45 51	46			53 48	1.5 1.		2.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_016	142 CHURCH STREET ST PETERS	Residential	1 SE	52	47 54	49	53	48	55 50	1.6 1.	9 2.6	2.8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_017	144 CHURCH STREET ST PETERS	Residential	O SE	50	45 51	46	50	45	53 48	1.4 1.	4 2.3	2.5	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_017	144 CHURCH STREET ST PETERS	Residential	1 SE	52	47 54	49		48	56 51	1.5	2.6	2.8	55	50	NO	NO	NO	NO	YES
NCA07	NCA07_018 NCA07_018	146 CHURCH STREET ST PETERS 146 CHURCH STREET ST PETERS	Residential Residential	0 SE 1 SE	50	45 52 48 54	47	51	48	53 48 56 51	1.4 1	7 2.2 4 2.4	2.4	55 55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA07	NCA07_019	146A CHURCH STREET ST PETERS	Residential	0 SE	50	45 52	47			53 48	1.4 1.		2.6	55	50	NO NO	NO	NO	NO	NO NO
NCA07	NCA07_019	146A CHURCH STREET ST PETERS	Residential	1 SE	53	48 55	50	54	49	56 51	1.4 1.	7 2.5	2.7	55	50	NO	NO	NO	NO	YES
NCA07	NCA07_020	148 CHURCH STREET ST PETERS	Residential	O SE	51	46 52	47			54 49	1.3 1		2.8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_021	150 CHURCH STREET ST PETERS	Residential	0 SE	52	47 53	48			55 50	1.1 1.			55	50	NO	NO	NO	NO	NO
NCA07	NCA07_022 NCA07_023	152 CHURCH STREET ST PETERS 154 CHURCH STREET ST PETERS	Residential Residential	0 SE 0 SE	54	49 55 48 54	50 49			56 51 56 51	1.2 1			55 55	50	NO NO	NO NO	NO NO	NO NO	NO YES
NCA07	NCA07_023 NCA07_024	156 CHURCH STREET ST PETERS	Residential	0 SE	56	51 57	52			58 53	0.8 1			55	50	NO	NO	NO	NO	NO NO
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	0 E	46	41 51	46			52 47	5.3 5.		6	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	1 E	47	42 52	48			54 49	5.5 5.		6.4	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	2 E	48	43 54	49			55 50	5.6 6.			55	50	NO NO	NO NO	NO NO	NO	NO VEC
NCA07 NCA07	NCA07_025 NCA07_025	19-23 CROWN STREET, ST PETERS 19-23 CROWN STREET, ST PETERS	Residential Residential	3 E 4 S	49 51	44 55 45 55	50		**	57 52 58 53	5.4 6. 4.4 5.		7.3	55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA07	NCA07_025 NCA07_026	25 CROWN STREET, ST PETERS	Residential	0 E	46	45 55	45			51 46	4.4 5.			55	50	NO NO	NO NO	NO NO	NO	NO YES
NCA07	NCA07_026	25 CROWN STREET ST PETERS	Residential	1 E	47	42 52	47			53 48	4.7 5.			55	50	NO	NO	NO	NO	NO
NCA07	NCA07_027	27 CROWN STREET ST PETERS	Residential	0 E	45	40 49	44			50 45	3.9 4.		5.1	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_027	27 CROWN STREET ST PETERS	Residential	1 E	47	42 52	47			53 48	4.7 5.			55	50	NO	NO	NO	NO	NO
NCA07	NCA07_028 NCA07_028	29 CROWN STREET ST PETERS 29 CROWN STREET ST PETERS	Residential Residential	0 E	45	40 49 42 52	44			50 45	3.8 4. 4.6 5.			55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_028 NCA07_029	31 CROWN STREET ST PETERS	Residential	0 E	47	42 52	47			50 45	3.8	2 5.4	5.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_029	31 CROWN STREET ST PETERS	Residential	1 E	47	42 51	47			52 47	4.6 4.		5.4	55	50	NO NO	NO	NO	NO	NO
NCA07	NCA07_030	33 CROWN STREET ST PETERS	Residential	0 E	45	40 49	45	45		51 46	4.2 4.		5.5	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_030	33 CROWN STREET ST PETERS	Residential	1 E	47	42 52	47			53 48	4.7 5.			55	50	NO	NO	NO	NO	NO
NCA07	NCA07_030	33 CROWN STREET ST PETERS	Residential	2 E	49	44 54	49			55 50	4.8 5.		6.2	55	50 49	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_031 NCA07_031	39 CROWN STREET ST PETERS 39 CROWN STREET ST PETERS	Residential Residential	1 F	41	36 45 39 49	40			46 41 50 45	3.9 4. 4.7 5.		4.3 5.4	54 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	2 E	47	42 52	48			55 49	5.3 5.		7	55	50	NO NO	NO	NO	NO	NO
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	3 S	53	47 55	50			57 52	2.3 2.	8 3.9	4.2	55	50	NO	NO	NO	NO	YES
NCA07	NCA07_032	41 CROWN STREET ST PETERS	Residential	0 E	45	39 49	44			50 45	4.1 5.			55	50	NO	NO	NO	NO	NO
NCA07	NCA07_032	41 CROWN STREET ST PETERS	Residential	1 E	47	42 51	47			53 48	4.1 4.		5.2	55	50	NO NO	NO NO	NO NO	NO	NO
NCA07	NCA07_033 NCA07_033	43 CROWN STREET ST PETERS 43 CROWN STREET ST PETERS	Residential Residential	0 E	45	40 49	44			50 45	4 4		5.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_033 NCA07_034	43 CROWN STREET ST PETERS 45 CROWN STREET ST PETERS	Residential	0 E	45	40 49	44			51 46	4 4		5.1	55	50	NO NO	NO NO	NO NO	NO	NO NO
NCA07	NCA07_034	45 CROWN STREET ST PETERS	Residential	1 E	48	42 52	47			53 48	3.9 5		5.1	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_035	47 CROWN STREET ST PETERS	Residential	0 E	45	40 50	45			51 46	4.1 4.		5.4	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_035	47 CROWN STREET ST PETERS	Residential	1 E	48	42 52	47	48	43	53 48	3.9 5.	1 4.8	5	55	50	NO	NO	NO	NO	NO

					Fac	ade -		Openin	-			Design				Increase (Buil			NCG noise	criteria	Do noise levels exceed the cumlative	e limit with project road	Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Rec	ceiver Type			No Be Day	uild Night	Bui Day	Night	No E	Build Night	Day	ld Night	Opening	Year Night	Design	Night Night	Day	Night	adding ≥2dB to the total		Day	Night	Consider further treatment?
					Floor	Orientation	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA07	NCA07_036 NCA07_036	49 CROWN STREET ST PETERS 49 CROWN STREET ST PETERS		Residential Residential	0	E F	46	40	50	45	46	41	51	46	3.9	5.1 4.1	5.1 4.8	5.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_037	51 CROWN STREET ST PETERS		Residential	0	E	46	40	50	45	46	41	51	46	4.2	5.2	5.2	5.4	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_037	51 CROWN STREET ST PETERS	R	Residential	1	E	48	43	52	47	48	43	53	48	3.8	4.2	4.9	5.1	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_038	53 CROWN STREET ST PETERS		Residential	0	E	46	40	50	45	46	41	51	46	4.3	5.3	5.2	5.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_038 NCA07_039	53 CROWN STREET ST PETERS 55 CROWN STREET ST PETERS		Residential Residential	0	F	48	43	52	47	48	43	53	48	3.9 4.3	4.3 5.5	5.2	5.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_039	55 CROWN STREET ST PETERS		Residential	1	E	48	43	52	47	49	43	54	48	3.8	4.3	5	5.2	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_040	57 CROWN STREET ST PETERS	R	Residential	0	E	46	40	50	46	46	41	52	47	4.4	5.7	5.3	5.7	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_040	57 CROWN STREET ST PETERS 61 CROWN STREET ST PETERS		Residential Residential	1	E W	48	43 55	52	47	49 61	43 56	54	49 50	3.9	4.5	5.1	5.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_041 NCA07_041	61 CROWN STREET ST PETERS		Residential	1	w	62	56	59	50	63	57	59 60	52	-2.6 -2.6	-6.3 -5.7	-2.8 -2.6	-5.5 -5.1	55 55	50	NO NO	NO NO	NO	NO	NO
NCA07	NCA07_042	63 CROWN STREET ST PETERS		Residential	0	E	47	41	50	45	47	42	51	46	3.1	3.9	4	4.2	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_043	65 CROWN STREET ST PETERS	R	Residential	0	E	47	41	52	48	48	42	54	49	5.1	6.9	6	6.5	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_043	65 CROWN STREET ST PETERS 67 CROWN STREET ST PETERS		Residential	1	E	49	43	54	49	50	44	56	51 49	4.9	6.6 7.3	6.2	6.6	55	50	NO NO	NO NO	NO NO	NO NO	YES NO
NCA07	NCA07_044 NCA07_044	67 CROWN STREET ST PETERS		Residential Residential	1	E	49	41	55	50	50	45	54	51	5.2	6	6.5	6.6	55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA07	NCA07_045	69 CROWN STREET ST PETERS		Residential	0	E	49	43	53	49	49	44	55	50	4.9	6	5.6	6.1	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_046	71 CROWN STREET ST PETERS	R	Residential	0	E	49	43	54	49	49	44	55	51	5.1	6.6	5.9	6.4	55	50	NO	NO	NO	NO	YES
NCA07	NCA07_047	73 CROWN STREET ST PETERS		Residential	0	E	50	44	55	51	50	45	57	52	5.4	6.9	6.8	7.2	55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA07	NCA07_048 NCA07_049	75 CROWN STREET ST PETERS 77 CROWN STREET ST PETERS		Residential Residential	0	SE SE	51	44	56	52	51	46	58	54	5.6 6.1	8.8	7.3	7.7 8.2	55	50	NO NO	NO YES	NO NO	NO NO	YES YES
NCA07	NCA07_049	77 CROWN STREET ST PETERS		Residential	1	SE	52	46	59	55	53	48	62	57	6.6	8.9	8.7	9.1	55	50	YES	YES	NO	NO	YES
NCA07	NCA07_050	1 EDITH STREET ST PETERS		Residential	0	SW	63	59	63	58	64	59	63	58	0	-0.5	-1.1	-0.8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_050	1 EDITH STREET ST PETERS		Residential	1	SW	64 73	59 67	64	59 58	65 73	60	64	59 62	0	0.2	-0.9	-0.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_051 NCA07_051	1-11 PRINCES HIGHWAY ST PETERS 1-11 PRINCES HIGHWAY ST PETERS		Residential Residential	1	E	73	67	72	58	73	67	72	62	-1.1	-8.5 -7.9	-1.5 -1.8	-4.8 -4.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_051	1-11 PRINCES HIGHWAY ST PETERS		Residential	2	E	72	66	71	59	73	67	71	62	-1.7	-7.1	-1.9	-5	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_051	1-11 PRINCES HIGHWAY ST PETERS		Residential	3	E	72	66	70	59	72	67	70	61	-1.8	-7.3	-2.1	-5.2	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_051	1-11 PRINCES HIGHWAY ST PETERS 1-11 PRINCES HIGHWAY ST PETERS		Residential	4	E	71	65	69	58	72	66	70	61	-2	-6.5	-2.3	-5.1	55	50	NO NO	NO NO	NO NO	NO	NO NO
NCA07	NCA07_051 NCA07_052	1-11 PRINCES HIGHWAY ST PETERS 13-19 PRINCES HIGHWAY ST PETERS		Residential Residential	0	E	71	65	69 71	58 57	71	66	69 71	62	-2.1	-6.7 -8.6	-2.3 -1.4	-5.1 -4.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_052	13-19 PRINCES HIGHWAY ST PETERS		Residential	1	E	72	66	71	58	73	67	71	62	-1.3	-7.7	-1.6	-4.9	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_052	13-19 PRINCES HIGHWAY ST PETERS	R	Residential	2	E	72	66	70	58	73	67	71	62	-1.5	-7.6	-1.9	-5	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_052	13-19 PRINCES HIGHWAY ST PETERS		Residential	3	E	71	65	70	58	72	66	70	61	-1.7	-6.8	-1.9	-5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_052 NCA07_052	13-19 PRINCES HIGHWAY ST PETERS 13-19 PRINCES HIGHWAY ST PETERS		Residential Residential	5	F	70	65	69	58	72	66	69	61	-1.7	-7.1 -7.3	-2.1	-5.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_053	21-27 PRINCES HIGHWAY ST PETERS		Residential	0	E	71	65	71	57	72	66	71	61	-0.8	-8.1	-1.4	-4.7	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_053	21-27 PRINCES HIGHWAY ST PETERS	R	Residential	1	E	72	66	71	58	73	66	71	62	-1.2	-8.1	-1.6	-4.8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_053	21-27 PRINCES HIGHWAY ST PETERS	··	Residential	2	E	72	66	70	58	72	66	71	61	-1.4	-8	-1.8	-4.9	55	50	NO	NO NO	NO	NO	NO
NCA07	NCA07_053 NCA07_053	21-27 PRINCES HIGHWAY ST PETERS 21-27 PRINCES HIGHWAY ST PETERS		Residential Residential	4	E F	71	65	70 69	58	72	66	70 69	61	-1.6	-7.1 -7.2	-1.9	-4.9 -4.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_053	21-27 PRINCES HIGHWAY ST PETERS		Residential	5	E	70	64	68	57	71	65	69	60	-1.8	-6.4	-2	-4.9	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_054	31 PRINCES HIGHWAY ST PETERS	R	Residential	0	SE	73	67	72	58	74	68	73	63	-1	-8.7	-1.4	-4.8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_054	31 PRINCES HIGHWAY ST PETERS 60-82 PRINCES HIGHWAY ST PETERS		Residential	1	SE W	73	67	72	59	74	68	72	63	-1.3	-7.9	-1.7	-5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_055 NCA07_055	60-82 PRINCES HIGHWAY ST PETERS 60-82 PRINCES HIGHWAY ST PETERS		Residential Residential	1	w	74	68	71	61	74	69	71	63	-3	-7.1 -7.5	-2.9	-6.2 -6.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	R	Residential	2	w	73	67	70	60	74	68	71	62	-2.8	-7	-2.8	-6	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS		Residential	3	w	72	67	70	59	73	67	70	62	-2.6	-7.5	-2.7	-5.8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_055 NCA07_055	60-82 PRINCES HIGHWAY ST PETERS 60-82 PRINCES HIGHWAY ST PETERS	··	Residential Residential	3	E W	50 72	66	54 69	49 59	50 72	45 67	70	52 61	-2.4	-6.9	7.5 -2.6	7.5 -5.5	55	50	NO NO	NO NO	NO NO	NO NO	YES NO
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS		Residential	4	E	52	46	56	51	52	47	60	54	4.2	5	7.7	7.7	55	50	YES	NO	NO	NO	YES
NCA07	NCA07_056	83-85 PRINCES HIGHWAY ST PETERS	R	Residential	0	E	74	68	73	59	75	68	73	63	-1.2	-9.2	-1.6	-5.1	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_056	83-85 PRINCES HIGHWAY ST PETERS		Residential	1	E	74	68	72	59	75	68	73	63	-1.4	-8.4	-1.8	-5.2	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_057 NCA07_057	89 PRINCES HIGHWAY ST PETERS 89 PRINCES HIGHWAY ST PETERS		Residential Residential	1	E F	73	67	72 72	58 59	74	67	72 72	63	-1.1	-8.8 -7.9	-1.4	-4.8 -5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_058	91 PRINCES HIGHWAY ST PETERS		Residential	0	E	73	67	72	58	74	67	72	63	-1.1	-8.6	-1.5	-4.8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_058	91 PRINCES HIGHWAY ST PETERS		Residential	1	E	73	67	72	59	74	68	72	63	-1.4	-7.7	-1.7	-5	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_059	93 PRINCES HIGHWAY ST PETERS		Residential	0	E	73	67	72	58	74	67	72	63	-1.2	-8.5	-1.5	-4.9	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_059 NCA07_060	93 PRINCES HIGHWAY ST PETERS 95 PRINCES HIGHWAY ST PETERS		Residential Residential	0	E E	73 73	67	72 72	59 58	74 74	68	72 72	63	-1.4 -1.2	-7.6 -8.5	-1.8 -1.6	-5 -4.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_060 NCA07_060	95 PRINCES HIGHWAY ST PETERS		Residential	1	E	73	67	72	59	74	68	72	63	-1.5	-8.5 -7.5	-1.6	-4.9	55	50	NO NO	NO	NO NO	NO	NO
NCA07	NCA07_061	97 PRINCES HIGHWAY ST PETERS	R	Residential	0	E	73	67	72	58	74	68	72	63	-1.2	-8.4	-1.6	-5	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_061	97 PRINCES HIGHWAY ST PETERS		Residential	1	E	73	67	72	59	74	68	72	63	-1.5	-7.4	-1.8	-5	55	50	NO NO	NO NO	NO	NO	NO
NCA07	NCA07_062 NCA07_062	145 PRINCES HIGHWAY ST PETERS 145 PRINCES HIGHWAY ST PETERS		Residential Residential	1	SE SE	74	69	74 75	70	74 74	69	74 74	70 70	0.7	0.8	-0.1	0.5	55 55	50	NO NO	NO NO	YES	YES	YES YES
NCA07	NCA07_062 NCA07_063	145 PRINCES HIGHWAY ST PETERS		Residential	0	NE NE	61	55	68	64	62	56	67	64	6.8	9.3	5.8	7.9	55	50	YES	YES	YES	YES	YES
NCA07	NCA07_063	145 PRINCES HIGHWAY ST PETERS		Residential	1	NE	62	56	69	65	63	57	68	65	6.9	9.2	5.8	7.9	55	50	YES	YES	YES	YES	YES
NCA07	NCA07_064	147 PRINCES HIGHWAY ST PETERS		Residential	0	SE	74	69	74	70	74	69	74	70	0.6	0.7	-0.2	0.4	55	50	NO	NO	NO	YES	YES
NCA07	NCA07_064 NCA07_065	147 PRINCES HIGHWAY ST PETERS 159 PRINCES HIGHWAY ST PETERS		Residential Residential	0	SE SE	74	69	75 74	70 69	74 74	69	74	70 69	0.7	0.9	-0.1	0.4	55 55	50	NO NO	NO NO	YES	YES NO	YES NO
NCA07	NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS		Residential	1	SE	74	69	74	69	74	69	74	69	0.5	0.5	-0.3	0.2	55	50	NO NO	NO NO	NO NO	NO	NO
NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS		Residential	2	SE	73	68	74	69	74	69	74	69	0.5	0.9	-0.2	0.2	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS		Residential	2	NE	57	52	62	57	58	53	62	57	4.4	5.4	3.6	4.6	55	50	YES	YES	NO	NO	YES
NCA07	NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS 159 PRINCES HIGHWAY ST PETERS		Residential Residential	3	SE NE	72 61	67 56	73 66	68	73 62	68 57	73 65	68	0.7 4.2	0.7 5.3	-0.1 3.1	0.3 4.2	55 55	50	NO YES	NO YES	NO NO	NO YES	NO YES
NCAU7 NCA07	NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS 159 PRINCES HIGHWAY ST PETERS		Residential	4	NE NE	63	56	67	63	63	58	67	62	4.2	5.8	3.1	4.2	55	50	YES	YES	YES	YES	YES
NCA07	NCA07_066	159 PRINCES HIGHWAY ST PETERS		Residential	0	NW	49	43	57	54	50	43	57	53	8.3	11	7.4	10.6	55	50	NO	NO	NO	NO	YES
NCA07	NCA07_066	159 PRINCES HIGHWAY ST PETERS		Residential	1	NW	51	45	58	55	51	45	58	54	7.5	10	6.7	9.7	55	50	NO	YES	NO	NO	YES
NCA07	NCA07_066 NCA07_067	159 PRINCES HIGHWAY ST PETERS 175 PRINCES HIGHWAY ST PETERS		Residential Residential	0	NE SE	58 74	52 69	63 74	58 69	58 74	52 69	62 74	58 70	0.4	6.6 0.6	4.1 -0.3	5.9 0.2	55 55	50	YES NO	YES NO	NO NO	NO NO	YES NO
NCAU7 NCA07	NCA07_067 NCA07_068	175 PRINCES HIGHWAY ST PETERS 177 PRINCES HIGHWAY ST PETERS		Residential	0	SE SE	74	69	74	69	74	69	74	70	0.4	0.6	-0.3	0.2	55	50	NO NO	NO NO	NO NO	NO	NO NO
NCA07	NCA07_069	179 PRINCES HIGHWAY ST PETERS		Residential	0	SE	73	68	73	69	74	69	73	69	0.4	0.7	-0.3	0.3	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_070	181 PRINCES HIGHWAY ST PETERS		Residential	0	SE	73	68	73	69	74	69	73	69	0.4	0.9	-0.4	0.2	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_071 NCA07_071	187 PRINCES HIGHWAY ST PETERS 187 PRINCES HIGHWAY ST PETERS		Residential Residential	0	SE SW	62 54	58 49	63 54	58 49	63 54	58 49	63 57	59 51	0.6	0.4	0.3 2.3	0.6 2.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO YES
NCA07	NCA07_071 NCA07_072	1 SILVER STREET ST PETERS		Residential	0	SW	58	54	59	54	59	54	59	51	0.9	-0.1	-0.2	0.3	55	50	NO NO	NO NO	NO NO	NO NO	NO YES
NCA07	NCA07_072	1 SILVER STREET ST PETERS		Residential	1	SW	59	54	60	55	60	55	60	55	0.4	0.8	-0.1	0.3	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_073	2 SILVER STREET ST PETERS	R	Residential	0	NE	52	47	53	48	53	48	54	49	0.7	1.1	1.1	1.3	55	50	NO	NO	NO	NO	NO

					Facade		O No Build	pening Year	Build	No	Design		aild	Opening	Increase (Build	l - No Build) Design	n Year	NCG no	se criteria	Do noise levels exceed the cumlati		ls the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor Orientati	Day	Night	Day	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	adding ≥2dB to the total	al noise levels? Night	Day ≥ 65dB LAeq,15h	Night Consi	ider further treatment?
NCA07	NCA07_074	3 SILVER STREET ST PETERS		Residential	0 SW	57	52	57	52	58	53	58	53	0.4	0.6	0	0.3	55	50	NO NO	NO	NO NO	NO NO	NO
NCA07	NCA07_074	3 SILVER STREET ST PETERS 5 SILVER STREET ST PETERS		Residential	1 SW	58	53	58	53	59	54	59	54	0.4	0.5	0.1	0.4	55	50	NO	NO NO	NO	NO	NO
NCA07	NCA07_075 NCA07_076	5 SILVER STREET ST PETERS 5 A SILVER STREET ST PETERS		Residential	0 SW	55	51	55	51	56 56	51 51	56 56	52 51	0.4	0.3	0.1	0.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_076	SA SILVER STREET ST PETERS		Residential	1 NE	56	51	57	52	56	51	58	53	0.8	0.9	1.1	1.3	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_076	5A SILVER STREET ST PETERS		Residential	2 NE	58	53	59	54	59	54	60	55	0.8	0.9	1.1	1.3	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_077 NCA07_078	7 SILVER STREET ST PETERS 7A SILVER STREET ST PETERS		Residential	0 SW	54	50	55 55	50	55	50	55	50	0.4	-0.2	0.1	0.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA07	NCA07_079	9 SILVER STREET ST PETERS		Residential	0 NE	51	46	52	47	52	47	53	49	1.1	1.5	1.5	1.8	55	50	NO	NO	NO	NO	NO
NCA07	NCA07_080	9A SILVER STREET ST PETERS		Residential	0 SW	53	49	54	49	54	49	55	50	0.3	0	0.5	0.6	55	50	NO	NO	NO	NO	NO
NCA07 NCA08	NCA07_081 NCA08_001	22 VICTORIA STREET ST PETERS 13 BARWON PARK ROAD ST PETERS		Residential	0 NE	58	53	59	54 47	59 47	54 42	60 52	55	4.1	4.7	4.3	4.5	55	50	YES NO	YES NO	NO NO	NO NO	YES NO
NCA08	NCA08_001	13 BARWON PARK ROAD ST PETERS		Residential	1 E	49	44	53	48	49	44	53	48	4.1	4.4	4.2	4.4	55	50	NO	NO	NO	NO	NO
NCA08	NCA08_002	13A BARWON PARK ROAD ST PETERS		Residential	0 E	46	41	51	46	46	41	51	46	4.5	5	4.9	5	55	50	NO	NO	NO	NO	NO
NCA08	NCA08_002	13A BARWON PARK ROAD ST PETERS 31 BARWON PARK ROAD ST PETERS		Residential	1 E	48	43	52 53	48	48	43	53	48	4.6	4.9	4.9	5.1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA08	NCA08_003 NCA08_003	31 BARWON PARK ROAD ST PETERS		Residential Residential	1 E	49	43	56	51	50	42	54 56	51	6.1	6.9 8.1	6.1	6.6	55	50	NO	NO	NO	NO NO	YES
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS		Residential	2 E	51	46	58	53	52	47	58	53	6.2	7.1	5.9	6.4	55	50	NO	NO	NO	NO	YES
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS		Residential	0 E	47	41	53	48	47	42	53	48	5.7	7.1	6	6.1	55	50	NO	NO	NO	NO	NO
NCA08	NCA08_004 NCA08_004	35 BARWON PARK ROAD ST PETERS 35 BARWON PARK ROAD ST PETERS		Residential	1 E	49 52	44	55 59	51	49	44	55	51	6.2	6.7 8.1	6.1	6.5	55	50	NO NO	NO NO	NO NO	NO NO	YES
NCA08	NCA08_005	47 BARWON PARK ROAD ST PETERS		Residential	0 E	52	45	60	56	53	47	60	55	7.7	10.7	7	8	55	50	YES	YES	NO	NO	YES
NCA08	NCA08_006	49 BARWON PARK ROAD ST PETERS		Residential	0 E	52	46	60	56	53	48	60	55	7.7	9.8	6.9	7.9	55	50	YES	YES	NO	NO	YES
NCA08 NCA08	NCA08_007 NCA08_007	51 BARWON PARK ROAD ST PETERS 51 BARWON PARK ROAD ST PETERS		Residential Residential	0 E	55 56	48	63	58 59	56 57	50 52	62	58 59	7.4	10.3	6.4	7.4	55 55	50 50	YES YES	YES	NO NO	NO NO	YES YES
NCA08	NCA08_007 NCA08_008	53 BARWON PARK ROAD ST PETERS 53 BARWON PARK ROAD ST PETERS		Residential	0 SW	69	58	73	69	70	64	73	69	3.8	11.1	3.1	5.3	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS		Residential	1 SW	68	58	73	69	69	63	73	69	4.9	11.4	4.3	6.2	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS		Residential	2 SW	68	58	73	69	68	62	74	69	5.7	11.3	5.3	7	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_008 NCA08_009	53 BARWON PARK ROAD ST PETERS 19 CAMPBELL STREET ST PETERS		Residential Residential	3 SW 0 SW	67	58 58	73	69 68	68 70	62	74	69	3.4	11.2	2.5	7.4 4.7	55	50	YES YES	YES	YES	YES YES	YES
NCA08	NCA08_009	19 CAMPBELL STREET ST PETERS		Residential	1 SW	68	58	73	69	69	63	73	69	4.9	11.5	4.2	6.1	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_010	21 CAMPBELL STREET ST PETERS		Residential	0 SW	69	58	72	68	70	63	72	68	3.4	10.3	2.5	4.6	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_010 NCA08_0105	21 CAMPBELL STREET ST PETERS 1/23 CAMPBELL STREET ST PETERS		Residential	1 SW	68	58 58	73	69	69	63	73 72	69	4.9 3.2	11.5	2.4	6.1 4.4	55 55	50	YES YES	YES	YES	YES YES	YES
NCA08	NCA08_0106	2/23 CAMPBELL STREET ST PETERS		Residential	1 SW	68	58	73	69	69	63	73	69	4.7	11.2	4	6.1	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_011	25 CAMPBELL STREET ST PETERS		Residential	0 SW	69	58	72	68	69	63	72	68	3.5	10.3	2.5	4.7	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_011 NCA08_012	25 CAMPBELL STREET ST PETERS 27 CAMPBELL STREET ST PETERS		Residential	1 SW	68	58 57	73	69	69	63	73 72	69	4.9 3.6	11.4	2.8	6.2	55 55	50	YES YES	YES	YES	YES YES	YES YES
NCA08	NCA08_012	27 CAMPBELL STREET ST PETERS		Residential	1 SW	68	58	73	69	69	63	73	69	5.1	11.5	4.4	6.3	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS		Residential	0 SW	68	57	72	68	69	63	72	68	3.8	11.5	2.8	5	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS		Residential	1 SW	68	58 57	73	69	69	63	73	69	5.1	11.5	4.3	6.3	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_014 NCA08_015	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS		Residential Residential	0 S	67	58	71	67	68	62	71	67	3.5	9.9	2.6	4.4	55 55	50 50	YES YES	YES	YES YES	YES YES	YES YES
NCA08	NCA08_016	35 CAMPBELL STREET ST PETERS		Residential	0 S	68	58	72	68	69	63	71	67	3.5	9.8	2.5	4.3	55	50	YES	YES	YES	YES	YES
NCA08	NCA08_017	2 CROWN STREET ST PETERS		Residential	0 E	48	42	52	47	48	43	52	47	3.9	4.9	4.2	4.3	55	50	NO	NO	NO	NO	NO
NCA08	NCA08_018 NCA08_019	4 CROWN STREET ST PETERS 6 CROWN STREET ST PETERS		Residential Residential	0 E	48	42	52 51	47	48	43	52	47	3.9	4.8	4.1	4.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA08	NCA08_020	22 CROWN STREET ST PETERS		Residential	0 W	46	40	49	44	46	41	50	45	3.2	4.4	3.5	4	55	50	NO	NO	NO	NO	NO
NCA08	NCA08_021	24 CROWN STREET ST PETERS		Residential	0 W	46	40	49	45	47	41	50	45	3.3	4.7	3.4	4	55	50	NO	NO	NO	NO	NO
NCA08	NCA08_022 NCA08_023	26 CROWN STREET ST PETERS 28 CROWN STREET ST PETERS		Residential	0 W	46	41	50	45	47	41	50 51	45	3.3	4.1	3.4	4.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA08	NCA08_024	30 CROWN STREET ST PETERS		Residential	0 W	47	41	51	46	48	42	51	46	3.8	5.4	3.6	4.3	55	50	NO	NO	NO	NO	NO
NCA08	NCA08_025	32 CROWN STREET ST PETERS		Residential	0 W	47	41	51	46	47	42	51	46	3.7	4.9	3.4	4.1	55	50	NO	NO	NO	NO	NO
NCA08	NCA08_026	34 CROWN STREET ST PETERS		Residential	0 W	48	42		47	48	43	52	48	4.4	5.5	4.3	5.1	55	50	NO NO	NO NO	NO	NO	NO
NCA08	NCA08_027 NCA08_028	36 CROWN STREET ST PETERS 38 CROWN STREET ST PETERS		Residential	0 W	48	42	52 53	48	49	43	53 54	48	4.4	6	4.2	5.1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA08	NCA08_029	40 CROWN STREET ST PETERS	Currently construction site office	Residential	0 W	50	43	54	50	50	45	55	50	4.8	7.2	4.5	5.4	55	50	NO	NO	NO	NO	NO
NCA08	NCA08_030	42 CROWN STREET ST PETERS		Residential	0 W	51	44	56	52	51	46	56	52	5.3	8.1	4.7	5.6	55	50	NO	NO	NO	NO	YES
NCA08	NCA08_030 NCA08_031	42 CROWN STREET ST PETERS 42 CROWN STREET ST PETERS		Residential	1 W	52 47	46	59	54 48	53	48	59	55 48	5.9	8.6	5.6	6.4	55 55	50	NO NO	YES	NO NO	NO NO	YES NO
NCA08	NCA08_031	42 CROWN STREET ST PETERS		Residential	1 S	49	43	55	51	50	45	56	51	6	7.8	5.9	6.4	55	50	NO	NO	NO	NO NO	YES
NCA10	NCA10_001	1 BELLEVUE STREET TEMPE		Residential	0 NE	44	39	45	39	44	39	47	41	1	0.7	2.5	2.1	55	50	NO	NO	NO	NO	NO
NCA10 NCA10	NCA10_002 NCA10_003	2 BELLEVUE STREET TEMPE 3 BELLEVUE STREET TEMPE		Residential	0 SE 0 NE	44	39 40	45 45	39 40	44	39 41	48	43	0.9	0.6	3.8	3.4 2.8	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA10 NCA10	NCA10_003 NCA10_004	4 BELLEVUE STREET TEMPE		Residential	0 NE	45	40	45	41	46	41	49	43	0.5	0.4	2.9	2.8	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA11	NCA11_001	1-5 BOURKE STREET MASCOT		Residential	0 W	66	61	66	61	67	61	66	60	0.3	-0.1	-1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_001	1-5 BOURKE STREET MASCOT 1-5 BOURKE STREET MASCOT		Residential	1 W	67	62	67	61	68	62	67	61	0.3	-0.1	-1	-1.1	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA11 NCA11	NCA11_001 NCA11_001	1-5 BOURKE STREET MASCOT 1-5 BOURKE STREET MASCOT		Residential Residential	2 W	67	62	67	62	68	62	67 67	61	0.2	-0.1	-1.1	-1.1	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_001	1-5 BOURKE STREET MASCOT		Residential	4 W	67	62	67	61	68	62	66	61	0.2	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_001	1-5 BOURKE STREET MASCOT		Residential	5 W	67	61	67	61	67	62	66	61	0.2	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_001 NCA11_001	1-5 BOURKE STREET MASCOT 1-5 BOURKE STREET MASCOT		Residential Residential	6 W	66	61	66	61	67	62	66	60	0.2	-0.1	-1.2 -1.2	-1.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_001	1-5 BOURKE STREET MASCOT		Residential	8 W	66	60	66	60	66	61	65	60	0.2	-0.2	-1.2	-1.2	55	50	NO	NO	NO	NO NO	NO NO
NCA11	NCA11_001	1-5 BOURKE STREET MASCOT		Residential	9 W	65	60	66	60	66	61	65	59	0.2	-0.2	-1.2	-1.2	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_001 NCA11_002	1-5 BOURKE STREET MASCOT 1-5 BOURKE STREET MASCOT		Residential Residential	10 W 0 W	65 68	60	65 68	60	66 69	60	65 68	59 62	0.1	-0.1 -0.2	-1.2 -1.1	-1.1 -1.2	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_002 NCA11_002	1-5 BOURKE STREET MASCOT 1-5 BOURKE STREET MASCOT		Residential	1 W	69	64	69	64	70	64	69	63	0.2	-0.2	-1.1	-1.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_002	1-5 BOURKE STREET MASCOT		Residential	2 W	69	64	69	63	70	64	69	63	0.2	-0.2	-1	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_002	1-5 BOURKE STREET MASCOT		Residential	3 W	69	63	69	63	69	64	68	63	0.1	-0.3	-1.1	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_002 NCA11_002	1-5 BOURKE STREET MASCOT 1-5 BOURKE STREET MASCOT		Residential	4 W	68	63	68	63	69 69	64	68	62	0.1	-0.2	-1.1 -1.1	-1.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_002	1-5 BOURKE STREET MASCOT		Residential	6 W	67	62	68	62	68	63	67	62	0.1	-0.3	-1.1	-1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_002	1-5 BOURKE STREET MASCOT		Residential	7 W	67	62	67	62	68	63	67	61	0.1	-0.4	-1.1	-1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_002 NCA11_002	1-5 BOURKE STREET MASCOT 1-5 BOURKE STREET MASCOT		Residential	8 W 9 W	67	62	67	61	67	62	66	61	0.1	-0.4	-1.1	-1.4	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_002 NCA11_003	7 BOURKE STREET MASCOT		Residential	0 W	67	62	67	62	68	62	67	61	0.3	0	-1	-1.4	55	50	NO NO	NO NO	NO	NO NO	NO
NCA11	NCA11_003	7 BOURKE STREET MASCOT		Residential	1 W	68	62	68	62	68	63	67	62	0.3	0	-1	-1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_003	7 BOURKE STREET MASCOT		Residential	2 W	68	62	68	62	69	63	67	62	0.2	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO	NO

					Faca	de	No Bu	Openin		ıild	No.	Design				ncrease (Build -		V	NCG noise	criteria	Do noise levels exceed the cumlative	e limit with project roac	ds Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description Recei	eiver Type	Floor C	Prientation	Day	Night	Day	Night	Day	Night	Day	Night	Opening Y	Night	Day	Night	Day	Night	adding ≥2dB to the total		Day	Night	Consider further treatment?
NCA11	NCA11_003	7 BOURKE STREET MASCOT	Res	esidential	3	w	dB(A)	dB(A) 62	68 68	62	dB(A) 68	63	dB(A)	dB(A) 62	0.2	dB(A)	dB(A)	dB(A)	dB(A) 55	dB(A) 50	Day NO	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h NO	NO
NCA11	NCA11_003	7 BOURKE STREET MASCOT		esidential	4	w	67	62	68	62	68	63	67	61	0.2	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_003	7 BOURKE STREET MASCOT	Res	esidential	5	w	67	62	67	62	68	62	67	61	0.2	0	-1.1	-1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_003	7 BOURKE STREET MASCOT	Res	esidential	6	w	67	61	67	61	68	62	66	61	0.2	0	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_003	7 BOURKE STREET MASCOT	·	esidential	7	W	67	61	67	61	67	62	66	61	0.2	-0.1	-1.1	-1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_003	7 BOURKE STREET MASCOT		esidential	8	W	66	61	66	61	67	61	66	60	0.2	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_003	7 BOURKE STREET MASCOT		esidential	9	w	66	61	66	60	67	61	65	60	0.2	-0.1	-1.2	-1.1	55	50	NO	NO	NO	NO	NO NO
NCA11	NCA11_004	8 BOURKE STREET MASCOT 8 BOURKE STREET MASCOT		esidential esidential	1	E	70	65	71	64	71	66	70	64	0.1	-0.6	-1.5 -1.5	-1.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_004 NCA11_004	8 BOURKE STREET MASCOT		esidential	2	F	71	65	71	65	71	66	70	64	0.1	-0.5	-1.5	-1.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_004	8 BOURKE STREET MASCOT		esidential	3	E	70	65	70	64	71	65	69	64	0.1	-0.4	-1.4	-1.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_004	8 BOURKE STREET MASCOT	Res	esidential	4	E	69	64	70	64	70	65	69	63	0.1	-0.3	-1.4	-1.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_004	8 BOURKE STREET MASCOT	Res	esidential	5	E	69	64	69	63	70	64	68	63	0.1	-0.3	-1.3	-1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_004	8 BOURKE STREET MASCOT	Res	esidential	6	E	68	63	68	63	69	64	68	62	0.1	-0.3	-1.2	-1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_004	8 BOURKE STREET MASCOT	Res	esidential	7	E	68	63	68	62	69	63	67	62	0.1	-0.3	-1.2	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_004	8 BOURKE STREET MASCOT	·	esidential	8	E	67	62	67	62	68	63	67	61	0.1	-0.2	-1.2	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_004	8 BOURKE STREET MASCOT		esidential	9	E	67	62	67	61	68	62	66	61	0.2	-0.3	-1.3	-1.2	55	50	NO	NO	NO	NO	NO NO
NCA11 NCA11	NCA11_004 NCA11_004	8 BOURKE STREET MASCOT 8 BOURKE STREET MASCOT		esidential esidential	10	E	66	61	67	61	67	62	66	60	0.1	-0.2	-1.2 -1.2	-1.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_004	8 BOURKE STREET MASCOT		esidential	12	F	66	60	66	60	66	61	65	60	0.1	-0.2	-1.2	-1.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_005	8 BOURKE STREET MASCOT		esidential	0	E	71	66	71	65	72	66	70	65	0.1	-0.5	-1.5	-1.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_005	8 BOURKE STREET MASCOT		esidential	1	E	71	66	71	65	72	67	71	65	0.1	-0.5	-1.4	-1.8	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_005	8 BOURKE STREET MASCOT	Res	esidential	2	E	71	65	71	65	72	66	70	64	0.1	-0.4	-1.4	-1.7	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_005	8 BOURKE STREET MASCOT	Res	esidential	3	E	70	65	70	64	71	66	70	64	0.1	-0.4	-1.4	-1.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_005	8 BOURKE STREET MASCOT	·	esidential	4	E	70	64	70	64	70	65	69	63	0.1	-0.4	-1.3	-1.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_005	8 BOURKE STREET MASCOT		esidential	5	E	69	64	69	63	70	64	68	63	0.2	-0.3	-1.3	-1.5	55	50	NO NO	NO	NO	NO	NO
NCA11	NCA11_005	8 BOURKE STREET MASCOT		esidential	6	E	68	63	69	63	69	64	68	62	0.1	-0.3	-1.3	-1.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_005 NCA11_005	8 BOURKE STREET MASCOT 8 BOURKE STREET MASCOT		esidential esidential	8	E	68	63	68	62	69	63	67	62	0.1	-0.3	-1.3 -1.3	-1.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_005 NCA11_005	8 BOURKE STREET MASCOT		esidential	9	E	67	62	67	61	68	62	66	61	0.1	-0.3	-1.3	-1.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_005	8 BOURKE STREET MASCOT		esidential	10	E	66	61	67	61	67	62	66	61	0.1	-0.4	-1.3	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_005	8 BOURKE STREET MASCOT		esidential	11	E	66	61	66	61	67	61	66	60	0.1	-0.4	-1.3	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_005	8 BOURKE STREET MASCOT	Res	esidential	12	E	66	61	66	60	66	61	65	60	0	-0.4	-1.2	-1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_006	1 CHURCH AVENUE MASCOT	Res	esidential	0	N	58	52	59	53	58	51	57	53	0.7	1	-0.7	1.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_006	1 CHURCH AVENUE MASCOT	Res	esidential	1	N	59	53	60	54	59	52	59	54	0.6	1	-0.5	1.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_006	1 CHURCH AVENUE MASCOT	·	esidential	2	N	59	53	60	54	60	53	59	54	0.6	1.1	-0.6	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_006	1 CHURCH AVENUE MASCOT		esidential	3	N	60	54	60	55	60	53	59	54	0.6	1	-0.6	1.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_006 NCA11_006	1 CHURCH AVENUE MASCOT 1 CHURCH AVENUE MASCOT		esidential esidential	- 4	N N	50	53	60	54	60	53	59	54	0.5	1	-0.6 -0.6	1.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_006	1 CHURCH AVENUE MASCOT		esidential	6	N	59	53	60	54	59	53	59	54	0.5	1	-0.5	1.2	55	50	NO.	NO.	NO.	NO NO	NO NO
NCA11	NCA11_006	1 CHURCH AVENUE MASCOT	Res	esidential	7	N	59	53	60	54	59	52	59	54	0.5	1	-0.5	1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_006	1 CHURCH AVENUE MASCOT	Res	esidential	8	N	59	53	59	54	59	52	59	54	0.6	1	-0.5	1.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_006	1 CHURCH AVENUE MASCOT	Res	esidential	9	N	59	53	59	54	59	52	59	53	0.6	1	-0.4	1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_006	1 CHURCH AVENUE MASCOT	Res	esidential	10	N	59	53	59	54	59	52	58	53	0.6	1	-0.4	1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_006	1 CHURCH AVENUE MASCOT		esidential	11	N	58	53	59	54	59	52	58	53	0.7	1	-0.2	1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_007	3-9 CHURCH AVENUE MASCOT	···	esidential	0	SE SE	44	38	45	39 40	44	38	44	39	0.5	0.6	-0.2	0.6	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_007 NCA11_007	3-9 CHURCH AVENUE MASCOT 3-9 CHURCH AVENUE MASCOT		esidential esidential	2	SE	45	39	45	40	45	39	45	40	0.6	0.7	-0.2	0.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_007	3-9 CHURCH AVENUE MASCOT		esidential	3	SE	46	40	46	40	46	40	46	40	0.5	0.7	-0.2	0.7	55	50	NO NO	NO NO	NO NO	NO	NO
NCA11	NCA11_007	3-9 CHURCH AVENUE MASCOT	Res	esidential	4	w	45	40	46	40	46	40	46	41	0.9	0.6	0.5	1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_007	3-9 CHURCH AVENUE MASCOT	Res	esidential	5	W	47	41	47	42	47	41	47	42	0.9	0.7	0.4	0.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_007	3-9 CHURCH AVENUE MASCOT	Res	esidential	6	w	48	42	48	43	48	42	48	43	0.9	0.7	0.4	1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_007	3-9 CHURCH AVENUE MASCOT	Res	esidential	7	W	48	43	49	44	49	43	49	44	0.9	0.6	0.5	1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_008	3-9 CHURCH AVENUE MASCOT		esidential	0	N	60	54	60	55	60	53	59	54	0.7	1	-0.6	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_008	3-9 CHURCH AVENUE MASCOT		esidential	1	N	60	54	61	55	61	54	60	55	0.6	1.1	-0.5	1.5	55	50	NO	NO	NO	NO NO	NO NO
NCA11	NCA11_008	3-9 CHURCH AVENUE MASCOT 3-9 CHURCH AVENUE MASCOT		esidential esidential	3	N N	61	55 54	61	56 56	61	54	60	55 55	0.6	1.1	-0.4	1.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_008 NCA11_008	3-9 CHURCH AVENUE MASCOT 3-9 CHURCH AVENUE MASCOT		esidential	4	N N	60	54	61	55	61	54	60	55	0.6	1.1	-0.5 -0.5	1.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_008	3-9 CHURCH AVENUE MASCOT		esidential	5	N	60	54	61	55	60	54	60	55	0.7	1.1	-0.4	1.5	55	50	NO NO	NO	NO	NO	NO NO
NCA11	NCA11_008	3-9 CHURCH AVENUE MISSCOT	·	esidential	6	N	60	54	61	55	60	54	60	55	0.7	1.2	-0.3	1.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_008	3-9 CHURCH AVENUE MASCOT	Res	esidential	7	N	60	54	61	55	60	53	60	55	0.7	1.1	-0.4	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_009	3-9 CHURCH AVENUE MASCOT	Res	esidential	0	N	60	54	60	55	60	53	60	54	0.6	1	-0.5	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_009	3-9 CHURCH AVENUE MASCOT		esidential	1	N	60	54	61	55	60	54	60	55	0.6	1	-0.4	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_009	3-9 CHURCH AVENUE MASCOT		esidential	2	N	60	54	61	55	61	54	60	55	0.6	1	-0.5	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_009	3-9 CHURCH AVENUE MASCOT		esidential	3	N	61	55	61	56	61	54	60	55	0.6	1.1	-0.5	1.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_009 NCA11_009	3-9 CHURCH AVENUE MASCOT 3-9 CHURCH AVENUE MASCOT		esidential esidential	5	N N	61	55 55	61	56 56	61	54 54	60	55 55	0.6	1	-0.4	1.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_009	3-9 CHURCH AVENUE MASCOT		esidential	6	N N	60	55	61	55	61	54	60	55	0.7	1	-0.4	1.3	55	50	NO NO	NO NO	NO NO	NO	NO NO
NCA11	NCA11_009	3-9 CHURCH AVENUE MISSCOT		esidential	7	N	60	54	61	55	60	54	60	55	0.7	1	-0.4	1.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_010	19-21 CHURCH AVENUE MASCOT		esidential	0	S	45	40	46	40	46	41	45	40	0.3	0.1	-0.9	-0.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_010	19-21 CHURCH AVENUE MASCOT	Res	esidential	1	S	46	41	46	41	47	41	46	40	0.3	0.1	-0.9	-0.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_010	19-21 CHURCH AVENUE MASCOT	Res	esidential	2	S	47	41	47	41	47	42	46	41	0.3	0.1	-0.9	-0.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_010	19-21 CHURCH AVENUE MASCOT		esidential	3	S	47	41	47	42	48	42	47	41	0.3	0.1	-0.9	-0.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_010	19-21 CHURCH AVENUE MASCOT		esidential	4	N	47	42	48	42	48	42	47	42	0.4	0.3	-0.5	-0.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_010	19-21 CHURCH AVENUE MASCOT		esidential	5	N	48	42	48	43	48	43	48	43	0.5	0.3	-0.4	0.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_010 NCA11_011	19-21 CHURCH AVENUE MASCOT 19-21 CHURCH AVENUE MASCOT		esidential esidential	0	W E	49	43	49	43	49	43	49	44	0.3	-0.1	-0.1	1.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_011 NCA11_011	19-21 CHURCH AVENUE MASCOT 19-21 CHURCH AVENUE MASCOT		esidential	1	E	47	41	47	42	47	40	47	42	0.6	1.1	-0.5	1.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_011	19-21 CHURCH AVENUE MASCOT		esidential	2	E	48	42	49	43	48	42	48	43	0.6	1.1	-0.5	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_011	19-21 CHURCH AVENUE MASCOT		esidential	3	E	49	42	49	44	49	42	48	43	0.6	1.1	-0.4	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_011	19-21 CHURCH AVENUE MASCOT	Res	esidential	4	N	50	44	51	45	50	44	50	45	0.6	0.7	-0.4	0.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_011	19-21 CHURCH AVENUE MASCOT	Res	esidential	5	N	51	46	52	46	52	45	51	46	0.6	0.7	-0.3	0.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_011	19-21 CHURCH AVENUE MASCOT	Res	esidential	6	N	52	47	53	47	53	46	52	47	0.5	0.5	-0.3	0.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_011	19-21 CHURCH AVENUE MASCOT		esidential	7	N	53	47	54	48	53	47	53	48	0.5	0.4	-0.3	1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_012	19-21 CHURCH AVENUE MASCOT		esidential	0	N	61	55	62	56	61	54	61	56	0.8	1.2	-0.1	1.5	55	50	NO NO	NO	NO	NO	NO NO
NCA11	NCA11_012	19-21 CHURCH AVENUE MASCOT		esidential	2	N N	62	56	63	57	62	55	62	57	0.7	1.2	-0.1	1.6	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_012 NCA11_012	19-21 CHURCH AVENUE MASCOT 19-21 CHURCH AVENUE MASCOT		esidential esidential	3	N N	62	56 56	63	57 57	62	55 56	62	56 57	0.7	1.1	-0.1	1.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_012 NCA11_012	19-21 CHURCH AVENUE MASCOT		esidential	4	N N	62	56	63	57	62	56	62	57	0.7	1	-0.2	1.1	55	50	NO NO	NO NO	NO	NO	NO NO
			inco																						

					Facade			ening Year			Design Ye			Increase (Build - I			NCG noise crit	ria Do noise	levels exceed the cumlative lii	mit with project roac	Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor Orientation	Day	No Build Night	Day	uild Night	No Build Day	Night	Build Day Night	Openir	Night	Design \	Night	Day	light	adding ≥2dB to the total no	ise levels?	Day	Night	ider further treatment?
NCAAA	NC444 043	40.24 GIURGU AVENUE MACCOT		Desidential		dB(A)	dB(A)		dB(A)		dB(A)	dB(A) dB(A)	dB(A)	dB(A)	dB(A)	dB(A)		B(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	NO.
NCA11 NCA11	NCA11_012 NCA11_013	19-21 CHURCH AVENUE MASCOT 42 CHURCH STREET, MASCOT	Current industrial site has been bought	Residential Residential	5 N 0 E	62	56 63	62	57 62	62	56 64	62 57 68 62	0.6	-0.9	-0.4	-1.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_013	42 CHURCH STREET, MASCOT	Current industrial site has been bought	Residential	1 E	68	64	68	63	69	65	68 63	-0.1	-1.5	-0.8	-2.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_013	42 CHURCH STREET, MASCOT	Current industrial site has been bought	Residential	2 E	68	64	68	63		65	68 62	-0.3	-1.5	-1.1	-2.6	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_013 NCA11_013	42 CHURCH STREET, MASCOT 42 CHURCH STREET, MASCOT	Current industrial site has been bought Current industrial site has been bought	Residential	3 E	68	64	67	62		65	68 62 67 62	-0.4	-1.5 -1.4	-1.1	-2.6 -2.6	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_013	42 CHURCH STREET, MASCOT	Current industrial site has been bought	Residential	5 E	67	63	67	62	68	64	67 61	-0.5	-1.4	-1.3	-2.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_013	42 CHURCH STREET, MASCOT	Current industrial site has been bought	Residential	6 E	67	63	66	61	68	63	66 61	-0.5	-1.4	-1.3	-2.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_013	42 CHURCH STREET, MASCOT	Current industrial site has been bought	Residential	7 E	66	62	66	61		63	66 61	-0.4	-1.3	-1.3	-2.4	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_013 NCA11_013	42 CHURCH STREET, MASCOT 42 CHURCH STREET, MASCOT	Current industrial site has been bought Current industrial site has been bought	Residential	9 F	66	62	66	61	**	63	66 60 65 60	-0.4	-1.2	-1.4	-2.3 -2.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_013	42 CHURCH STREET, MASCOT	Current industrial site has been bought	Residential	10 E	65	61	65	60	66	62	65 60	-0.4	-1.2	-1.3	-2.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_013	42 CHURCH STREET, MASCOT	Current industrial site has been bought	Residential	11 E	65	61	65	60	66	61	65 59	-0.4	-1.1	-1.3	-2.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_014	55 CHURCH AVENUE MASCOT		Residential	0 N	65	62	66	62		63	66 60	1.1	0.4	0.3	-2.2	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_014 NCA11_014	55 CHURCH AVENUE MASCOT 55 CHURCH AVENUE MASCOT		Residential	1 N	65	62	66	62		63	66 61 66 60	1.1	0.4	0.3	-2.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_014	55 CHURCH AVENUE MASCOT		Residential	3 N	65	61	66	62	65	62	65 60	1	0.4	0.1	-2.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_014	55 CHURCH AVENUE MASCOT		Residential	4 N	64	61	65	61	65	62	65 60	1	0.4	0.1	-2.2	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_014 NCA11_014	55 CHURCH AVENUE MASCOT 55 CHURCH AVENUE MASCOT		Residential	5 N	64	61	65	61		61	64 59 64 59	0.9	0.3	-0.2	-2.4 -2.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_014 NCA11_014	55 CHURCH AVENUE MASCOT		Residential	6 N	64	60	65	61		61	64 58	0.9	0.3	-0.2	-2.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_014	55 CHURCH AVENUE MASCOT		Residential	8 N	63	60	64	60	64	60	63 58	0.8	0.3	-0.3	-2.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_014	55 CHURCH AVENUE MASCOT		Residential	9 N	63	59	64	59	63	60	63 58	0.8	0.2	-0.4	-2.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_014	55 CHURCH AVENUE MASCOT		Residential	10 N	63	59	63	59		60	63 57	0.7	0.2	-0.5	-2.5	55	50	NO NO	NO NO	NO NO	NO NO	NO
NCA11 NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT 61 CHURCH AVENUE MASCOT		Residential	0 W	70	64	72	67		65	69 60 69 61	1.8	3.6	-2.5 -2.6	-5 -4.7	60	55	NO NO	NO NO	NO NO	NO NO	YES
NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT		Residential	2 W	70	64	71	67	71	65	68 60	1.5	3.1	-2.5	-4.7	60	55	NO	NO NO	NO	NO NO	YES
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	3 W	69	63	71	66	71	65	68 60	1.4	2.9	-2.6	-4.3	60	55	NO	NO	NO	NO	YES
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	4 W	69	63	70	66		64	68 60	1.3	2.7	-2.6	-4.1	60	55	NO NO	NO NO	NO	NO NO	YES
NCA11 NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT 61 CHURCH AVENUE MASCOT		Residential	5 W	69	63	70	65		64	67 60 67 60	1.1	2.4	-2.6 -2.7	-4.1	60	55 55	NO NO	NO NO	NO NO	NO NO	YES
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	7 W	68	63	69	65	69	64	67 60	0.9	2	-2.6	-4	55	50	NO	NO NO	NO	NO NO	NO NO
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	7 W	67	61	69	64	68	62	66 59	1.4	2.9	-2.5	-3.6	60	55	NO	NO	NO	NO	YES
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8 W	68	63	69	64		64	66 60	0.8	1.8	-2.7	-4	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT 61 CHURCH AVENUE MASCOT		Residential	8 W	67	61	68	64		62	66 59 66 59	0.7	1.6	-2.4	-3.5	55	55	NO NO	NO NO	NO NO	NO NO	YES NO
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9 W	67	61	68	64	68	62	65 59	1.1	2.5	-2.5	-3.6	60	55	NO	NO	NO	NO	YES
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10 W	68	62	68	64	69	63	66 59	0.7	1.5	-2.7	-4.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10 W	67	61	68	63	68	62	65 58	1.1	2.3	-2.5	-3.6	60	55	NO	NO	NO	NO	YES
NCA11	NCA11_016	208-210 COWARD STREET MASCOT 208-210 COWARD STREET MASCOT		Residential Residential	0 N	44	39 40	45 45	39 40	45 46	39 40	44 39 45 40	0.4	0.2	-0.7	-0.6 -0.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_016 NCA11_016	208-210 COWARD STREET MASCOT		Residential	2 N	46	40	46	41	46	41	46 40	0.4	0.2	-0.4	-0.4	55	50	NO	NO	NO NO	NO NO	NO
NCA11	NCA11_016	208-210 COWARD STREET MASCOT		Residential	3 N	46	41	47	41	47	41	46 41	0.4	0.3	-0.4	-0.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_016	208-210 COWARD STREET MASCOT		Residential	4 N	47	41	47	42		42	47 42	0.4	0.3	-0.3	-0.2	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_016	208-210 COWARD STREET MASCOT 208-210 COWARD STREET MASCOT		Residential	5 N	47	42	48	42		42	48 42 48 43	0.4	0.3	-0.2	-0.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_016 NCA11_016	208-210 COWARD STREET MASCOT		Residential	7 N	48	42	48	43	48	43	48 43	0.4	0.3	-0.2	0.1	55	50	NO	NO	NO NO	NO NO	NO NO
NCA11	NCA11_016	208-210 COWARD STREET MASCOT		Residential	8 N	49	43	49	44	49	44	49 44	0.5	0.2	0	0.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_016	208-210 COWARD STREET MASCOT		Residential	9 N	50	44	50	44	50	45	50 45	0.5	0	0.1	0.4	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_016	208-210 COWARD STREET MASCOT 208-210 COWARD STREET MASCOT		Residential Residential	10 N	50	45 45	51 51	45 45	51 51	45 45	51 45 51 46	0.5	-0.1	0.1	0.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_016 NCA11_016	208-210 COWARD STREET MASCOT		Residential	11 N	51	46	51	45	51	46	51 46	0.4	-0.1	0.1	0.4	55	50	NO	NO	NO NO	NO NO	NO
NCA11	NCA11_016	208-210 COWARD STREET MASCOT		Residential	13 N	51	46	52	46	52	46	52 47	0.5	-0.1	0.2	0.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_017	214-220 COWARD STREET MASCOT		Residential	0 N	46	41	46	41	47	41	46 40	0.3	0.1	-0.8	-0.8	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_017	214-220 COWARD STREET MASCOT		Residential	1 N	47	41	47	41		42	47 41	0.3	0.1	-0.8	-0.8	55	50	NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_017 NCA11_017	214-220 COWARD STREET MASCOT 214-220 COWARD STREET MASCOT		Residential Residential	2 N 3 N	47	42	48	42		42	47 42 48 42	0.3	0.2	-0.8	-0.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_017	214-220 COWARD STREET MASCOT		Residential	4 N	48	43	48	43		43	48 42	0.4	0.2	-0.6	-0.6	55	50	NO	NO	NO	NO NO	NO
NCA11	NCA11_017	214-220 COWARD STREET MASCOT		Residential	5 N	48	43	49	43		43	49 43	0.4	0.2	-0.5	-0.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_017	214-220 COWARD STREET MASCOT		Residential	6 N	49 50	44	49	44		44	49 44	0.4	0.1	-0.4	-0.4	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA11 NCA11	NCA11_017 NCA11_017	214-220 COWARD STREET MASCOT 214-220 COWARD STREET MASCOT		Residential	7 N 8 N	50	44	50 51	44		45 45	50 44 51 45	0.3	-0.2	-0.4	-0.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_017	214-220 COWARD STREET MASCOT		Residential	9 N	51	46	51	45		46	51 46	0.2	-0.2	-0.3	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_017	214-220 COWARD STREET MASCOT		Residential	10 N	51	46	52	46		46	52 46	0.3	-0.2	-0.4	-0.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_017	214-220 COWARD STREET MASCOT		Residential	11 N	52	47	52	46		47	52 47	0.2	-0.3	-0.3	-0.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_017 NCA11_017	214-220 COWARD STREET MASCOT 214-220 COWARD STREET MASCOT		Residential Residential	12 N 13 N	52 52	47	52 53	47		47	52 47 53 47	0.2	-0.3 -0.2	-0.2	0	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_018	222-228 COWARD STREET MASCOT		Residential	0 S	47	42	47	42		42	47 41	0.2	-0.1	-1.1	-1	55	50	NO	NO	NO	NO NO	NO
NCA11	NCA11_018	222-228 COWARD STREET MASCOT		Residential	1 S	49	43	49	43		44	48 43	0.2	0	-1.2	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_018	222-228 COWARD STREET MASCOT		Residential	2 S	49	44	49	44		44	49 43	0.2	-0.1	-1.1	-1.1	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA11 NCA11	NCA11_018 NCA11_018	222-228 COWARD STREET MASCOT 222-228 COWARD STREET MASCOT		Residential	3 S	49 50	44	50	44		45 45	49 43 49 44	0.3	-0.1	-1.2 -1.2	-1.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_018	222-228 COWARD STREET MASCOT		Residential	5 N	50	44	50	44		45	49 44	0.2	-0.3	-0.8	-0.8	55	50	NO	NO	NO	NO NO	NO
NCA11	NCA11_018	222-228 COWARD STREET MASCOT		Residential	6 N	50	45	50	44	51	45	50 44	0	-0.3	-0.8	-0.8	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_018	222-228 COWARD STREET MASCOT		Residential	7 N	50	45	50	45		45	50 45	-0.1	-0.3	-0.8	-0.7	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_019 NCA11_019	222-228 COWARD STREET MASCOT 222-228 COWARD STREET MASCOT		Residential Residential	0 N	50	44	50	44	50	45 46	49 44 50 45	0.1	-0.1	-1.1	-1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_019	222-228 COWARD STREET MASCOT		Residential	2 N	51	46	51	46		46	51 45	0.1	-0.1	-1.1	-1		50	NO	NO	NO	NO NO	NO
NCA11	NCA11_019	222-228 COWARD STREET MASCOT		Residential	3 N	52	46	52	46		47	51 46	0.1	0	-1	-0.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_019	222-228 COWARD STREET MASCOT		Residential	4 N	52	47	52	46		47	52 46	0.2	-0.1	-1	-0.9	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_020 NCA11_020	230 COWARD STREET MASCOT 230 COWARD STREET MASCOT		Residential Residential	0 W	71	65 65	71	65 65		66 66	71 65 71 65	0.3	0.3	-0.8	-1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_020	230 COWARD STREET MASCOT		Residential	2 W	70	65	70	65		65	70 64	0.3	0.1	-1	-1	55	50	NO	NO	NO	NO NO	NO
NCA11	NCA11_020	230 COWARD STREET MASCOT		Residential	3 W	69	64	70	64	70	64	69 63	0.2	0	-1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_020	230 COWARD STREET MASCOT		Residential	4 W	69	63	69	63		64	68 63	0.2	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_020 NCA11_020	230 COWARD STREET MASCOT 230 COWARD STREET MASCOT		Residential Residential	5 W	68	63	68	63		63	68 62 67 61	0.2	-0.1	-1.1	-1.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_020	230 COWARD STREET MASCOT		Residential	7 W	67	62	67	61		62	66 61	0.2	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO NO	NO
NCA11	NCA11_020	230 COWARD STREET MASCOT		Residential	8 W	66	61	67	61	67	62	66 60	0.2	-0.2	-1.1	-1.1		50	NO	NO	NO	NO	NO

					Faca	ıde	No.5	Openi Build	-	ild	No B	Design	ı Year Bu	ild	Openina	Increase (Build -	- No Build) Design	n Voor	NCG nois	e criteria	Do noise levels exceed the cumlativ	e limit with project roa	ads Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor C	rientation	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	adding ≥2dB to the total	noise levels?	Day ≥ 65dB LAeq,15h	Night Con	sider further treatment?
NCA11	NCA11_020	230 COWARD STREET MASCOT	<u> </u>	Residential	9	w	66	61	66	60	67	61	65	60	0.2	-0.1	-1.1	-1.1	55	50	NO NO	NO	NO NO	NO NO	NO
NCA11	NCA11_020	230 COWARD STREET MASCOT		Residential	10	w	65	60	66	60	66	61	65	59	0.1	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_020	230 COWARD STREET MASCOT		Residential	11	W	65	60	65	60	66	60	65	59	0.2	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_021	230 COWARD STREET MASCOT		Residential	0	W	68	63	69	63	69	63	68	62	0.2	0	-1	-1	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_021 NCA11_021	230 COWARD STREET MASCOT 230 COWARD STREET MASCOT		Residential	2	w	69	63	69	63	70 69	64	69	63	0.2	0	-1	-1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_021 NCA11_021	230 COWARD STREET MASCOT		Residential	3	w	68	63	69	63	69	63	68	62	0.2	0	-1	-1	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA11	NCA11_021	230 COWARD STREET MASCOT		Residential	4	w	68	63	68	63	69	63	68	62	0.2	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_021	230 COWARD STREET MASCOT		Residential	5	w	68	62	68	62	68	63	67	62	0.2	-0.1	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_022	246-248 COWARD STREET MASCOT	Currently 2 storey office block	Residential	0	N	57	51	57	51	57	52	56	51	0.1	-0.1	-1.2	-1.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_022	246-248 COWARD STREET MASCOT	Currently 2 storey office block	Residential	1	E	57	52	58	52	58	53	57	51	0.1	-0.4	-1.4	-1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_022	246-248 COWARD STREET MASCOT	Currently 2 storey office block	Residential	2	E	58	53	58	52	59	53	57	52	0.1	-0.3	-1.5	-1.4	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_022 NCA11_022	246-248 COWARD STREET MASCOT 246-248 COWARD STREET MASCOT	Currently 2 storey office block Currently 2 storey office block	Residential	3	E	58	53	58	52 52	59 59	53	57	52 52	0.1	-0.3	-1.5 -1.5	-1.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_022 NCA11_022	246-248 COWARD STREET MASCOT	Currently 2 storey office block	Residential	5	E	58	52	58	52	58	53	57	52	0.1	-0.3	-1.4	-1.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_022	246-248 COWARD STREET MASCOT	Currently 2 storey office block	Residential	6	E	58	52	58	52	58	53	57	52	0.1	-0.3	-1.4	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_022	246-248 COWARD STREET MASCOT	Currently 2 storey office block	Residential	7	E	57	52	58	52	58	53	57	51	0.1	-0.2	-1.3	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_022	246-248 COWARD STREET MASCOT	Currently 2 storey office block	Residential	8	E	58	52	58	52	58	53	57	52	0.1	-0.2	-1.3	-1.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_022	246-248 COWARD STREET MASCOT	Currently 2 storey office block	Residential	9	E	58	53	58	53	59	53	58	52	0.2	-0.1	-1.2	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_022	246-248 COWARD STREET MASCOT	Currently 2 storey office block	Residential	10	E	59	53	59	53	59	54	58	53	0.2	-0.1	-1.2	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_022	246-248 COWARD STREET MASCOT 246-248 COWARD STREET MASCOT	Currently 2 storey office block	Residential	11	E	60	54	60	55	62	55	60	54	0.3	0.2	-0.9	-0.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_022 NCA11_023	246-248 COWARD STREET MASCOT 280 COWARD STREET MASCOT	Currently 2 storey office block Currently 4 storey office block	Residential	0	N N	52	56 47	62 52	56 47	53	56 47	52	55 46	0.4	0.1	-0.8	-0.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	1	N	52	47	53	47	53	47	52	46	0.3	0.2	-1.2	-1.1	55	50	NO	NO NO	NO	NO	NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	2	N	53	47	53	47	53	48	52	47	0.3	0.1	-1.2	-1.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	3	N	53	47	53	48	54	48	52	47	0.3	0.1	-1.2	-1.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	4	N	53	48	53	48	54	48	53	47	0.3	0.2	-1.1	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	5	N	53	48	53	48	54	48	53	47	0.3	0.2	-1.2	-1.1	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA11 NCA11	NCA11_023 NCA11_023	280 COWARD STREET MASCOT 280 COWARD STREET MASCOT	Currently 4 storey office block Currently 4 storey office block	Residential Residential	6	N N	53	48	53	48	54	48	53	47	0.3	0.2	-1.1 -1.1	-1.1 -1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_023 NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	8	N	53	48	53	48	54	48	53	47	0.3	0.3	-0.9	-0.9	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	9	N	53	48	54	48	54	48	53	48	0.4	0.3	-0.6	-0.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	10	N	53	48	54	48	54	48	53	48	0.4	0.3	-0.5	-0.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	11	w	52	47	53	48	53	47	54	49	1.1	1.3	1.8	1.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	12	N	54	48	55	50	55	49	55	50	1	1.4	0.9	0.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	13	N	54	49	55	50	55	50	56	50	1.1	1.3	1	0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_023	280 COWARD STREET MASCOT	Currently 4 storey office block	Residential	14	N	54	49	56	51	55	50	56	50	1.1	1.2	1	0.2	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_024 NCA11_024	629 GARDENERS ROAD MASCOT 629 GARDENERS ROAD MASCOT		Residential	0	N N	74	68	74	68	74	69	74	68	0.4	0.2	0.1	-0.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_024 NCA11_024	629 GARDENERS ROAD MASCOT		Residential	2	N	74	68	74	68	74	68	74	68	0.5	0.1	0.1	-0.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_024	629 GARDENERS ROAD MASCOT		Residential	3	N	73	67	73	67	74	68	74	67	0.4	0.2	0.1	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_024	629 GARDENERS ROAD MASCOT		Residential	4	N	72	67	73	67	73	67	73	67	0.3	0.2	0.1	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_024	629 GARDENERS ROAD MASCOT		Residential	5	N	72	66	72	66	73	67	73	66	0.4	0.2	0.2	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_025	629 GARDENERS ROAD MASCOT		Residential	0	w	56	50	56	50	57	50	57	50	0.5	0.1	0.2	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_025	629 GARDENERS ROAD MASCOT		Residential	1	W	57	51	57	51	57	51	58	51	0.5	0.2	0.3	-0.1	55	50	NO	NO NO	NO	NO	NO
NCA11 NCA11	NCA11_025 NCA11_025	629 GARDENERS ROAD MASCOT 629 GARDENERS ROAD MASCOT		Residential	2	W SE	57	51	58	51	58	52	58	52	0.5	0.3	0.3	-0.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_025	629 GARDENERS ROAD MASCOT		Residential	4	SE	60	54	60	54	60	54	60	54	0.4	0.1	0.1	-0.2	55	50	NO NO	NO NO	NO NO	NO NO	NO
NCA11	NCA11_025	629 GARDENERS ROAD MASCOT		Residential	5	SE	60	54	61	54	61	55	61	55	0.4	0.2	0.2	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_026	629 GARDENERS ROAD MASCOT		Residential	0	w	51	45	52	45	52	46	52	46	0.3	0.1	0.1	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_026	629 GARDENERS ROAD MASCOT		Residential	1	w	53	47	53	47	53	47	54	47	0.6	0.2	0.4	0.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_026	629 GARDENERS ROAD MASCOT		Residential	2	W	53	47	54	48	54	48	54	48	0.5	0.3	0.4	0.1	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_026 NCA11_026	629 GARDENERS ROAD MASCOT 629 GARDENERS ROAD MASCOT		Residential	3	w	54	48	54	48	54	48	55	50	0.7	0.4	0.6	0.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_026 NCA11_026	629 GARDENERS ROAD MASCOT		Residential	5	w	54	48	56	50	55	49	57	51	1.4	1.2	1.1	1.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_027	629 GARDENERS ROAD MASCOT		Residential	0	w	50	44	50	44	51	44	51	44	0.4	0.3	0	0.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_027	629 GARDENERS ROAD MASCOT		Residential	1	w	51	45	51	45	51	45	52	45	0.5	0.3	0.2	0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_027	629 GARDENERS ROAD MASCOT		Residential	2	w	52	46	52	46	52	46	53	46	0.6	0.5	0.4	0.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_027	629 GARDENERS ROAD MASCOT		Residential	3	w	52	46	53	47	53	47	53	47	0.7	0.6	0.6	0.7	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_027	629 GARDENERS ROAD MASCOT		Residential	4	W	53	47	54	48	53	47	54	48	1	0.9	1	1.1	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_027 NCA11_028	629 GARDENERS ROAD MASCOT 629 GARDENERS ROAD MASCOT		Residential Residential	0	W	53	47	55 53	49	54	48	55 52	49	0.6	1.5	-0.6	1.7	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_028 NCA11_028	629 GARDENERS ROAD MASCOT		Residential	1	S	53	46	54	48	53	45	53	48	0.6	1	-0.6	1.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_028	629 GARDENERS ROAD MASCOT		Residential	2	S	54	48	54	49	54	47	53	48	0.5	1	-0.6	1.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_028	629 GARDENERS ROAD MASCOT		Residential	3	w	53	47	54	48	54	47	54	48	0.6	0.8	0	1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_028	629 GARDENERS ROAD MASCOT		Residential	4	w	54	48	55	49	54	48	54	49	0.9	1.1	0.4	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_028	629 GARDENERS ROAD MASCOT		Residential	5	W	54	48	55	50	54	48	55	50	1.3	1.5	0.7	1.8	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_029	629 GARDENERS ROAD MASCOT		Residential	0	S	64	57	64	58	64	57	64	58	0.4	0.9	-0.3	1.2	55	50	NO NO	NO NO	NO	NO	NO NO
NCA11 NCA11	NCA11_029 NCA11_029	629 GARDENERS ROAD MASCOT 629 GARDENERS ROAD MASCOT		Residential Residential	2	5	64	57	64	58 58	64	57 56	64	58	0.5	0.9	-0.2	1.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_029 NCA11_029	629 GARDENERS ROAD MASCOT		Residential	3	S S	63	57	64	58	63	56	63	57	0.4	0.9	-0.3	1.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_029	629 GARDENERS ROAD MASCOT		Residential	4	S	63	56	63	57	63	56	62	57	0.6	0.9	-0.4	1.3	55	50	NO NO	NO NO	NO	NO	NO
NCA11	NCA11_029	629 GARDENERS ROAD MASCOT		Residential	5	N	62	56	62	56	62	56	63	56	0.4	0.1	0.2	-0.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_029	629 GARDENERS ROAD MASCOT		Residential	6	N	62	56	62	56	62	56	63	57	0.5	0.4	0.4	0.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_029	629 GARDENERS ROAD MASCOT		Residential	7	N	62	56	63	57	63	57	63	57	0.6	0.4	0.4	0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_029	629 GARDENERS ROAD MASCOT		Residential	8	N	63	56	63	57	63	57	64	57	0.6	0.4	0.4	0.2	55	50	NO NO	NO NO	NO	NO	NO
NCA11	NCA11_029	629 GARDENERS ROAD MASCOT		Residential	9	N	63	57 57	63	57	64	57	64	58	0.6	0.3	0.4	0.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_029 NCA11_030	629 GARDENERS ROAD MASCOT 635 GARDENERS ROAD MASCOT	Active Kids child care centre on ground	Residential	0	N S	63	57 56	64	57 57	64	58	64	58	0.5	0.2	-0.3	1.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_030 NCA11_030	635 GARDENERS ROAD MASCOT	Active Kids child care centre on ground Active Kids child care centre on ground	Residential	1	S	63	56	63	57	63	56	63	55	0.6	1	-0.3	1.2	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_030	635 GARDENERS ROAD MASCOT	Active Kids child care centre on ground	Residential	2	s	62	56	63	57	63	56	62	57	0.6	1	-0.3	1.4	55	50	NO	NO NO	NO	NO	NO
NCA11	NCA11_030	635 GARDENERS ROAD MASCOT	Active Kids child care centre on ground	Residential	3	S	62	56	63	57	62	55	62	57	0.6	1	-0.3	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_030	635 GARDENERS ROAD MASCOT	Active Kids child care centre on ground	Residential	4	s	62	56	63	57	62	55	62	57	0.6	1	-0.3	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_031	635 GARDENERS ROAD MASCOT		Residential	0	N	72	66	72	66	73	67	73	67	0.4	0.2	0	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_031	635 GARDENERS ROAD MASCOT		Residential	1	N	73	67	73	67	73	68	73	67	0.3	0.1	0.1	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_031	635 GARDENERS ROAD MASCOT		Residential	3	N	73	67	73	67	73	68	73	67	0.3	0.1	0	-0.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_031 NCA11_031	635 GARDENERS ROAD MASCOT 635 GARDENERS ROAD MASCOT		Residential Residential	4	N	72	66	73	66	73	67	73	67	0.3	0.1	0.1	-0.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_031	635 GARDENERS ROAD MASCOT		Residential	0	E	50	44	50	44	50	43	50	44	0.5	0.7	-0.4	0.8	55	50	NO	NO NO	NO	NO	NO

					Facade		Opening	g Year			Design Year	r		Increase (Bui	ild - No Build)		NCG noise	criteria	Do maios levels avesard the sun	ulativa limit with usainst sa	ads Is the contribution from t	he road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type		Day	Build Night	Day	Night	No Build Day Nig	ght	Build Day Night	Opening Day	g Year Night	Design Day	n Year Night	Day	Night	adding ≥2dB to the	e total noise levels?	Day	Night	Consider further treatment?
					Floor Orientation	dB(A)	dB(A)	dB(A)	dB(A)	dB(A) dB		dB(A) dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
NCA11	NCA11_032 NCA11_032	635 GARDENERS ROAD MASCOT 635 GARDENERS ROAD MASCOT		Residential Residential	1 E	51 51	45 45	51 52	45 46	51 4 52 4		51 45 51 46	0.5	0.7	-0.3 -0.3	0.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_032 NCA11_032	635 GARDENERS ROAD MASCOT		Residential	3 E	52	45	52	46	52 4		52 47	0.4	0.6	-0.3	0.7	55	50	NO	NO	NO	NO NO	NO
NCA11	NCA11_032	635 GARDENERS ROAD MASCOT		Residential	4 E	52	46	53	47	53 4	-	53 47	0.6	0.7	-0.1	0.9	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_033 NCA11_033	635 GARDENERS ROAD MASCOT 635 GARDENERS ROAD MASCOT		Residential Residential	0 E	55	49	55	49 50	55 4 56 5		55 49 56 50	0.4	0.2	0.2	-0.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_033	635 GARDENERS ROAD MASCOT		Residential	2 W	56	50	56	50	56 5	-	57 51	0.6	0.2	0.7	0.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_033	635 GARDENERS ROAD MASCOT		Residential	3 W	57	51	58	52	58 5	2	58 52	0.7	0.1	0.7	0.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_033 NCA11_034	635 GARDENERS ROAD MASCOT 635 GARDENERS ROAD MASCOT		Residential Residential	4 W	58 54	53 49	59	53 48	59 5 55 5		55 48	-0.5	-0.2	-0.6	-1.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_034 NCA11_034	635 GARDENERS ROAD MASCOT		Residential	1 W	55	50	55	49	56 5		56 50	-0.3	-0.9	-0.5	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_034	635 GARDENERS ROAD MASCOT		Residential	2 N	56	50	56	50	56 5	1	57 51	0.3	-0.1	0.2	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_034	635 GARDENERS ROAD MASCOT		Residential	3 N	57	51	57	51	57 5 59 5		58 52	0.5	-0.1	0.4	0	55	50	NO	NO	NO	NO NO	NO
NCA11 NCA11	NCA11_034 NCA11_035	635 GARDENERS ROAD MASCOT 635 GARDENERS ROAD MASCOT		Residential Residential	0 W	58 49	43	58 49	52 43	59 5 49 4	-	59 53 49 43	0.3	-0.4	-0.1	-0.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_035	635 GARDENERS ROAD MASCOT		Residential	1 W	50	44	50	45	50 4	14	50 45	0.5	0.5	0	0.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_035	635 GARDENERS ROAD MASCOT		Residential	2 W	51	45	52	46	52 4		52 46	0.6	0.3	0.1	0.3	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_035 NCA11_035	635 GARDENERS ROAD MASCOT 635 GARDENERS ROAD MASCOT		Residential Residential	4 W	54	47	55	47	53 4		53 48 55 49	0.8	0.5	0.4	0.6	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	0 N	72	67	71	65	73 6	68	72 66	-0.9	-1.6	-0.9	-2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	1 N	73	68	72	66	73 6		73 66	-0.8	-1.6	-0.9	-2	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_036 NCA11_036	653 GARDENERS ROAD MASCOT 653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22 Apartment development DA approved DA-22	Residential Residential	2 N	73	68	72 72	66	73 6		73 66 73 66	-0.8	-1.6 -1.5	-0.8	-1.9	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	4 N	72	67	72	66	73 6		72 66	-0.5	-1.5	-0.4	-1.7	55	50	NO	NO	NO NO	NO	NO
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	5 N	72	67	71	65	73 6		72 66	-0.3	-1.4	-0.3	-1.6	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_036 NCA11_036	653 GARDENERS ROAD MASCOT 653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22 Apartment development DA approved DA-22	Residential Residential	6 N	71	66	71	65 65	72 6 72 6		72 65 72 65	-0.3	-1.4 -1.4	-0.2	-1.5 -1.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_036 NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22 Apartment development DA approved DA-22	Residential	8 N	71	66	71	64	72 6		71 65	-0.3	-1.4	-0.2	-1.5	55	50	NO NO	NO	NO NO	NO NO	NO
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	9 N	70	65	70	64	71 6		71 65	-0.2	-1.3	-0.2	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential Residential	10 N	70	65	70	64	71 6		71 64	-0.2	-1.3 -1.3	0	-1.3 -1.1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_036 NCA11_036	653 GARDENERS ROAD MASCOT 653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22 Apartment development DA approved DA-22	Residential	11 N	70	65	69	63	71 6		71 64	-0.1	-1.3	0	-1.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	13 N	69	64	69	63	70 6	55	70 64	-0.1	-1.2	0	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	13 W	58	53	59	53	59 5		61 55	0.9	0.2	1.4	0.8	55	50	YES	YES	NO	NO	YES
NCA11 NCA11	NCA11_037 NCA11_037	659-669 GARDENERS ROAD MASCOT 659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction Avantra apartments under construction	Residential Residential	0 N	71	66	71	65	72 6		72 65 73 66	-0.5	-1.3	-0.4	-1.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_037	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	2 N	72	67	72	66	73 6		73 66	-0.4	-1.4	-0.2	-1.7	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_037	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	3 N	72	67	72	66	73 6		73 66	-0.7	-1.6	-0.5	-1.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_037	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	4 N	72	67	71	65	73 6		72 66	-0.5	-1.6	-0.4	-1.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO
NCA11 NCA11	NCA11_037 NCA11_037	659-669 GARDENERS ROAD MASCOT 659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction Avantra apartments under construction	Residential Residential	6 N	72 71	66	71 71	65 65	72 6 72 6		72 65 72 65	-0.4	-1.5 -1.5	-0.3	-1.7	55	50	NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_037	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	7 N	71	66	71	64	72 6	66	71 65	-0.4	-1.4	-0.2	-1.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_037	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	8 N	71	65	70	64	71 6		71 65	-0.3	-1.4	-0.1	-1.5	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_037 NCA11_037	659-669 GARDENERS ROAD MASCOT 659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction Avantra apartments under construction	Residential Residential	9 N	70	65	70 70	64	71 6 71 6		71 64	-0.3	-1.4	-0.1	-1.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_037	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	11 N	70	64	69	63	70 6	55	70 64	-0.2	-1.3	0.1	-1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_038	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	0 W	50	44	49	43	50 4	15	50 43	-0.5	-1.5	-0.4	-1.7	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_038 NCA11_038	659-669 GARDENERS ROAD MASCOT 659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction Avantra apartments under construction	Residential Residential	1 W	51	45	50	44	51 4	17	51 44	-0.6	-1.5 -1.6	-0.5	-1.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_038	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	3 W	51	46	51	44	52 4		52 45	-0.6	-1.6	-0.4	-1.7	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_038	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	4 W	52	46	51	45	52 4		52 45	-0.4	-1.5	-0.1	-1.6	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_038 NCA11_038	659-669 GARDENERS ROAD MASCOT 659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction Avantra apartments under construction	Residential Residential	5 W	52	46	51	45	52 4	17	52 46	-0.4	-1.5	-0.1	-1.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_038	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	7 W	52	47	52	45	53 4	17	53 46	-0.3	-1.5	-0.1	-1.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_038	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	8 W	52	47	52	45			53 46	-0.3	-1.5	-0.1	-1.5	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_038 NCA11_038	659-669 GARDENERS ROAD MASCOT 659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction Avantra apartments under construction	Residential Residential	9 W 10 W	52 52	47	52 52	45 45			53 46 53 46	-0.2	-1.5 -1.3	0	-1.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_038	659-669 GARDENERS ROAD MASCOT	Avantra apartments under construction	Residential	11 W	52	47	52	45			53 46	-0.2	-1.1	0.1	-1.1	55	50	NO	NO NO	NO	NO	NO
NCA11	NCA11_039	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	0 N	72	67	71	65	73 6	i8	72 65	-1.2	-2.2	-1.3	-2.8	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_039	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	1 N	73	68	72	66			72 66	-1.1	-2	-1.2	-2.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_039 NCA11_039	671-683 GARDENERS ROAD MASCOT 671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential Residential	2 N N	73	68	72 72	66	73 6 73 6		72 66 72 66	-0.9	-1.9 -1.6	-0.7	-2.5 -2.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_039	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	4 N	72	67	71	65	73 6	57	72 66	-0.4	-1.4	-0.4	-1.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_039	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	5 N	71	66	71	65	72 6		72 65	-0.3	-1.1	-0.3	-1.7	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_039 NCA11_039	671-683 GARDENERS ROAD MASCOT 671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential Residential	6 N 7 N	71	66	71	65			72 65 71 65	-0.1	-0.9	0.2	-1.5 -1.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_039 NCA11_039	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential	8 N	70	65	70	64	71 6		71 64	0.1	-0.7	0.3	-1.1	55	50	NO	NO	NO NO	NO	NO NO
NCA11	NCA11_039	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	9 N	70	64	70	64			71 64	0.3	-0.6	0.4	-1	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_039 NCA11_039	671-683 GARDENERS ROAD MASCOT 671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential Residential	10 N 11 N	69	64	70 69	63	70 6 70 6		70 64 70 64	0.4	-0.6	0.5	-0.8 -0.7	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_039 NCA11_039	671-683 GARDENERS ROAD MASCOT 671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential	11 N	68	63	69	63	69 6		70 63	0.5	-0.5	0.7	-0.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO
NCA11	NCA11_040	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	0 N	71	67	71	65	72 6	57	72 66	-0.2	-1.2	-0.1	-1.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_040	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	1 N	72	67	72	66	73 6		73 66	-0.4	-1.3	-0.2	-1.7	55	50	NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_040 NCA11_040	671-683 GARDENERS ROAD MASCOT 671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential Residential	2 N 3 N	72 72	67	72 72	66	73 6 73 6		73 66 73 66	-0.4	-1.4	-0.2	-1.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_040	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	4 N	72	67	71	65			72 66	-0.3	-1.2	0	-1.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_040	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	5 N	71	66	71	65	72 6		72 65	-0.2	-1.2	0	-1.5	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_040 NCA11_040	671-683 GARDENERS ROAD MASCOT 671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential Residential	6 N	71	66	71	65	72 6 71 6		72 65 72 65	-0.2	-1.2	0.1	-1.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_040 NCA11_040	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential	8 N	70	65	70	64	71 6		71 64	-0.1	-1.2	0.2	-1.4	55	50	NO NO	NO NO	NO NO	NO	NO NO
NCA11	NCA11_040	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	9 N	70	65	70	63	71 6	5	71 64	0	-1.1	0.2	-1.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_040	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	10 N	69	64	70	63			71 64	0.1	-1.1	0.4	-1.1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_040 NCA11_040	671-683 GARDENERS ROAD MASCOT 671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential Residential	11 N	69 69	64	69	63	70 6 70 6		70 64 70 63	0.1	-1	0.4	-1.1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_041	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	0 N	71	66	71	65			72 66	-0.1	-0.9	0	-1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_041	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	1 N	72	67	72	66	73 6		73 67	-0.2	-1.1	0	-1.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_041 NCA11_041	671-683 GARDENERS ROAD MASCOT 671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential Residential	2 N	72	67	72 72	66	73 6 73 6		73 66 73 66	-0.3	-1.3 -1.3	0	-1.5 -1.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_041 NCA11_041	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential	4 N	72	67	71	65	73 6		73 66	-0.2	-1.3	0	-1.5	55	50	NO	NO	NO NO	NO	NO

					F	acade	No B	Openir		uild	No	Design	n Year Bui	ild	Opening	Increase (Bui	ild - No Build) Design	Vear	NCG nois	e criteria	Do noise levels exceed the cumlative		ds ls the contribution fron	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor	Orientation	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	Day dB(A)	Night dB(A)	adding ≥2dB to the total	noise levels?	Day ≥ 65dB LAeq,15h	Night ≥ 60dB LAeq,9h	Consider further treatment?
NCA11	NCA11_041	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	5	N	71	66	71	65	72	67	72	65	-0.2	-1.2	0	-1.5	55	50	NO NO	NO	NO NO	NO NO	NO
NCA11	NCA11_041	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	6	N	71	66	71	65	72	67	72	65	-0.3	-1.2	0	-1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_041	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	7	N	71	65	70	64	71	66	72	65	-0.2	-1.3	0.1	-1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_041	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	8	N	70	65	70	64	71	66	71	64	-0.2	-1.3	0.2	-1.4	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_041	671-683 GARDENERS ROAD MASCOT 671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential	10	N N	70	65	70 70	63	71	65	71	64	-0.1	-1.2	0.1	-1.3 -1.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_041 NCA11_041	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172 Apartments approved DA: DA13/172	Residential	11	N N	69	64	69	63	70	65	70	64	-0.1	-1.2	0.2	-1.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_041	671-683 GARDENERS ROAD MASCOT	Apartments approved DA: DA13/172	Residential	12	N N	69	64	69	63	70	64	70	63	-0.1	-1.2	0.2	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_042	5 HARAN STREET MASCOT		Residential	0	NE	47	41	47	42	47	40	46	41	0.7	1	-0.6	1.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_042	5 HARAN STREET MASCOT		Residential	1	NE	48	42	48	43	48	41	47	42	0.6	1.1	-0.5	1.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_042	5 HARAN STREET MASCOT		Residential	2	NE	48	42	49	43	48	42	48	43	0.6	1	-0.5	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_042	5 HARAN STREET MASCOT		Residential	3	NE	49	43	49	44	49	42	48	43	0.7	1.1	-0.4	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_042	5 HARAN STREET MASCOT		Residential	4	NE	49	43	50	44	49	42	49	44	0.7	1.1	-0.3	1.5	55	50	NO NO	NO	NO	NO NO	NO NO
NCA11 NCA11	NCA11_042 NCA11_042	5 HARAN STREET MASCOT 5 HARAN STREET MASCOT		Residential Residential	6	NE NE	49	43	50	44	49 50	43	49	44	0.7	1.1	-0.2	1.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_042	5 HARAN STREET MASCOT		Residential	7	NW	49	43	50	44	50	43	50	45	0.7	0.9	0.3	1.3	55	50	NO	NO NO	NO	NO	NO NO
NCA11	NCA11_043	28 JOHN STREET MASCOT		Residential	0	S	55	50	56	50	56	50	55	49	0.3	0	-1	-1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_043	28 JOHN STREET MASCOT		Residential	1	S	56	51	56	51	57	51	56	50	0.3	0.1	-1	-1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_043	28 JOHN STREET MASCOT		Residential	2	S	56	51	57	51	57	52	56	51	0.4	0.1	-0.9	-0.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_043	28 JOHN STREET MASCOT		Residential	3	S	57	51	57	51	57	52	56	51	0.3	0.1	-1	-1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_043	28 JOHN STREET MASCOT		Residential	4	S	57	52	57	52	58	52	57	51	0.3	0.1	-1	-0.9	55	50	NO NO	NO	NO	NO	NO NO
NCA11 NCA11	NCA11_043 NCA11_043	28 JOHN STREET MASCOT 28 JOHN STREET MASCOT		Residential Residential	5	S .	57	52 52	57	52 52	58	52 52	57	51	0.3	0.1	-1	-1	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_043 NCA11_043	28 JOHN STREET MASCOT		Residential	7	S	57	52	57	52	58	52	57	51	0.3	0.1	-1	-1	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_043	28 JOHN STREET MASCOT		Residential	8	S	57	51	57	52	58	52	57	51	0.3	0.1	-0.9	-0.9	55	50	NO NO	NO NO	NO	NO	NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	w	70	65	69	64	71	66	67	60	-1	-1.7	-3.8	-5.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	W	71	66	70	65	72	67	68	61	-1	-1.7	-3.7	-5.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	w	71	66	70	65	72	67	69	61	-0.9	-1.7	-3.6	-5.8	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	3	W	71	66	70	64	72	67	69	61	-1	-1.8	-3.5	-5.7	55	50	NO	NO	NO	NO	NO NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	W	71	66	70	64	72	67	68	61	-0.9	-1.7	-3.4	-5.5	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA11 NCA11	NCA11_044a NCA11_044a	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	6	w	71	66	70 69	64	71	66	68	61	-0.9	-1.7	-3.3 -3.1	-5.5 -5.3	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	w	70	65	69	63	71	66	68	60	-0.8	-1.6	-3	-5.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	w	70	65	69	63	70	65	68	60	-0.8	-1.6	-2.9	-5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	N	65	60	65	58	65	60	64	57	-0.1	-1.2	-1.5	-3.4	55	50	NO	YES	NO	NO	YES
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	9	w	69	64	69	63	70	65	67	60	-0.7	-1.4	-2.8	-4.8	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	9	N	64	59	64	58	65	60	64	57	0	-1.1	-1.2	-3.1	55	50	NO	YES	NO	NO	YES
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	W	69	64	68	62	70	65	67	60	-0.7	-1.4	-2.6	-4.7	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	N	64	59	64	58	65	60	64	57	0.1	-0.9	-0.9	-2.8	55	50	YES	YES	NO	NO	YES
NCA11 NCA11	NCA11_044a NCA11_044a	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	11	N N	69	64 59	68	62 58	70 65	59	67	60 57	-0.6	-1.3	-2.5	-4.5 -2.5	55	50	NO YES	NO YES	NO NO	NO NO	NO YES
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	w	68	63	68	62	69	64	67	60	-0.5	-1.3	-2.3	-4.3	55	50	NO NO	NO NO	NO	NO	NO NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	N	63	58	64	58	64	59	64	57	0.4	-0.7	-0.4	-2.1	55	50	YES	YES	NO	NO	YES
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	w	68	63	68	62	69	64	67	60	-0.5	-1.3	-2.2	-4.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	N	63	58	64	58	64	59	64	57	0.6	-0.4	-0.1	-1.7	55	50	YES	YES	NO	NO	YES
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	N	58	53	57	51	59	54	56	49	-1.1	-2.1	-2.9	-5.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	N	59	54	58	52	60	55	57	50	-1.1	-2.2	-2.8	-5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	2	N N	60	55 55	59	52	60	55 56	58	51	-1.1	-2.2 -2.1	-2.6 -2.4	-4.7 -4.5	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	4	N N	60	55	59	53	61	56	59	52	-0.9	-2.1	-2.4	-4.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	N	60	55	59	53	61	56	59	52	-0.8	-2	-2	-4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	6	N	60	55	60	53	61	56	59	52	-0.7	-1.9	-1.8	-3.8	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	N	60	55	60	53	61	56	60	52	-0.7	-1.8	-1.5	-3.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	N	60	55	60	53	61	56	60	53	-0.5	-1.7	-1.3	-3.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	9	N	60	55	60	53	61	56	60	53	-0.4	-1.7	-1.1	-3	55	50	NO	NO	NO	NO NO	NO NO
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	10	N N	60	55 55	60	53	61	56 55	60	53	-0.3	-1.6	-0.8	-2.7 -2.5	55 55	50	YES YES	NO NO	NO NO	NO NO	YES
NCA11 NCA11	NCA11_044b	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	12	N N	60	55	60	53	60	55	60	53	-0.2	-1.4	-0.8	-2.5	55	50	YES	NO NO	NO NO	NO NO	YES
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	N	60	55	60	54	60	55	60	54	0.2	-1	0	-1.4	55	50	YES	NO	NO	NO	YES
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	w	56	51	55	49	57	52	56	49	-0.6	-1.8	-1.2	-3.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	w	57	52	56	50	58	53	57	49	-0.7	-1.8	-1.3	-3.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	w	58	53	57	51	58	53	57	50	-0.7	-2.3	-1.2	-3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	3	w	58	53	57	51	59	53	58	51	-0.6	-1.9	-1.1	-2.8	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	w	58	53 53	58	51 52	59 59	54	58	51	-0.4	-1.6	-0.8	-2.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_045 NCA11_045	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	6	w	58	53	58	52	59	54	58	51	-0.3	-1.3 -1.1	-0.7	-2.4 -2.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	7	w	58	54	58	52	59	54	59	52	-0.2	-1.1	-0.5	-2.3	55	50	NO NO	NO NO	NO NO	NO	NO NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	w	59	54	58	52	59	54	59	52	-0.1	-1.8	-0.2	-2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	9	w	58	54	58	52	59	54	59	52	0	-1.8	-0.2	-1.8	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	w	58	53	58	52	59	54	59	52	0.1	-0.8	-0.1	-1.7	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	W	58	53	58	52	59	54	59	52	0.1	-0.8	0	-1.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	W	58	53	58	52	59	54	59	53	0.2	-0.7	0.3	-1.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	w	58	53	59	52	59	54	60	53	0.4	-0.4	0.7	-0.6	55	50	YES	NO NO	NO	NO NO	YES
NCA11 NCA11	NCA11_046 NCA11_046	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	0	w	51	46	51	45 45	52 53	47	52	45	-0.1	-1.3 -1.6	0	-1.6 -1.7	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_046 NCA11_046	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	2	w	52	47	52	45	53	48	53	46	-0.2	-1.6	0	-1.7	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA11	NCA11_046	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	3	w	52	48	52	46	53	48	53	46	-0.2	-1.9	-0.1	-1.6	55	50	NO NO	NO	NO	NO	NO
NCA11	NCA11_046	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	w	53	48	52	46	53	48	53	47	-0.2	-1.7	0	-1.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_046	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	W	53	48	53	46	54	48	54	47	-0.2	-1.5	0	-1.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_046	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	6	W	53	48	53	46	54	49	54	47	-0.2	-1.4	0	-1.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_046	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	W	53	48	53	47	54	49	54	47	-0.2	-1.3	0.1	-1.5	55	50	NO NO	NO	NO	NO	NO
NCA11	NCA11_046	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	w	53	48	53	47	54	49	54	47	-0.1	-1.2	0	-1.4	55 55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA11 NCA11	NCA11_046 NCA11_046	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	10	w	53	48	53	47	54	49	54	47	-0.1	-1.2 -1.2	0.1	-1.4	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_046	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	11	w	53	48	53	47	54	49	54	48	0.1	-1.1	0.4	-1.2	55	50	NO NO	NO	NO	NO	NO
NCA11	NCA11_046	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	w	53	48	53	47	54	49	54	48	0.3	-0.7	0.6	-0.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_046	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	w	53	48	54	48	54	49	55	49	0.8	0.3	1.4	0.5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	w	74	69	73	67	74	70	70	63	-1	-1.7	-4.1	-6.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1	W	74	69	73	67	75	70	71	64	-1	-1.4	-3.9	-6.1	55	50	NO	NO	NO	NO	NO

					Facade	No	Openii	ng Year Bui	ild	No	Design	Year Bu	uild	Opening	Increase (Build	d - No Build) Design	Vear	NCG noi:	e criteria	Do noise levels exceed the cumlati		ads Is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor Orientation	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	adding ≥2dB to the tot		Day	Night	sider further treatment?
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2 W	dB(A) 74	dB(A) 69	73	dB(A) 67	74	dB(A) 69	dB(A) 71	dB(A)	-1	-1.8	-3.9	-6	dB(A) 55	dB(A) 50	Day NO	Night NO	≥ 65dB LAeq,15h NO	≥ 60dB LAeq,9h NO	NO
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3 W	73	68	72	67	74	69	70	63	-1	-1.3	-3.8	-6	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_047 NCA11_047	9 KENT ROAD MASCOT 9 KENT ROAD MASCOT	Esprit by Bridgehill under construction Esprit by Bridgehill under construction	Residential Residential	4 W	73	68	72	66	73	68	70 69	62	-0.9	-1.9	-3.6 -3.5	-5.9 -5.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6 W	72	67	71	65	72	67	69	62	-0.8	-1.8	-3.5	-5.7	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7 W	71	66	70	65	72	67	69	61	-0.8	-1.2	-3.3	-5.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8 W	71	66	70	64	72	66	68	61	-0.8	-1.6	-3.2	-5.4	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_047 NCA11_047	9 KENT ROAD MASCOT 9 KENT ROAD MASCOT	Esprit by Bridgehill under construction Esprit by Bridgehill under construction	Residential Residential	9 W	70	65	70 69	64	71	66	68	61	-0.7	-0.9	-3.1	-5.3 -5.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11 W	70	65	69	63	70	65	68	60	-0.6	-1.5	-2.9	-5	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12 W	69	64	69	63	70	65	67	60	-0.6	-0.8	-2.8	-4.9	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_047	9 KENT ROAD MASCOT 9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12 N 13 W	62	57	62	56 63	63 70	58 65	62	54 60	-0.3	-1.2	-1.5 -2.7	-3.4	55 55	50	YES NO	NO NO	NO NO	NO NO	YES NO
NCA11 NCA11	NCA11_047 NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction Esprit by Bridgehill under construction	Residential Residential	13 W	62	57	62	55	63	57	62	54	-0.5	-1.4	-1.2	-4.7	55	50	YES	NO NO	NO NO	NO NO	YES
NCA11	NCA11_048	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0 S	66	62	68	63	66	63	67	62	2	1.5	1.3	-1.6	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_048	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1 S	66	63	68	64	66	63	67	62	1.8	0.7	1.2	-1.5	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_048 NCA11_048	9 KENT ROAD MASCOT 9 KENT ROAD MASCOT	Esprit by Bridgehill under construction Esprit by Bridgehill under construction	Residential Residential	2 S	65	62	67	63	66	63	67	61	1.8	0.6	1.1	-1.6 -1.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_048 NCA11_048	9 KENT ROAD MASCOT	Esprit by Bridgelill under construction	Residential	4 S	64	61	66	62	64	62	65	60	1.6	1	1	-1.0	55	50	NO NO	NO	NO	NO NO	NO
NCA11	NCA11_048	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	5 S	64	61	65	61	64	61	65	60	1.6	0.3	0.9	-1.7	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_048	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6 S	63	60	65	61	63	61	64	59	1.6	0.8	0.9	-1.8	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_048 NCA11_048	9 KENT ROAD MASCOT 9 KENT ROAD MASCOT	Esprit by Bridgehill under construction Esprit by Bridgehill under construction	Residential Residential	7 S	63	60 59	64	60	63	60	64	58 58	1.5	0.2	0.9	-1.7 -1.8	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_048	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9 S	62	59	63	59	62	59	63	57	1.5	0.7	0.7	-1.8	55	50	NO NO	NO NO	NO	NO	NO
NCA11	NCA11_048	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10 S	61	58	63	59	61	59	62	57	1.5	0.8	0.7	-1.8	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_048	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11 S	61	58	62	58	61	58	62	57	1.5	0.4	0.6	-1.8	55	50	NO NO	NO NO	NO	NO NO	NO NO
NCA11 NCA11	NCA11_048 NCA11_048	9 KENT ROAD MASCOT 9 KENT ROAD MASCOT	Esprit by Bridgehill under construction Esprit by Bridgehill under construction	Residential Residential	12 S	60	57	62	58	61	58	61	56 56	1.5	0.8	0.7	-1.8 -1.6	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_049	39 KENT ROAD MASCOT	Espire by bridge fill under construction	Residential	0 W	68	61	69	65	69	62	66	58	1.8	4	-2.6	-4.3	60	55	NO NO	NO	NO	NO	YES
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	1 W	68	62	70	65	69	63	67	59	1.8	3.5	-2.6	-4.1	60	55	NO	NO	NO	NO	YES
NCA11	NCA11_049	39 KENT ROAD MASCOT 39 KENT ROAD MASCOT		Residential	2 W	68	61	69	65	69 68	62	66	59	1.8	4.2	-2.6	-3.9	60	55	NO NO	NO NO	NO	NO NO	YES
NCA11 NCA11	NCA11_049 NCA11_049	39 KENT ROAD MASCOT		Residential Residential	3 W	67	61	69	65	68	62	66	58	1.8	3.8	-2.6 -2.5	-3.7	60	55 55	NO NO	NO NO	NO NO	NO NO	YES
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	5 W	66	60	68	64	67	61	65	58	1.9	3.9	-2.5	-3.4	60	55	NO	NO	NO	NO	YES
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	6 W	66	60	68	63	67	61	65	57	1.8	3.5	-2.5	-3.3	60	55	NO	NO	NO	NO	YES
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	7 W	65	59	67	63	67	60	64	57	1.8	4	-2.4	-3.1	60	55	NO	NO	NO	NO	YES
NCA11 NCA11	NCA11_049 NCA11_049	39 KENT ROAD MASCOT 39 KENT ROAD MASCOT		Residential Residential	9 W	65	59	67	62	66	60 59	64	57 57	1.8	3.6 4.2	-2.4	-3	60	55 55	NO NO	NO NO	NO NO	NO NO	YES YES
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	10 W	64	58	66	62	65	59	63	56	1.8	3.8	-2.2	-2.8	60	55	NO	NO	NO	NO	YES
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	11 W	64	58	66	61	65	59	63	56	1.8	3.4	-2.1	-2.7	60	55	NO	NO	NO	NO	YES
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	12 W	64	57	65	61	65	58	63	56	1.7	4.1	-2.1	-2.6	60	55	NO	NO	NO	NO NO	YES
NCA11 NCA11	NCA11_049 NCA11_050	39 KENT ROAD MASCOT 103-105 O'RIORDAN STREET MASCOT		Residential Residential	13 W 0 N	63 59	57	60	61 54	64	58 54	62	56	0.4	-0.2	0.1	-2.6	55	55 50	NO NO	NO NO	NO NO	NO NO	YES NO
NCA11	NCA11_050	103-105 O'RIORDAN STREET MASCOT		Residential	1 N	61	55	62	55	62	56	62	56	0.3	0.6	0.1	-0.3	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_050	103-105 O'RIORDAN STREET MASCOT		Residential	2 N	62	56	62	56	63	56	63	56	0.4	0.2	0.1	-0.2	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_050	103-105 O'RIORDAN STREET MASCOT		Residential	3 N	62	57	63	57	63	57	63	57	0.3	-0.3	0.2	-0.3	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11 NCA11	NCA11_050 NCA11_050	103-105 O'RIORDAN STREET MASCOT 103-105 O'RIORDAN STREET MASCOT		Residential Residential	5 N	63	57	63	57	63	57	63	57	0.4	0.2	0.2	-0.2	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_050	103-105 O'RIORDAN STREET MASCOT		Residential	6 N	63	57	64	57	64	58	64	58	0.4	0.6	0.2	-0.1	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_050	103-105 O'RIORDAN STREET MASCOT		Residential	7 N	64	58	64	58	64	58	64	58	0.5	-0.1	0.3	0	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_050 NCA11_050	103-105 O'RIORDAN STREET MASCOT 103-105 O'RIORDAN STREET MASCOT		Residential Residential	8 N	64	58	64	58	64	58	65	58	0.5	0.2	0.4	0	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_050	103-105 O'RIORDAN STREET MASCOT		Residential	10 N	64	58	65	58	65	59	65	59	0.5	0.4	0.3	-0.1	55	50	NO NO	NO	NO	NO NO	NO NO
NCA11	NCA11_050	103-105 O'RIORDAN STREET MASCOT		Residential	11 N	64	58	65	58	65	59	65	59	0.5	0.6	0.3	0	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_051	109-123 O'RIORDAN STREET MASCOT		Residential	0 S	62	56	62	56	62	55	62	56	0.7	0.6	-0.2	1.2	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_051 NCA11_051	109-123 O'RIORDAN STREET MASCOT 109-123 O'RIORDAN STREET MASCOT		Residential Residential	1 S	62	56 56	63	57 57	63	55 55	62	57 57	0.6	1.2	-0.1	1.4	55 55	50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_051	109-123 O RIORDAN STREET MASCOT		Residential	3 S	62	56	62	57	62	55	62	56	0.6	0.7	-0.2	1.4	55	50	NO NO	NO NO	NO	NO	NO
NCA11	NCA11_051	109-123 O'RIORDAN STREET MASCOT		Residential	4 S	61	55	62	56	62	55	61	56	0.7	1.3	-0.3	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_051	109-123 O'RIORDAN STREET MASCOT		Residential	5 S	61	55	62	56	61	54	61	56	0.6	1	-0.4	1.4	55	50	NO	NO	NO	NO	NO
NCA11 NCA11	NCA11_051 NCA11_052	109-123 O'RIORDAN STREET MASCOT 143 O'RIORDAN STREET MASCOT		Residential Residential	6 S	61 38	55 32	61 38	55 32	61 38	54 32	60 39	55 32	0.6	0.6	-0.4	0.3	55 50	50 44	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_053	149-161 O'RIORDAN STREET MASCOT		Residential	0 NW	42	36	42	36	42	36	43	37	0.7	0.6	0.6	1	54	48	NO	NO	NO	NO	NO
NCA11	NCA11_053	149-161 O'RIORDAN STREET MASCOT		Residential	1 NW	42	37	43	37	43	37	44	38	0.7	0.4	0.6	1.1	55	49	NO	NO	NO	NO	NO
NCA11	NCA11_053	149-161 O'RIORDAN STREET MASCOT		Residential	2 NW	43	37	44	38	43	37	44	38	0.8	1 0.6	0.7	1.1	55	49	NO NO	NO NO	NO	NO NO	NO NO
NCA11 NCA11	NCA11_053 NCA11_053	149-161 O'RIORDAN STREET MASCOT 149-161 O'RIORDAN STREET MASCOT		Residential Residential	3 NW 4 NW	44	38	44	38	44	38	45 45	39 40	0.8	1.2	0.8	1.2	55 55	50 50	NO NO	NO NO	NO NO	NO NO	NO NO
NCA11	NCA11_053	149-161 O'RIORDAN STREET MASCOT		Residential	5 NW	45	39	45	40	45	39	46	40	0.9	0.9	1	1.4	55	50	NO	NO	NO	NO	NO
NCA11	NCA11_053	149-161 O'RIORDAN STREET MASCOT		Residential	6 NW	45	40	46	40	46	40	47	41	1.1	0.6	1	1.4	55	50	NO	NO	NO	NO	NO
OSR	OSR_105 OSR_105	95 BURROWS ROAD ALEXANDRIA 95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr Little Learning School child care centr	Childcare Sleeping Childcare Sleeping	0 NE 1 NE	45 47	41	48 50	44	45 47	41	47	43	2.8	2.7	2.2	2.1	45 45		NO YES	NO NO	NO NO	NO NO	YES YES
OSR	OSR_105 OSR_105	95 BURROWS ROAD ALEXANDRIA 95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping Childcare Sleeping	2 NE	50	43	50	48	49	45	52	45	2.7	2.4	2.3	2.3	45	-	YES	NO NO	NO NO	NO NO	YES
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	0 SE	48	44	51	47	49	44	50	46	2.9	3	1.6	1.5	45	-	NO	NO	NO	NO	YES
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	1 SE	50	46	52	48	50	46	52	47	2.7	2.4	1.6	1.5	45		NO	NO	NO	NO	YES
OSR	OSR_125 OSR_130	4B HUNTLEY STREET ALEXANDRIA 4H HUNTLEY STREET ALEXANDRIA	Oz Education child care centre Child care centre	Childcare Sleeping Childcare Sleeping	2 SE 0 NW	51 45	47	54 48	50	51 45	47	53 48	49	2.7	2.7 3.1	3.7	3.5	45 45		NO NO	NO NO	NO NO	NO NO	YES
OSR	OSR_176	ST PETERS PUBLIC SCHOOL	Cinia care certae	School Classroom	0 NW	45	41	52	43	48	41	52	48	4.8	7.7	4.2	6.8	50		NO NO	NO NO	NO	NO	YES
OSR	OSR_176	ST PETERS PUBLIC SCHOOL		School Classroom	1 NE	50	44	55	52	51	45	56	52	5.5	7.8	5	6.9	50		YES	NO	NO	NO	YES
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0 NE	48	42	54	51	48	42	54	50	6.5	8.8	5.9	8	50		NO NO	NO	NO	NO	YES
OSR	OSR_177 OSR_178	ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL		School Classroom School Classroom	1 NE 0 SW	51	45	56 51	53 46	51 50	45 45	57 53	53 48	5.7	7.9	2.7	7.4	50		YES NO	NO NO	NO NO	NO NO	YES YES
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0 SE	62	57	63	57	63	58	63	58	0.5	0.6	0.6	0.9	50	50	NO NO	NO	NO	NO NO	NO NO
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0 SW	56	51	57	52	57	52	58	53	0.6	0.9	1.3	1.5	50	50	YES	NO	NO	NO	YES
OSR	OSR_216 OSR 216	187 PRINCES HIGHWAY ST PETERS 187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1 SE	64 58	59 53	64 58	59 53	64 58	59	65	60 55	0.5	0.4	1.5	0.8	50	50	NO YES	NO YES	NO NO	NO NO	NO YES
OSR	OSR_216 OSR_217	187 PRINCES HIGHWAY ST PETERS 187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church St Peters Anglican Church	Places of worship Places of worship	0 SE	56	53	58	53	58	53	58	53	0.6	1	1.5	1.7	50	50	YES	NO YES	NO NO	NO NO	YES
OSR	OSR_223	283 PRINCES HIGHWAY ST PETERS	Maggie's rundown guest house	Residential	0 SE	71	67	70	66	72	67	70	65	-0.9	-1.2	-2.3	-2.6	55	50	NO	NO	NO	NO	NO
OSR	OSR_223	283 PRINCES HIGHWAY ST PETERS	Maggie's rundown guest house	Residential	1 SE	72	67	71	66	72	67	70	65	-0.8	-1	-2.1	-2.5	55	50	NO NO	NO NO	NO NO	NO NO	NO NO
OSR	OSR_223	283 PRINCES HIGHWAY ST PETERS	Maggie's rundown guest house	Residential	2 SE	71	67	71	66	72	67	70	65	-0.7	-1.1	-2	-2.3	55	50	NO	NO	NO	NO	NO

						Facade		Ope	ning Year			Design	n Year			Increase (Bu	ild - No Build)		NCC	se criteria			Landa a sandalla di sanda di s	46	
						racade	No	Build	Bi	uild	No	Build	В	uild	Openi	ng Year	Design	n Year	NCG noi:	se criteria	Do noise levels exceed the cun adding ≥2dB to the		is the contribution from	the road project Acute?	
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type			Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night]		Day	Night	Consider further treatment?
					Floor	Orientation	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	Day	Night	≥ 65dB LAeq,15h	≥ 60dB LAeq,9h	
OSR	OSR_321	90-96 BOURKE ROAD ALEXANDRIA		Childcare Sleeping	0	NW	69	65	69	62	70	65	70	64	-0.3	-2.9	0.5	-1	45		NO	NO	NO	NO	NO
OSR	OSR_321	90-96 BOURKE ROAD ALEXANDRIA		Childcare Sleeping	1	NW	69	65	69	62	70	65	70	64	-0.4	-2.7	0.4	-1	45	-	NO	NO	NO	NO	NO
OSR	OSR_321	90-96 BOURKE ROAD ALEXANDRIA		Childcare Sleeping	2	NW	69	65	69	62	69	65	70	64	-0.3	-2.8	0.4	-0.9	45	-	NO	NO	NO	NO	NO
OSR	OSR_323	2/140 BOURKE ROAD ALEXANDRIA	Alexandria Early Education child care c	Childcare Sleeping	0	SW	58	53	57	50	58	53	58	53	-0.6	-2.7	0.5	-0.5	45	-	NO	NO	NO	NO	NO
OSR	OSR_323	2/140 BOURKE ROAD ALEXANDRIA	Alexandria Early Education child care c	Childcare Sleeping	1	SW	59	54	58	51	59	55	59	54	-0.6	-2.7	0.4	-0.7	45	-	NO	NO	NO	NO	NO
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	0	NW	46	42	47	41	47	42	49	43	0.7	-0.9	1.9	1.1	45	-	NO	NO	NO	NO	NO
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	0	NW	45	40	46	40	45	40	48	42	1.2	0.2	2.5	1.9	45	-	NO	NO	NO	NO	YES
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	1	NW	48	43	48	42	48	43	50	45	0.8	-0.5	2.1	1.3	45	-	YES	NO	NO	NO	YES
OSR	OSR_358	65 DOODY STREET ALEXANDRIA	Hillsong Church Alexandria	Places of worship	0	NW	59	55	58	51	59	55	59	54	-0.8	-3.8	0.2	-0.8	50	50	NO	NO	NO	NO	NO
OSR	OSR_358	65 DOODY STREET ALEXANDRIA	Hillsong Church Alexandria	Places of worship	1	NW	59	55	59	52	60	55	60	55	-0.8	-3	0.3	-0.7	50	50	NO	NO	NO	NO	NO
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	0	SE	40	34	40	34	40	35	41	35	0.6	0.6	0.6	0.4	45		NO	NO	NO	NO	NO
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	1	NE	42	37	43	37	42	37	43	38	0.8	0.6	1.4	1	45	-	NO	NO	NO	NO	NO
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	2	NW	47	42	48	43	47	42	50	45	1.8	1.1	3.3	3	45		YES	NO	NO	NO	YES

RENZO TONIN & ASSOCIATES 27 SEPTEMBER 2019

APPENDIX C Receivers requiring At-Property treatment

						Facade			
NCA	NCA ID	Receiver Address	Receiver Description	Receiver Type	Floor	Number	Orientation	Exceedance	Treatment category
NCA01	NCA01_087	105-155 EUSTON ROAD ALEXANDRIA		Residential	0	1	NW	-	No treatment
NCA01	NCA01_087	105-155 EUSTON ROAD ALEXANDRIA		Residential	0	2	NW	-	No treatment
NCA01	NCA01_087	105-155 EUSTON ROAD ALEXANDRIA		Residential	0	3	SE	16	2
NCA01 NCA01	NCA01_087 NCA01_087	105-155 EUSTON ROAD ALEXANDRIA 105-155 EUSTON ROAD ALEXANDRIA		Residential Residential	1	1	SE NW	-	No treatment
NCA01	NCA01_087	105-155 EUSTON ROAD ALEXANDRIA		Residential	1	2	NW	-	No treatment
NCA01	NCA01_087	105-155 EUSTON ROAD ALEXANDRIA		Residential	1	3	SE	16	2
NCA01	NCA01_087	105-155 EUSTON ROAD ALEXANDRIA		Residential	1	4	SE NW	16	2
NCA01	NCA01_087 NCA01_087	105-155 EUSTON ROAD ALEXANDRIA 105-155 EUSTON ROAD ALEXANDRIA		Residential Residential	2	2	NW	-	No treatment No treatment
NCA01	NCA01_087	105-155 EUSTON ROAD ALEXANDRIA		Residential	2	3	SE	15	2
NCA01	NCA01_087	105-155 EUSTON ROAD ALEXANDRIA		Residential	2	4	SE	15	2
NCA01	NCA01_088 NCA01_088	105-155 EUSTON ROAD ALEXANDRIA 105-155 EUSTON ROAD ALEXANDRIA		Residential Residential	0	3	NW SE	16	No treatment
NCA01	NCA01_088	105-155 EUSTON ROAD ALEXANDRIA		Residential	0	4	SW	11	2
NCA01	NCA01_088	105-155 EUSTON ROAD ALEXANDRIA		Residential	1	1	NW	-	No treatment
NCA01	NCA01_088	105-155 EUSTON ROAD ALEXANDRIA		Residential	1	3	SE	16	2
NCA01	NCA01_088	105-155 EUSTON ROAD ALEXANDRIA		Residential	1	4	SW	12	2 No treatment
NCA01	NCA01_088 NCA01_088	105-155 EUSTON ROAD ALEXANDRIA 105-155 EUSTON ROAD ALEXANDRIA		Residential Residential	2	3	NW SE	15	No treatment
NCA01	NCA01_088	105-155 EUSTON ROAD ALEXANDRIA		Residential	2	4	SW	12	2
NCA01	NCA01_088	105-155 EUSTON ROAD ALEXANDRIA		Residential	3	1	NW	-	No treatment
NCA01	NCA01_088	105-155 EUSTON ROAD ALEXANDRIA		Residential	3	2	NE	- 15	No treatment
NCA01	NCA01_088 NCA01_088	105-155 EUSTON ROAD ALEXANDRIA 105-155 EUSTON ROAD ALEXANDRIA		Residential Residential	3	3	SE SW	15 12	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	0	1	NE	7	1b
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	0	2	SE	14	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	0	3	SE	14	2
NCA01	NCA01_089 NCA01_089	93-103 EUSTON ROAD ALEXANDRIA 93-103 EUSTON ROAD ALEXANDRIA		Residential Residential	0	5	SE SE	15 16	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	0	7	NW	-	No treatment
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	0	8	NW	-	No treatment
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	0	9	NW	-	No treatment
NCA01	NCA01_089 NCA01_089	93-103 EUSTON ROAD ALEXANDRIA 93-103 EUSTON ROAD ALEXANDRIA		Residential Residential	1	10	NW NE	8	No treatment 1b
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	1	2	SE	15	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	1	3	SE	15	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	1	4	SE	15	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	1	5	SE	- -	2
NCA01	NCA01_089 NCA01_089	93-103 EUSTON ROAD ALEXANDRIA 93-103 EUSTON ROAD ALEXANDRIA		Residential Residential	1	7 8	NW NW	-	No treatment
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	1	9	NW	-	No treatment
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	1	10	NW	-	No treatment
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	2	1	NE	8 14	1b
NCA01	NCA01_089 NCA01_089	93-103 EUSTON ROAD ALEXANDRIA 93-103 EUSTON ROAD ALEXANDRIA		Residential Residential	2	3	SE SE	14	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	2	4	SE	15	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	2	5	SE	15	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	2	7	NW	-	No treatment
NCA01 NCA01	NCA01_089 NCA01_089	93-103 EUSTON ROAD ALEXANDRIA 93-103 EUSTON ROAD ALEXANDRIA		Residential Residential	2	9	NW NW	-	No treatment
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	2	10	NW	-	No treatment
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	3	1	NE	8	1b
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	3	2	SE	14	2
NCA01	NCA01_089 NCA01_089	93-103 EUSTON ROAD ALEXANDRIA 93-103 EUSTON ROAD ALEXANDRIA		Residential Residential	3	3	SE SE	14	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	3	5	SE	14	2
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	3	6	SW	-	No treatment
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	3	7	NW	-	No treatment
NCA01 NCA01	NCA01_089 NCA01_089	93-103 EUSTON ROAD ALEXANDRIA 93-103 EUSTON ROAD ALEXANDRIA		Residential Residential	3	9	NW NW	-	No treatment
NCA01	NCA01_089	93-103 EUSTON ROAD ALEXANDRIA		Residential	3	10	NW	-	No treatment
NCA01	NCA01_170	288-302 LAWRENCE STREET ALEXANDRIA		Residential	0	1	SE	-	No treatment
NCA01	NCA01_170	288-302 LAWRENCE STREET ALEXANDRIA		Residential	0	2	SW	5	1a
NCA01	NCA01_170 NCA01_170	288-302 LAWRENCE STREET ALEXANDRIA 288-302 LAWRENCE STREET ALEXANDRIA		Residential Residential	1	1	NW SE	2	No treatment
NCA01	NCA01_170	288-302 LAWRENCE STREET ALEXANDRIA		Residential	1	2	SW	7	1b
NCA01	NCA01_170	288-302 LAWRENCE STREET ALEXANDRIA		Residential	1	3	NW	-	No treatment
NCA01	NCA01_170	288-302 LAWRENCE STREET ALEXANDRIA		Residential	2	1	SE	3	1a
NCA01	NCA01_170 NCA01_170	288-302 LAWRENCE STREET ALEXANDRIA 288-302 LAWRENCE STREET ALEXANDRIA		Residential Residential	2	3	SW NW	7	1b No treatment
NCA01	NCA01_170 NCA03_010	63-65 CAMPBELL STREET ALEXANDRIA		Residential	0	3	SW	16.6	No treatment
NCA03	NCA03_010	63-65 CAMPBELL STREET ST PETERS		Residential	1	3	SW	17.2	2
NCA03	NCA03_011	67 CAMPBELL STREET ST PETERS		Residential	0	1	SW	16.1	2
NCA03	NCA03_011 NCA03_011	67 CAMPBELL STREET ST PETERS 67 CAMPBELL STREET ST PETERS		Residential Residential	1	1	NW SW	10.2	1b 2
NCA03	NCA03_011 NCA03_011	67 CAMPBELL STREET ST PETERS		Residential	1	2	NW	11.1	2
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS		Residential	0	1	Е	-	No treatment
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS		Residential	0	2	SE	3	1a
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS		Residential	0	3	SW	6.2	1b

	NCA02 444	CO. CO. LILLTCUINGON CERSET CE RETERS	Parishanti	-1 0		***		a b
NCA03	NCA03_114 NCA03_114	60-68 HUTCHINSON STREET ST PETERS 60-68 HUTCHINSON STREET ST PETERS	Residenti Residenti		5	W N	5.5	1b No treatment
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti		1	E	-	No treatment
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti		2	SE	3.9	1a
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti	al 1	3	SW	7.1	1b
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti	al 1	4	W	6.4	1b
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti	al 1	5	N	-	No treatment
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti	al 2	1	E	-	No treatment
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti	al 2	2	SE	4.5	1a
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti	al 2	3	SW	7.6	1b
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti		4	W	7	1b
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti		5	N	-	No treatment
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti		1	E	-	No treatment
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti		2	SE	5.1	1a
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti		3	SW	8.1	1b
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti		4	W	7.5	1b
NCA03	NCA03_114	60-68 HUTCHINSON STREET ST PETERS	Residenti		5	N	1.6	1a
NCA03	NCA03_119	69 HUTCHINSON STREET ST PETERS	Residenti		1	N	- 1	No treatment
NCA03	NCA03_119	69 HUTCHINSON STREET ST PETERS	Residenti		2	S	1	1a
NCA03	NCA03_120	71 HUTCHINSON STREET ST PETERS	Residenti		1	N	2	No treatment
NCA03	NCA03_120	71 HUTCHINSON STREET ST PETERS	Residenti		3	S	-	1a
NCA03	NCA03_120	71 HUTCHINSON STREET ST PETERS	Residenti Residenti		2	N 	-	No treatment
NCA03	NCA03_120	71 HUTCHINSON STREET ST PETERS				E	3	No treatment
NCA03 NCA03	NCA03_120	71 HUTCHINSON STREET ST PETERS	Residenti Residenti		3 1	N		1a No treatment
	NCA03_121	73 HUTCHINSON STREET ST PETERS			2	S	4	
NCA03 NCA03	NCA03_121 NCA03_121	73 HUTCHINSON STREET ST PETERS 73 HUTCHINSON STREET ST PETERS	Residenti Residenti		3	S	1	1a 1a
NCA03	NCA03_121 NCA03_121	73 HUTCHINSON STREET ST PETERS 73 HUTCHINSON STREET ST PETERS	Residenti		4	N N	-	No treatment
NCA03	NCA03_121 NCA03_121	73 HUTCHINSON STREET ST PETERS 73 HUTCHINSON STREET ST PETERS	Residenti		5	W	-	No treatment
NCA03	NCA03_121 NCA03_121	73 HUTCHINSON STREET ST PETERS	Residenti		1	N N	-	No treatment
NCA03	NCA03_121 NCA03_121	73 HUTCHINSON STREET ST PETERS 73 HUTCHINSON STREET ST PETERS	Residenti		2	S	4.4	1a
NCA03	NCA03_121	73 HUTCHINSON STREET ST PETERS	Residenti		3		2.8	1a
NCA03	NCA03_121	73 HUTCHINSON STREET ST PETERS	Residenti		4	N N	-	No treatment
NCA03	NCA03_121	73 HUTCHINSON STREET ST PETERS	Residenti		5	W	-	No treatment
NCA03	NCA03_122	77 HUTCHINSON STREET ST PETERS	Residenti		1	S	5.7	1b
NCA03	NCA03_122	77 HUTCHINSON STREET ST PETERS	Residenti		3	N	-	No treatment
NCA03	NCA03_122	77 HUTCHINSON STREET ST PETERS	Residenti	al 0	4	NE	-	No treatment
NCA03	NCA03_123	79 HUTCHINSON STREET ST PETERS	Residenti		1	N	-	No treatment
NCA03	NCA03_123	79 HUTCHINSON STREET ST PETERS	Residenti	al 0	2	S	6	1b
NCA03	NCA03_123	79 HUTCHINSON STREET ST PETERS	Residenti	al 0	3	W	-	No treatment
NCA03	NCA03_123	79 HUTCHINSON STREET ST PETERS	Residenti	al 0	4	W	-	No treatment
NCA03	NCA03_124	81 HUTCHINSON STREET ST PETERS	Residenti	al 0	1	N	-	No treatment
NCA03	NCA03_124	81 HUTCHINSON STREET ST PETERS	Residenti	al 0	2	NE	-	No treatment
NCA03	NCA03_124	81 HUTCHINSON STREET ST PETERS	Residenti	al 0	3	S	6	1b
NCA03	NCA03_125	83 HUTCHINSON STREET ST PETERS	Residenti	al 0	1	S	7	1b
NCA03	NCA03_125	83 HUTCHINSON STREET ST PETERS	Residenti	al 0	2	W	-	No treatment
NCA03	NCA03_125	83 HUTCHINSON STREET ST PETERS	Residenti	al 0	3	N	-	No treatment
NCA03	NCA03_126	85 HUTCHINSON STREET ST PETERS	Residenti	al 0	1	E	-	No treatment
NCA03	NCA03_126	85 HUTCHINSON STREET ST PETERS	Residenti	al 0	2	S	7	1b
NCA03	NCA03_126	85 HUTCHINSON STREET ST PETERS	Residenti	al 0	4	N	-	No treatment
NCA03	NCA03_127	87 HUTCHINSON STREET ST PETERS	Residenti	al 0	1	N	-	No treatment
NCA03	NCA03_127	87 HUTCHINSON STREET ST PETERS	Residenti	al 0	2	S	8	1b
NCA03	NCA03_139	15-17 LACKEY STREET ST PETERS	Residenti	al O	1	NE	-	No treatment
NCA03	NCA03_139	15-17 LACKEY STREET ST PETERS	Residenti	al 0	3	SW	-	No treatment
NCA03	NCA03_139	15-17 LACKEY STREET ST PETERS	Residenti	al 0	5	NE	-	No treatment
NCA03	NCA03_139	15-17 LACKEY STREET ST PETERS	Residenti	al 0	6	SE	-	No treatment
NCA03	NCA03_139	15-17 LACKEY STREET ST PETERS	Residenti	al 1	1	NE	-	No treatment
NCA03	NCA03_139	15-17 LACKEY STREET ST PETERS	Residenti		3	SW	0.9	1a
NCA03	NCA03_139	15-17 LACKEY STREET ST PETERS	Residenti		5	NE	-	No treatment
NCA03	NCA03_139	15-17 LACKEY STREET ST PETERS	Residenti		6	SE	-	No treatment
NCA03	NCA03_140	16 LACKEY STREET ST PETERS	Residenti		1	NE	-	No treatment
NCA03	NCA03_140	16 LACKEY STREET ST PETERS	Residenti	al 0	3	NW	6.5	1b
NCA03		1C LACVEY CEREET CE RETERE		al -		• • •		No treatment
	NCA03_140	16 LACKEY STREET ST PETERS	Residenti		4	NE SE		
NCA03	NCA03_140	16 LACKEY STREET ST PETERS	Residenti Residenti	al 0	5	SE	-	No treatment
NCA03	NCA03_140 NCA03_140	16 LACKEY STREET ST PETERS 16 LACKEY STREET ST PETERS	Residenti Residenti Residenti	al 0 al 1	5 1	SE NE	-	No treatment No treatment
NCA03	NCA03_140 NCA03_140 NCA03_140	16 LACKEY STREET ST PETERS 16 LACKEY STREET ST PETERS 16 LACKEY STREET ST PETERS	Residenti Residenti Residenti Residenti	al 0 al 1 al 1	5 1 3	SE NE NW	- - 7.4	No treatment No treatment 1b
NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140	16 LACKEY STREET ST PETERS	Residenti Residenti Residenti Residenti Residenti	al 0 al 1 al 1 al 1	5 1 3 4	SE NE NW	- - 7.4 -	No treatment No treatment 1b No treatment
NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140	16 LACKEY STREET ST PETERS	Residenti Residenti Residenti Residenti Residenti	al 0 al 1 al 1 al 1	5 1 3 4 5	SE NE NW NE SE	- - 7.4	No treatment No treatment 1b No treatment No treatment
NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS	Residenti Residenti Residenti Residenti Residenti Residenti	al 0 al 1 al 1 al 1 al 1 al 0	5 1 3 4 5	SE NE NW NE SE NE	- - 7.4 - -	No treatment No treatment 1b No treatment No treatment No treatment
NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS	Residenti Residenti Residenti Residenti Residenti Residenti Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 0 al 0	5 1 3 4 5 1	SE NE NW NE SE NE SE NE SW	- - 7.4 - -	No treatment No treatment 1b No treatment No treatment No treatment 1a
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 0 al 0 al 0	5 1 3 4 5 1 2	SE NE NW NE SE NE SW NE	- 7.4 - - - 1.4	No treatment No treatment 1b No treatment No treatment No treatment No treatment 1a No treatment
NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS	Residenti Residenti Residenti Residenti Residenti Residenti Residenti	al 0 al 1 al 1 al 1 al 1 al 0 al 0 al 0 al 1	5 1 3 4 5 1	SE NE NW NE SE NE SE NE SW	- 7.4 - - - 1.4	No treatment No treatment 1b No treatment No treatment No treatment 1a
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_141	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 0 al 1 al 1 al 1 al 1 al 0 al 0 al 1 al 1	5 1 3 4 5 1 2 1	SE NE NW NE SE NE SW NE SW	- 7.4 - - - 1.4	No treatment No treatment 1b No treatment No treatment No treatment 1a No treatment 1a
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 0 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 1	5 1 3 4 5 1 2 1 2	SE NE NW NE SE NE SW NE	- 7.4 - - - 1.4 - 2.7	No treatment No treatment 1b No treatment No treatment No treatment 1a No treatment 1a No treatment
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 0 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 0 al 1	5 1 3 4 5 1 2 1 2	SE NE NW NE SE NE SW NE SW NE SW NE SW	- 7.4 - - - 1.4 - 2.7	No treatment No treatment 1b No treatment No treatment No treatment 1a No treatment 1a No treatment 1a
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 0 al 0 al 0 al 1 al 1 al 1 al 1	5 1 3 4 5 1 2 1 2 1 2	SE NE NW NE SE NE SW NE SW NE SW NE	- 7.4 - - - 1.4 - 2.7 - 3	No treatment No treatment 1b No treatment No treatment 1a No treatment
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 1 al 1 al 1 al 1 al 0 al 1 al 0	5 1 3 4 5 1 2 1 2 1 2 1 2	SE NE NW NE SE NE SW NE	- 7.4 - - - 1.4 - 2.7 - 3 -	No treatment No treatment 1b No treatment No treatment No treatment 1a
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 1 al 1 al 0 al 1 al 0 al 0 al 0 al 0 al 0	5 1 3 4 5 1 2 1 2 1 2 1 2	SE NE NW NE SE NE SW NE SW NE SW NE SW NE SW NE	- 7.4 - - - 1.4 - 2.7 - 3 - 4	No treatment No treatment 1b No treatment No treatment No treatment 1a No treatment
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_143 NCA03_143	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 1 al 1 al 0 al 1 al 0 al 0 al 1	5 1 3 4 5 1 2 1 2 1 2 1 2 1 2	SE NE NW NE SE NE SW	- 7.4 - 7.4 1.4 - 2.7 - 3 - 4	No treatment No treatment 1b No treatment No treatment No treatment 1a
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_143 NCA03_143 NCA03_143	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 22 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 1 al 1 al 0 al 0 al 1 al 0 al 1	5 1 3 4 5 1 2 1 2 1 2 1 2 1 2 1	SE NE NW NE SE NE SW NE	- 7.4 	No treatment No treatment 1b No treatment No treatment No treatment 1a No treatment
NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_143 NCA03_143 NCA03_143 NCA03_143	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 1 al 0 al 1 al 0 al 1	5 1 3 4 5 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	SE NE NW NE SE NE SW	7.4 1.4 - 2.7 - 3 - 4 - 5	No treatment No treatment 1b No treatment No treatment No treatment 1a
NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_143 NCA03_143 NCA03_143 NCA03_143 NCA03_143 NCA03_144	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 22 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 24 LACKEY STREET ST PETERS 25 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 1 al 0 al 1 al 1 al 1 al 1 al 0 al 1 al 1 al 1 al 0 al 0 al 1 al 1 al 0 al 0 al 1	5 1 3 4 5 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	SE NE NW NE SE NE SW NE	- - 7.4 - - - 1.4 - 2.7 - 3 - 4 - 4 - 5	No treatment No treatment 1b No treatment No treatment No treatment 1a No treatment
NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_143 NCA03_143 NCA03_143 NCA03_143 NCA03_143 NCA03_144 NCA03_144 NCA03_144	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 22 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 24 LACKEY STREET ST PETERS 25 LACKEY STREET ST PETERS 26 LACKEY STREET ST PETERS 27 LACKEY STREET ST PETERS 28 LACKEY STREET ST PETERS 29 LACKEY STREET ST PETERS 20 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 0 al 1 al 0 al 0 al 1 al 1 al 0 al 1 al 1 al 0 al 1 al 1 al 0 al 0 al 1 al 1 al 0 al 0 al 1	5 1 3 4 5 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	SE NE NW NE SE NE SW	7.4 1.4 - 2.7 - 3 - 4 - 5 - 5	No treatment No treatment 1b No treatment No treatment No treatment 1a
NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_143 NCA03_143 NCA03_143 NCA03_143 NCA03_144 NCA03_144 NCA03_144 NCA03_144	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 24 LACKEY STREET ST PETERS 25 LACKEY STREET ST PETERS 26 LACKEY STREET ST PETERS 27 LACKEY STREET ST PETERS 28 LACKEY STREET ST PETERS 29 LACKEY STREET ST PETERS 20 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 22 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 1 al 1 al 1 al 1 al 1	5 1 3 4 5 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	SE NE NW NE SE NE SW NE	- 7.4 1.4 1.4 2.7 - 3 - 4 4 - 5 - 5 - 5	No treatment No treatment 1b No treatment No treatment No treatment 1a No treatment
NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_143 NCA03_143 NCA03_143 NCA03_143 NCA03_144 NCA03_144 NCA03_144 NCA03_144 NCA03_144	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 22 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 24 LACKEY STREET ST PETERS 25 LACKEY STREET ST PETERS 26 LACKEY STREET ST PETERS 27 LACKEY STREET ST PETERS 28 LACKEY STREET ST PETERS 29 LACKEY STREET ST PETERS 20 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 22 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 24 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 1 al 0 al 1 al 0 al 0 al 1 al 1 al 1 al 0 al 1 al 1 al 1 al 0 al 1 al 1 al 0 al 1 al 1 al 0 al 1	5 1 3 4 5 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	SE NE NW NE SE NE SW	- 7.4 1.4 2.7 - 3 - 4 5 - 5 - 5	No treatment No treatment 1b No treatment No treatment No treatment 1a
NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_143 NCA03_143 NCA03_143 NCA03_143 NCA03_144 NCA03_144 NCA03_144 NCA03_144 NCA03_144 NCA03_144	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 22 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 24 LACKEY STREET ST PETERS 25 LACKEY STREET ST PETERS 26 LACKEY STREET ST PETERS 27 LACKEY STREET ST PETERS 28 LACKEY STREET ST PETERS 29 LACKEY STREET ST PETERS 20 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 22 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 24 LACKEY STREET ST PETERS 25 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 1 al 1 al 0 al 1 al 1 al 0 al 1 al 1 al 0 al 1 al 1 al 1 al 0 al 1 al 1 al 1 al 0 al 1 al 1 al 0 al 1 al 1 al 0 al 1	5 1 3 4 5 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	SE NE NW NE SE NE SW NE	7.4 1.4 - 2.7 - 3 - 4 - 5 - 5 - 5	No treatment No treatment 1b No treatment No treatment No treatment 1a
NCA03	NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_140 NCA03_141 NCA03_141 NCA03_141 NCA03_141 NCA03_142 NCA03_142 NCA03_142 NCA03_142 NCA03_143 NCA03_143 NCA03_143 NCA03_143 NCA03_144 NCA03_145 NCA03_145	16 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 19 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 22 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 24 LACKEY STREET ST PETERS 25 LACKEY STREET ST PETERS 26 LACKEY STREET ST PETERS 27 LACKEY STREET ST PETERS 28 LACKEY STREET ST PETERS 29 LACKEY STREET ST PETERS 20 LACKEY STREET ST PETERS 21 LACKEY STREET ST PETERS 22 LACKEY STREET ST PETERS 23 LACKEY STREET ST PETERS 24 LACKEY STREET ST PETERS 25 LACKEY STREET ST PETERS 26 LACKEY STREET ST PETERS	Residenti	al 0 al 1 al 1 al 1 al 1 al 1 al 1 al 0 al 0 al 0 al 1 al 1 al 0 al 1 al 1 al 0 al 0 al 1 al 1 al 0 al 0 al 1	5 1 3 4 5 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	SE NE NW NE SE NE SW	7.4 1.4 2.7 - 3 - 4 - 5 - 5 - 5 - 5	No treatment No treatment 1b No treatment No treatment No treatment 1a

NCA03 NCA03								
NCA03	NCA03 146	29 LACKEY STREET ST PETERS	Residential	0	4	SW	5	1a
							-	
NCA03	NCA03_146	29 LACKEY STREET ST PETERS	Residential	1	2	NE		No treatment
	NCA03_146	29 LACKEY STREET ST PETERS	Residential	1	4	SW	6	1b
NCA03	NCA03_147	31 LACKEY STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA03	NCA03_147	31 LACKEY STREET ST PETERS	Residential	0	3	SW	5	1a
NCA03	NCA03_147	31 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
NCA03	NCA03_147	31 LACKEY STREET ST PETERS	Residential	1	3	SW	6	1b
NCA03	NCA03_148	33 LACKEY STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA03	NCA03_148	33 LACKEY STREET ST PETERS	Residential	0	3	SW	5	1a
NCA03	NCA03_148	33 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
NCA03	NCA03_148	33 LACKEY STREET ST PETERS	Residential	1	3	SW	6	1b
NCA03	NCA03_149	35 LACKEY STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA03	NCA03_149	35 LACKEY STREET ST PETERS	Residential	0	2	SW	5	1a
NCA03	NCA03_149	35 LACKEY STREET ST PETERS	Residential	0	3	NW	-	No treatment
NCA03	NCA03_149	35 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
NCA03	NCA03_149	35 LACKEY STREET ST PETERS	Residential	1	2	SW	6	1b
NCA03	NCA03_149	35 LACKEY STREET ST PETERS	Residential	1	3	NW	-	No treatment
NCA03	NCA03_150	37 LACKEY STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA03	NCA03_150	37 LACKEY STREET ST PETERS	Residential	0	2	SE	-	No treatment
NCA03	NCA03_150	37 LACKEY STREET ST PETERS	Residential	0	3	SW	5	1a
NCA03	NCA03_150	37 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
NCA03	NCA03_150	37 LACKEY STREET ST PETERS	Residential	1	2	SE	-	No treatment
NCA03	NCA03_150	37 LACKEY STREET ST PETERS	Residential	1	3	SW	6	1b
							_	
NCA03	NCA03_151	39 LACKEY STREET ST PETERS	Residential	0	1	NE		No treatment
NCA03	NCA03_151	39 LACKEY STREET ST PETERS	Residential	0	2	SW	5	1a
NCA03	NCA03_151	39 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
					2		6	
NCA03	NCA03_151	39 LACKEY STREET ST PETERS	Residential	1		SW		1b
NCA03	NCA03_152	41 LACKEY STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA03	NCA03_152	41 LACKEY STREET ST PETERS	Residential	0	2	SW	6	1b
NCA03	NCA03_152	41 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
NCA03	NCA03_152	41 LACKEY STREET ST PETERS	Residential	1	2	SW	6	1b
NCA03	NCA03_153	43 LACKEY STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA03	NCA03_153	43 LACKEY STREET ST PETERS	Residential	0	3	SW	6	1b
NCA03	NCA03_153	43 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
NCA03	NCA03_153	43 LACKEY STREET ST PETERS	Residential	1	3	SW	7	1b
NCA03	NCA03_154	45 LACKEY STREET ST PETERS	Residential	0	1	NE	_	No treatment
NCA03	NCA03_154	45 LACKEY STREET ST PETERS	Residential	0	2	SW	6	1b
NCA03	NCA03_154	45 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
NCA03	NCA03_154	45 LACKEY STREET ST PETERS	Residential	1	2	SW	7	1b
NCA03	NCA03_155	47 LACKEY STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA03	NCA03_155	47 LACKEY STREET ST PETERS	Residential	0	3	SW	6	1b
NCA03	NCA03_155	47 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
						SW	7	
NCA03	NCA03_155	47 LACKEY STREET ST PETERS	Residential	1	3			1b
NCA03	NCA03_156	49 LACKEY STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA03	NCA03_156	49 LACKEY STREET ST PETERS	Residential	0	2	SW	6	1b
NCA03	NCA03_156	49 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
							7	
NCA03	NCA03_156	49 LACKEY STREET ST PETERS	Residential	1	2	SW		1b
NCA03	NCA03_157	51 LACKEY STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA03	NCA03_157	51 LACKEY STREET ST PETERS	Residential	0	2	SW	6	1b
NCA03		51 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
	NCA03_157							
NCA03	NCA03_157	51 LACKEY STREET ST PETERS	Residential	1	2	SW	7	1b
NCA03	NCA03_158	53 LACKEY STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA03	NCA03_158	53 LACKEY STREET ST PETERS	Residential	0	3	SW	6	1b
NCA03	NCA03_158	53 LACKEY STREET ST PETERS	Residential	1	1	NE	-	No treatment
NCA03	NCA03_158	53 LACKEY STREET ST PETERS	Residential	1	3	SW	7	1b
NCA03	NCA03_159	55 LACKEY STREET ST PETERS	Residential	0	1	N	-	No treatment
							6	
NCA03	NCA03_159	55 LACKEY STREET ST PETERS	Residential	0	3	SW		1b
NCA03	NCA03_159	55 LACKEY STREET ST PETERS	Residential	0	4	NW	-	No treatment
NCA03	NCA03_159	55 LACKEY STREET ST PETERS	Residential	1	1	N	-	No treatment
NCA03	NCA03_159	55 LACKEY STREET ST PETERS	Residential	1	3	SW	7	1b
NCA03	NCA03_159	55 LACKEY STREET ST PETERS	Residential	1	4	NW	-	No treatment
NCA03	NCA03_159	55 LACKEY STREET ST PETERS	 Residential	2	1	N	-	No treatment
NCA03	NCA03_159	55 LACKEY STREET ST PETERS	Residential	2	2	SE	-	No treatment
				2	3	SW	7	
NCAOS	NCA03_159	55 LACKEY STREET ST PETERS	Residential					1b
NCA03	NCA03_159	55 LACKEY STREET ST PETERS	Residential	2	4	NW	1	1a
NCA03	NCA03_195					Е	-	No treatment
	110/100_100	124 MAY STREET ST PETERS	Residential	0	1			
NCA03 NCA03							9.9	1h
NCA03 NCA03	NCA03_195	124 MAY STREET ST PETERS	Residential	0	2	S	9.9	1b
NCA03 NCA03							9.9	1b No treatment
NCA03 NCA03	NCA03_195	124 MAY STREET ST PETERS	Residential	0	2	S		
NCA03 NCA03 NCA03	NCA03_195 NCA03_195 NCA03_195	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS	Residential Residential	0	2	S N	-	No treatment
NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195	124 MAY STREET ST PETERS	Residential Residential Residential Residential	0 0 0	2 4 5 6	S N E E	- - -	No treatment No treatment No treatment
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS	Residential Residential Residential Residential Residential	0 0 0 0	2 4 5 6 1	S N E E S	10.9	No treatment No treatment No treatment 2
NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195	124 MAY STREET ST PETERS	Residential Residential Residential Residential	0 0 0	2 4 5 6	S N E E	- - -	No treatment No treatment No treatment
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS	Residential Residential Residential Residential Residential	0 0 0 0	2 4 5 6 1	S N E E S	10.9	No treatment No treatment No treatment 2
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 126 MAY STREET ST PETERS 126 MAY STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential	0 0 0 0 0	2 4 5 6 1 2	S N E E S W	- - - 10.9 5.3	No treatment No treatment No treatment 2 1a 1a
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential Residential	0 0 0 0 0 0 0	2 4 5 6 1 2 3 4	S N E E S W S	- - 10.9 5.3 3.1	No treatment No treatment No treatment 2 1a 1a No treatment
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5	S N E E S W S W W	- - - 10.9 5.3	No treatment No treatment No treatment 2 1a 1a
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential Residential	0 0 0 0 0 0 0	2 4 5 6 1 2 3 4	S N E E S W S	- - 10.9 5.3 3.1	No treatment No treatment No treatment 2 1a 1a No treatment
NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03 NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6	S N E E S W S W N	- - 10.9 5.3 3.1 - -	No treatment No treatment 2 1a 1a No treatment No treatment
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 128 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6	S N E E S W S W N E	- - 10.9 5.3 3.1 - - - 3.1	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment No treatment
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 128 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6	S N E E S W S W N E S S	- - 10.9 5.3 3.1 - - - 3.1 12.8	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment No treatment 1a 2
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 128 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6	S N E E S W S W N E	- - 10.9 5.3 3.1 - - - 3.1	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment No treatment
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197	124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 128 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6	S N E E S W S W N E S S	- - 10.9 5.3 3.1 - - - 3.1 12.8	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment No treatment 1a 2
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_198	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 4 1	S N E E S W S W N E S W W N W N E S N W	- - 10.9 5.3 3.1 - - - 3.1 12.8 - 15.7	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment 1a 2 No treatment 2
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_198 NCA03_198	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS 130 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 4 1 2 2	S N E E S W S W N E S N N E S N N N N N N N N N N N N N	- - 10.9 5.3 3.1 - - - 3.1 12.8 - 15.7	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment 1a 2 No treatment 2 2 1a 2 2 2
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_198	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 4 1	S N E E S W S W N E S W W N W N E S N W	- - 10.9 5.3 3.1 - - - 3.1 12.8 - 15.7	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment 1a 2 No treatment 2
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_198 NCA03_198	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS 130 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 4 1 2 2	S N E E S W S W N E S N N E S N N N N N N N N N N N N N	- - 10.9 5.3 3.1 - - - 3.1 12.8 - 15.7	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment 1a 2 No treatment 2 2 1a 2 2 2
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_197 NCA03_197 NCA03_198 NCA03_198 NCA03_198 NCA03_198	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS 130 MAY STREET ST PETERS 130 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 4 1 2 3 4	S N E E S W S W N N E S N N S N S N N N N S	- - 10.9 5.3 3.1 - - 3.1 12.8 - 15.7 15.7	No treatment No treatment No treatment 2 1a 1a No treatment No treatment No treatment 1a 2 No treatment 2 No treatment 2 No treatment 2 No treatment 2
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_197 NCA03_198 NCA03_198 NCA03_198	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS 130 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 4 1 2 3	S N E E S W S W N E S W N N N N	10.9 5.3 3.1 3.1 12.8 - 15.7	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment 1a 2 No treatment 2 No treatment 2 No treatment 2 No treatment
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_197 NCA03_197 NCA03_198 NCA03_198 NCA03_198 NCA03_198	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS 130 MAY STREET ST PETERS 130 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 4 1 2 3 4	S N E E S W S W N N E S N N S N S N N S N N N N S	- - 10.9 5.3 3.1 - - 3.1 12.8 - 15.7 15.7	No treatment No treatment Vo treatment 2 1a 1a No treatment No treatment No treatment 1a 2 No treatment 2 No treatment 2 No treatment 2 No treatment 2
NCA03	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_197 NCA03_197 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS	Residential	0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 4 1 2 3 4 1	S N E E S W S W N E S N N E S N W N N N N N N N N N N N N N N N N N	- 10.9 5.3 3.1 3.1 12.8 - 15.7 15.7 14.9	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment 1a 2 No treatment 2 No treatment 2 No treatment 2 2 No treatment 2 2 No treatment 2
NCA03 NCA04 NCA04 NCA04	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_197 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA04_001 NCA04_001 NCA04_001	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS 2 CAMPBELL ROAD ALEXANDRIA 2 CAMPBELL ROAD ALEXANDRIA	Residential	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 3 4 1 2 3 4 1 2 3	S N E E S W S W N E S N W N N E S N W N N N N N N N N N N N N N N N N N	10.9 5.3 3.1 3.1 12.8 - 15.7 15.7 - 14.9 14.4 8.8 6.4	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment 1a 2 No treatment 2 No treatment 2 10 10 10 10 10 10 10 10 10 10 10 10 10
NCA03 NCA04 NCA04 NCA04 NCA04	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_197 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA04_001 NCA04_001 NCA04_001 NCA04_001	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS 2 CAMPBELL ROAD ALEXANDRIA 2 CAMPBELL ROAD ALEXANDRIA	Residential	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 3 4 1 2 3 4 1 2 3 4	S N E E S W W N N N S W N N N S W N N N N S W N N N N	10.9 5.3 3.1 3.1 12.8 - 15.7 15.7 - 14.9 14.4 8.8 6.4 18	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment 1a 2 No treatment 2 No treatment 2 1 1b 1b 2
NCA03 NCA04 NCA04 NCA04	NCA03_195 NCA03_195 NCA03_195 NCA03_195 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_196 NCA03_197 NCA03_197 NCA03_197 NCA03_197 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA03_198 NCA04_001 NCA04_001 NCA04_001	124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 124 MAY STREET ST PETERS 126 MAY STREET ST PETERS 128 MAY STREET ST PETERS 130 MAY STREET ST PETERS 2 CAMPBELL ROAD ALEXANDRIA 2 CAMPBELL ROAD ALEXANDRIA	Residential	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 4 5 6 1 2 3 4 5 6 1 2 3 4 1 2 3 4 1 2 3	S N E E S W S W N E S N W N N E S N W N N N N N N N N N N N N N N N N N	10.9 5.3 3.1 3.1 12.8 - 15.7 15.7 - 14.9 14.4 8.8 6.4	No treatment No treatment 2 1a 1a No treatment No treatment No treatment No treatment 1a 2 No treatment 2 No treatment 2 10 10 10 10 10 10 10 10 10 10 10 10 10

NCA04	NCA04_001	2 CAMPBELL ROAD ALEXANDRIA	Residential	1	3	NE	8	1b
NCA04	NCA04_001	2 CAMPBELL ROAD ALEXANDRIA	Residential	1	4	SW	19	2
NCA04	NCA04_001	2 CAMPBELL ROAD ALEXANDRIA	Residential	2	1	W	16	2
NCA04	NCA04_001	2 CAMPBELL ROAD ALEXANDRIA	Residential	2	2	N	12	2
NCA04	NCA04_001	2 CAMPBELL ROAD ALEXANDRIA	Residential	2	3	NE	10	1b
NCA04	NCA04_001	2 CAMPBELL ROAD ALEXANDRIA	Residential	2	4	SW	19	2
NCA04	NCA04_002	4 CAMPBELL ROAD ALEXANDRIA	Residential	0	2	NE	6	1b
NCA04	NCA04_002	4 CAMPBELL ROAD ALEXANDRIA	Residential	0	4	SW	18	2
NCA04	NCA04_002	4 CAMPBELL ROAD ALEXANDRIA	Residential	1	2	NE	8	1b
NCA04	NCA04_002	4 CAMPBELL ROAD ALEXANDRIA	Residential	1	4	SW	19	2
NCA04	NCA04_002	4 CAMPBELL ROAD ALEXANDRIA	Residential	2	2	NE	9	1b
NCA04	NCA04_002	4 CAMPBELL ROAD ALEXANDRIA	Residential	2	4	SW	19	2
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	0	2	NE	2	1a
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	0	4	SW	-	No treatment
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	0	5	SE	-	No treatment
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	0	6	NE	-	No treatment
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	0	8	SW	18	2
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	1	1	NW	-	No treatment
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	1	2	NE SE	6 1	1b
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	1	3	SE		1a
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	1	4	SW	-	No treatment
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	1	5	SE	-	No treatment
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	1	6	NE SW/	19	No treatment
NCA04	NCA04_003	6 CAMPBELL ROAD ALEXANDRIA	Residential	1	8	SW	2	2
NCA04	NCA04_004	8 CAMPBELL ROAD ALEXANDRIA	Residential	0	2	NE SW	18	1a 2
NCA04	NCA04_004	8 CAMPBELL ROAD ALEXANDRIA	Residential		3	SW	3	
NCA04	NCA04_004	8 CAMPBELL ROAD ALEXANDRIA	Residential	1	2	NE SW		1a
NCA04	NCA04_004	8 CAMPBELL ROAD ALEXANDRIA	Residential	2	3	SW	19 7	2 1h
NCA04	NCA04_004	8 CAMPBELL ROAD ALEXANDRIA	Residential	2	2	NE SW/	19	1b
NCA04	NCA04_004	8 CAMPBELL ROAD ALEXANDRIA	Residential	2	3	SW	- 19	No treatment
NCA04	NCA04_005	10 CAMPBELL ROAD ALEXANDRIA	Residential	0	1	NE SW/	18	No treatment
NCA04	NCA04_005	10 CAMPBELL ROAD ALEXANDRIA	Residential	0	3	SW	2	2
NCA04	NCA04_005	10 CAMPBELL ROAD ALEXANDRIA	Residential	1	1 2	NE SW/	19	1a
NCA04 NCA04	NCA04_005 NCA04_005	10 CAMPBELL ROAD ALEXANDRIA 10 CAMPBELL ROAD ALEXANDRIA	Residential Residential	2	1	SW NE	7	2 1b
NCA04	NCA04_005	10 CAMPBELL ROAD ALEXANDRIA		2	3	SW	19	2
			Residential				2	
NCA04	NCA04_006	12 CAMPBELL ROAD ALEXANDRIA	Residential	0	1	NE SW	18	1a
NCA04	NCA04_006	12 CAMPBELL ROAD ALEXANDRIA 12 CAMPBELL ROAD ALEXANDRIA	Residential Residential	0	3	SW	4	2
NCA04	NCA04_006			1	1	NE SW	19	1a
NCA04	NCA04_006	12 CAMPBELL ROAD ALEXANDRIA	Residential	1	3	SW	7	2
NCA04	NCA04_006 NCA04_006	12 CAMPBELL ROAD ALEXANDRIA 12 CAMPBELL ROAD ALEXANDRIA	Residential	2	1	NE	8	1b
NCA04			Residential	2	3	SE	19	1b
NCA04	NCA04_006	12 CAMPBELL ROAD ALEXANDRIA	Residential	0	1	SW NE	2	
NCA04 NCA04	NCA04_007 NCA04_007	14 CAMPBELL ROAD ALEXANDRIA 14 CAMPBELL ROAD ALEXANDRIA	Residential Residential	0	3	SW	18	1a 2
NCA04	NCA04_007	14 CAMPBELL ROAD ALEXANDRIA	Residential	1	1	NE NE	4	1a
NCA04	NCA04_007	14 CAMPBELL ROAD ALEXANDRIA	Residential	1	3	SW	19	2
NCA04	NCA04_008	16 CAMPBELL ROAD ALEXANDRIA	Residential	0	1	NE NE	-	No treatment
NCA04	NCA04_008	16 CAMPBELL ROAD ALEXANDRIA	Residential	0	2	SW	18	2
NCA04	NCA04_008	16 CAMPBELL ROAD ALEXANDRIA	Residential	1	1	NE NE	-	No treatment
NCA04	NCA04_008	16 CAMPBELL ROAD ALEXANDRIA	Residential	1	2	SW	19	2
NCA04	NCA04_009	18 CAMPBELL ROAD ALEXANDRIA	Residential	0	1	NE	3	1a
NCA04	NCA04_009	18 CAMPBELL ROAD ALEXANDRIA	Residential	0	3	SW	18	2
NCA04	NCA04_009	18 CAMPBELL ROAD ALEXANDRIA	Residential	1	1	NE NE	4	1a
NCA04	NCA04_009	18 CAMPBELL ROAD ALEXANDRIA	Residential	1	3	SW	19	2
NCA04	NCA04_009	18 CAMPBELL ROAD ALEXANDRIA	Residential	2	1	NE	8	1b
NCA04	NCA04_009	18 CAMPBELL ROAD ALEXANDRIA	Residential	2	3	SW	19	2
NCA04	NCA04_009	18 CAMPBELL ROAD ALEXANDRIA	Residential	2	4	NW	8	1b
NCA04	NCA04_010	20 CAMPBELL ROAD ALEXANDRIA	Residential	0	1	NE	3	1a
NCA04	NCA04_010	20 CAMPBELL ROAD ALEXANDRIA	Residential	0	3	SW	18	2
NCA04	NCA04_010	20 CAMPBELL ROAD ALEXANDRIA	Residential	1	1	NE	4	1a
NCA04	NCA04_010	20 CAMPBELL ROAD ALEXANDRIA	Residential	1	3	SW	19	2
NCA04	NCA04_010	20 CAMPBELL ROAD ALEXANDRIA	Residential	2	1	NE NE	8	1b
NCA04	NCA04_010	20 CAMPBELL ROAD ALEXANDRIA	Residential	2	3	SW	19	2
NCA04	NCA04_011	22 CAMPBELL ROAD ALEXANDRIA	Residential	0	2	NE	3	
NCA04	NCA04_011	22 CAMPBELL ROAD ALEXANDRIA	Residential	0	4	SW	18	2
NCA04	NCA04_011	22 CAMPBELL ROAD ALEXANDRIA	Residential	1	2	NE	5	1a
NCA04	NCA04_011	22 CAMPBELL ROAD ALEXANDRIA	Residential	1	4	SW	19	2
NCA04	NCA04_011	22 CAMPBELL ROAD ALEXANDRIA	Residential	2	2	NE	8	1b
NCA04	NCA04_011	22 CAMPBELL ROAD ALEXANDRIA	Residential	2	3	SE	9	1b
NCA04	NCA04_011	22 CAMPBELL ROAD ALEXANDRIA	Residential	2	4	SW	19	2
NCA04	NCA04_012	24 CAMPBELL ROAD ALEXANDRIA	Residential	0	1	NE	-	No treatment
NCA04	NCA04_012	24 CAMPBELL ROAD ALEXANDRIA	Residential	0	2	SW	18	2
NCA04	NCA04_012	24 CAMPBELL ROAD ALEXANDRIA	Residential	1	1	NE	-	No treatment
NCA04	NCA04_012	24 CAMPBELL ROAD ALEXANDRIA	Residential	1	2	SW	19	2
NCA04	NCA04_013	26 CAMPBELL ROAD ALEXANDRIA	Residential	0	2	NE	4	1a
NCA04	NCA04_013	26 CAMPBELL ROAD ALEXANDRIA	Residential	0	3	SW	18	2
NCA04	NCA04_013	26 CAMPBELL ROAD ALEXANDRIA	Residential	1	2	NE	5	1a
NCA04	NCA04_013	26 CAMPBELL ROAD ALEXANDRIA	Residential	1	3	SW	19	2
NCA04	NCA04_014	28 CAMPBELL ROAD ALEXANDRIA	Residential	0	2	NE	-	No treatment
NCA04	NCA04_014	28 CAMPBELL ROAD ALEXANDRIA	Residential	0	4	SW	18	2
NCA04	NCA04_014	28 CAMPBELL ROAD ALEXANDRIA	Residential	1	2	NE	1	1a
NCA04	NCA04_014	28 CAMPBELL ROAD ALEXANDRIA	Residential	1	4	SW	19	2
NCA04	NCA04_015	30 CAMPBELL ROAD ALEXANDRIA	Residential	0	1	NE	7	1b
NCA04	NCA04_015	30 CAMPBELL ROAD ALEXANDRIA	Residential	0	3	SW	18	2
	NCA04_015	30 CAMPBELL ROAD ALEXANDRIA	Residential	1	1	NE	8	1b
NCA04								
NCA04 NCA04	NCA04_015	30 CAMPBELL ROAD ALEXANDRIA	 Residential	1	3	SW	19	2
	NCA04_015 NCA04_016	30 CAMPBELL ROAD ALEXANDRIA 32 CAMPBELL ROAD ALEXANDRIA	Residential Residential	0	1	SW NE	19 7	2 1b

NCA04 NCA04 NCA04 NCA04 NCA04	NCA04_016	32 CAMPBELL ROAD ALEXANDRIA						
NCA04 NCA04 NCA04		32 CAIVIF BELL NOAD ALEXANDRIA	Residential	1	1	NE	8	1b
NCA04 NCA04 NCA04	NCA04_016	32 CAMPBELL ROAD ALEXANDRIA	Residential	1	3	SW	19	2
NCA04				0	1	NE NE	7	1b
NCA04	NCA04_017	34 CAMPBELL ROAD ALEXANDRIA	Residential					
	NCA04_017	34 CAMPBELL ROAD ALEXANDRIA	Residential	0	2	SE	14	2
	NCA04_017	34 CAMPBELL ROAD ALEXANDRIA	Residential	0	3	SW	18	2
NCA04	NCA04_017	34 CAMPBELL ROAD ALEXANDRIA	Residential	1	1	NE	8	1b
NCA04	NCA04_017	34 CAMPBELL ROAD ALEXANDRIA	Residential	1	2	SE	15	2
NCA04	NCA04_017	34 CAMPBELL ROAD ALEXANDRIA	Residential	1	3	SW	19	2
NCA06A	NCA06A_001	3 BROWN STREET ST PETERS	Residential	0	1	SE	13.2	2
NCA06A		3 BROWN STREET ST PETERS	Residential	0	2	NW	12	2
	NCA06A_001							
NCA06A	NCA06A_001	3 BROWN STREET ST PETERS	Residential	0	3	NE	14.3	2
NCA06A	NCA06A_001	3 BROWN STREET ST PETERS	Residential	0	4	NW	14	2
NCA06A	NCA06A_001	3 BROWN STREET ST PETERS	Residential	0	5	NE	16.4	2
NCA06A	NCA06A_002	5 BROWN STREET ST PETERS	Residential	0	1	SE	11.4	2
NCA06A	NCA06A_002	5 BROWN STREET ST PETERS	Residential	0	2	NW	1	1a
NCA06A	NCA06A_002	5 BROWN STREET ST PETERS	Residential	0	3	SW	-	No treatment
NCA06A	NCA06A_002	5 BROWN STREET ST PETERS	Residential	0	4	NW	9.5	1b
NCA06A	NCA06A_003	6 BROWN STREET ST PETERS	Residential	0	1	SE	12.2	2
NCA06A	NCA06A_003	6 BROWN STREET ST PETERS	Residential	0	2	NW	12	2
NCA06A	NCA06A_003	6 BROWN STREET ST PETERS	Residential	0	3	NE	15	2
NCA06A	NCA06A 003	6 BROWN STREET ST PETERS	Residential	1	1	SE	13.2	2
NCA06A	NCA06A_003	6 BROWN STREET ST PETERS	Residential	1	2	NW	13.1	2
NCA06A	NCA06A_003	6 BROWN STREET ST PETERS	Residential	1	3	NE	15.8	2
NCA06A	NCA06A_004	7 BROWN STREET ST PETERS	Residential	0	1	SE	8	1b
NCA06A	NCA06A_004	7 BROWN STREET ST PETERS	Residential	0	2	NW	5	1a
NCA06A	NCA06A_004	7 BROWN STREET ST PETERS	Residential	1	1	SE	6	1b
NCA06A	NCA06A_004	7 BROWN STREET ST PETERS	Residential	1	2	SW	-	No treatment
NCA06A	NCA06A_004	7 BROWN STREET ST PETERS	Residential	1	3	NW	7	1b
NCA06A	NCA06A_004	7 BROWN STREET ST PETERS	Residential	1	4	NE	8	1b
NCA06A	NCA06A_005	8 BROWN STREET ST PETERS	Residential	0	1	SE	11	2
NCA06A	NCA06A_005	8 BROWN STREET ST PETERS	Residential	0	2	SW	-	No treatment
							10	
NCA06A	NCA06A_005	8 BROWN STREET ST PETERS	Residential	0	3	NW	10	1b
NCA06A	NCA06A_005	8 BROWN STREET ST PETERS	Residential	1	1	SE	12	2
NCA06A	NCA06A_005	8 BROWN STREET ST PETERS	Residential	1	2	SW	-	No treatment
NCA06A	NCA06A_005	8 BROWN STREET ST PETERS	Residential	1	3	NW	11	2
NCA06A	NCA06A 006	9 BROWN STREET ST PETERS	Residential	0	1	SE	6	1b
							4	
NCA06A	NCA06A_006	9 BROWN STREET ST PETERS	Residential	0	2	NW		1a
NCA06A	NCA06A_007	10 BROWN STREET ST PETERS	Residential	0	1	SE	8	1b
NCA06A	NCA06A_007	10 BROWN STREET ST PETERS	Residential	0	2	NW	6	1b
NCA06A	NCA06A_007	10 BROWN STREET ST PETERS	Residential	0	3	NE	-	No treatment
NCA06A	NCA06A_008	11 BROWN STREET ST PETERS	Residential	0	1	SE	5	1a
NCA06A		11 BROWN STREET ST PETERS	Residential	0	2	NW	3	1a
	NCA06A_008							
NCA06A	NCA06A_009	12 BROWN STREET ST PETERS	Residential	0	1	SE	7	1b
NCA06A	NCA06A_009	12 BROWN STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06A	NCA06A_009	12 BROWN STREET ST PETERS	Residential	0	3	NW	5	1a
NCA06A	NCA06A_009	12 BROWN STREET ST PETERS	Residential	0	4	NE	-	No treatment
NCA06A	NCA06A_009	12 BROWN STREET ST PETERS	Residential	0	5	NE	8	1b
							4	
NCA06A	NCA06A_010	13 BROWN STREET ST PETERS	Residential	0	1	SE	4	1a
NCA06A	NCA06A_010	13 BROWN STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06A	NCA06A_010	13 BROWN STREET ST PETERS	Residential	0	3	NW	2	1a
		13 DROWN STREET STITETERS						
NCA06A	NCA06A_011	75 CHURCH STREET ST PETERS	Residential	0	1	SE	12	2
		75 CHURCH STREET ST PETERS		0		SE NW	12 12	
NCA06A	NCA06A_011	75 CHURCH STREET ST PETERS 75 CHURCH STREET ST PETERS	Residential	0	2	NW	12	2
NCA06A NCA06A	NCA06A_011 NCA06A_011	75 CHURCH STREET ST PETERS 75 CHURCH STREET ST PETERS 75 CHURCH STREET ST PETERS	Residential Residential	0	2	NW NE	12 14	2 2 2
NCA06A NCA06A NCA06A	NCA06A_011	75 CHURCH STREET ST PETERS 75 CHURCH STREET ST PETERS	Residential	0	2 3 1	NW NE SE	12 14 13	2 2 2 2
NCA06A NCA06A	NCA06A_011 NCA06A_011	75 CHURCH STREET ST PETERS 75 CHURCH STREET ST PETERS 75 CHURCH STREET ST PETERS	Residential Residential	0	2	NW NE	12 14	2 2 2
NCA06A NCA06A NCA06A	NCA06A_011 NCA06A_011 NCA06A_011	75 CHURCH STREET ST PETERS	Residential Residential Residential	0 0 1	2 3 1	NW NE SE	12 14 13	2 2 2 2
NCA06A NCA06A NCA06A NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011	75 CHURCH STREET ST PETERS	Residential Residential Residential Residential	0 0 1	2 3 1 2	NW NE SE NW	12 14 13 13	2 2 2 2 2
NCA06A NCA06A NCA06A NCA06A NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential	0 0 1 1 1 0	2 3 1 2 3 1	NW NE SE NW NE SE	12 14 13 13 15 10	2 2 2 2 2 2 2 2 1b
NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential	0 0 1 1 1 0	2 3 1 2 3 1 2	NW NE SE NW NE SE	12 14 13 13 15 10	2 2 2 2 2 2 2 2 1b
NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential Residential	0 0 1 1 1 0 0	2 3 1 2 3 1 2 1	NW NE SE NW NE SE NW SE	12 14 13 13 15 10 10	2 2 2 2 2 2 2 1b 1b
NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 0 0	2 3 1 2 3 1 2 1 2	NW NE SE NW NE SE NW SE NW	12 14 13 13 15 10 10 12	2 2 2 2 2 2 1b 1b 2 2
NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential Residential	0 0 1 1 1 0 0	2 3 1 2 3 1 2 1	NW NE SE NW NE SE NW SE	12 14 13 13 15 10 10	2 2 2 2 2 2 2 1b 1b
NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 0 0	2 3 1 2 3 1 2 1 2	NW NE SE NW NE SE NW SE NW	12 14 13 13 15 10 10 12	2 2 2 2 2 2 1b 1b 2 2
NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 0 0 0 1 1	2 3 1 2 3 1 2 1 2	NW NE SE NW NE SE NW SE NW SE NW	12 14 13 13 15 10 10 12 11	2 2 2 2 2 2 1b 1b 2 2
NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2	NW NE SE NW NE SE NW SE NW SE NW SE SW	12 14 13 13 15 10 10 10 12 11	2 2 2 2 2 1b 1b 2 2 1b 1a
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 0 0 0 1 1 1 0 0	2 3 1 2 3 1 2 1 2 1 2 1 2 3	NW NE SE NW NE SE NW SE NW SE NW NE SE NW NW NE	12 14 13 13 15 10 10 12 11 9 5	2 2 2 2 2 1b 1b 2 2 1b 1b 1c 2 2 1b 1a 1b 2
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 0 0 0 1 1 1 0 0 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE	12 14 13 13 15 10 10 12 11 9 5 10	2 2 2 2 2 1b 1b 1b 2 1b 1a 1b 2
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 0 0 0 1 1 1 0 0 0 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1 2	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE NW	12 14 13 13 15 10 10 12 11 9 5 10 11 10 10 11	2 2 2 2 2 1b 1b 2 2 1b 1a 1b 2 1b 1a
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 0 0 0 1 1 1 0 0 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE	12 14 13 13 15 10 10 12 11 9 5 10	2 2 2 2 2 1b 1b 1b 2 1b 1a 1b 2
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 0 0 0 1 1 1 0 0 0 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1 2	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE NW	12 14 13 13 15 10 10 12 11 9 5 10 11 10 10 11	2 2 2 2 2 1b 1b 2 2 1b 1a 1b 2 1b 1a
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 1 1 1 0 0 0 0 0 1 1 1 1 0 0 0 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1 2	NW NE SE NW NE SE NW SE NW SE NW SE NW SE SW NW NE SE NW SE	12 14 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7	2 2 2 2 2 2 1b 1b 2 2 1b 1a 1b 2 1b 1b 1b 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 1 1 1 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1 2 1 2 1 2 1 2 1 2 1 2 1 1 2 1 1 2	NW NE SE NW NE SE NW SE NW SE NW SE NW SE NW NE SE NW NE SE NW SE NW SE NW SE NW	12 14 13 13 15 10 10 10 12 11 9 5 10 11 10 10 10 18	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1a 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_014	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	NW NE SE NW NE SE NW SE NW SE NW SE NW SE SW NW NE SE NW SE NW SE NW SE NW	12 14 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1a 1b 1b 1b 1b 2
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015	75 CHURCH STREET ST PETERS 76 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 1 1 2 1 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 2 1 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 2 1 1 2 1 2 1 1 2 1 1 2 1 1 2 1 2 1 1 2 1 1 2 1 2 1 1 2 1 2 1 1 2 2 1 2 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 2 1 2 1 2 1 2 2 1 2 2 1 2 2 1 2 2 2 2 1 2 2 2 1 2 2 2 2 2 1 2	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE NW	12 14 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10	2 2 2 2 2 2 2 1b 1b 1a 1b 2 1b 1b 1b 1b 2 1b 1b 1b 1b 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE NW SE NW SE NW SE NW SE NW SE NW	12 14 13 13 15 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 10 11	2 2 2 2 2 2 1b 1b 1b 2 1b 1a 1b 1b 1b 1b 1c 1b 1b 1b 1c 2 1b 1b 1b 1c 2 1c 1c 1c 1c 1c 1c 1c 2 1c 1c 1c 2 1c 1c 1c 1c 2 1c 1c 1c 1c 2 1c 1c 1c 1c 1c 2 1c
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015	75 CHURCH STREET ST PETERS 76 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 1 1 2 1 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 2 1 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 2 1 1 2 1 2 1 1 2 1 1 2 1 1 2 1 2 1 1 2 1 1 2 1 2 1 1 2 1 2 1 1 2 2 1 2 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 2 1 2 1 2 1 2 2 1 2 2 1 2 2 1 2 2 2 2 1 2 2 2 1 2 2 2 2 2 1 2	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE NW	12 14 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10	2 2 2 2 2 2 2 1b 1b 1a 1b 2 1b 1b 1b 1b 2 1b 1b 1b 1b 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 3 4 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE NW SE NW SE NW SE NW SE NW SE NW	12 14 13 13 15 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 10 11	2 2 2 2 2 2 1b 1b 1b 2 1b 1a 1b 1b 1b 1b 1c 1b 1b 1c
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 7 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE NW SE NW SE NW NE SE NW NE SE NW NE SE NW NW NE NE NW	12 14 13 13 15 10 10 10 12 11 9 5 10 11 10 10 11 10 10 11 11 10 11 11 11	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1a 1b 1b 2 1b 1b 2 1b 1b 2 1b 1c
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 7 FLORENCE STREET ST PETERS 7 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW	12 14 13 13 15 10 10 10 12 11 9 5 10 11 10 10 11 10 11 11 10 11 11 11 12	2 2 2 2 2 2 2 1b 1b 1b 2 2 1b 1a 1b 1b 2 1b 1b 2 2 1b 1b 2 2 2 2 2 2 2 2
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE NW NE SE NW NE SE NW NE NW	12 14 13 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1a 1b 1b 1b 2 1b 1b 2 2 1b 1b 2 2 2 2 2 2
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE SW NW NE SE SW NW NE SE NW	12 14 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8	2 2 2 2 2 2 2 1b 1b 1a 1b 2 1b 1b 1b 2 1b 1b 2 1b 1c 2 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE NW NE SE NW NE SE NW NE NW	12 14 13 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1a 1b 1b 1b 2 1b 1b 2 2 1b 1b 2 2 2 2 2 2
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE SW NW NE SE SW NW NE SE NW	12 14 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8	2 2 2 2 2 2 2 1b 1b 1a 1b 2 1b 1b 1b 2 1b 1b 2 1b 1c 2 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_016 NCA06A_016	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE NW SE SW NW NE SE NW NE SE NW NE SE NW NE SE NW NE SE NW NE SE NW	12 14 13 13 13 15 10 10 10 12 11 19 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4	2 2 2 2 2 2 1b 1b 1b 2 1b 1a 1b 1b 1b 2 1b 1b 2 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW SE NW SE NW SE NW SE NW NE SE NW NE SE NW NE SE NW	12 14 13 13 13 15 10 10 10 12 11 19 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4	2 2 2 2 2 2 1b 1b 1b 2 1b 1a 1b 1b 1b 1b 2 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_016	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 1 1 1 0 0 0 0 0 1 1 1 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE NW SE NW SE NW NE SE NW NE SE NW NW NE SE NW NW NE SE NW NW	12 14 13 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4 9 - 5	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1b 1b 1b 2 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_016	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 1 1 1 0 0 0 0 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE SW NW SE NW NE SE NW SE NW NE SE NW SE NW SE NW	12 14 13 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4 9 - 5 10	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1a 1b 1b 1b 1b 2 1b 1c
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_016	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 0 1 1 1 0 0 0 0 0 1 1 1 0 0 0 0 0 0 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE NW SE NW SE NW NE SE NW NE SE NW NW NE SE NW NW NE SE NW NW	12 14 13 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4 9 - 5	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1b 1b 1b 2 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_016	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 1 1 1 0 0 0 0 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE SW NW SE NW NE SE NW SE NW NE SE NW SE NW SE NW	12 14 13 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4 9 - 5 10	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1a 1b 1b 1b 1b 2 1b 1c
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_016 NCA06A_017 NCA06A_017 NCA06A_017	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 FLORENCE STREET ST PETERS	Residential	0 0 1 1 1 1 0 0 0 0 0 0 0 1 1 1 0 0 0 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE SW NW NE SE NW NE SE NW NE SE NW NW SE	12 14 13 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4 9 - 5 10 11	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1b 1a 1b 1b 2 1b 1c 2 1b 1b 1c 2 1b 1c 1c 1c 1c 1c 2 2 2 2 2 2 2 2 1b 1a 1b 1a 1b 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_017 NCA06A_017 NCA06A_017	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 SLORENCE STREET ST PETERS	Residential	0 0 0 1 1 1 1 0 0 0 0 1 1 1 0 0 0 0 0 1 1 1 0 0 0 1 1 1 1 0 0 0 1 1 1 1 0 0 0 1 1 1 1 0 0 0 1 1 1 1 0 0 0 1 1 1 1 1 0 0 0 1 1 1 1 1 0 0 0 1 1 1 1 1 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW SE NW SE SW NW NE SE NW NE SE SW NW NE SE SE NW NW SE SE NW	12 14 13 13 13 15 10 10 10 12 11 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4 9 - 5 10 11 13 11	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1b 1a 1b 2 1b 1b 2 1b 1b 1b 1b 1b 1b 1b 1b 1c 2 1b 1b 1b 1c 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_017 NCA06A_017 NCA06A_017 NCA06A_017	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 SLORENCE STREET ST PETERS	Residential	0 0 0 1 1 1 0 0 0 0 0 0 0 1 1 1 0 0 0 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW NW SE NW NW SE NW NW SE NW NW SE NW	12 14 13 13 13 15 10 10 10 12 11 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4 9 - 5 10 11 13 11 12	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1b 1b 1b 2 1b 1c 2 1b 1b 1c 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_015 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_017	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 SLORENCE STREET ST PETERS	Residential	0 0 0 1 1 1 0 0 0 0 0 0 0 1 1 1 0 0 0 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW NW	12 14 13 13 13 15 10 10 10 12 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4 9 - 5 10 11 13 11 13 11 12 14	2 2 2 2 2 2 1b 1b 1b 2 2 1b
NCA06A	NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_011 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_012 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_013 NCA06A_014 NCA06A_014 NCA06A_014 NCA06A_015 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_016 NCA06A_017 NCA06A_017 NCA06A_017 NCA06A_017	75 CHURCH STREET ST PETERS 77 CHURCH STREET ST PETERS 79 CHURCH STREET ST PETERS 81 CHURCH STREET ST PETERS 7 FLORENCE STREET ST PETERS 9 SLORENCE STREET ST PETERS	Residential	0 0 0 1 1 1 0 0 0 0 0 0 0 1 1 1 0 0 0 0	2 3 1 2 3 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	NW NE SE NW NE SE NW NW SE NW NW SE NW NW SE NW NW SE NW	12 14 13 13 13 15 10 10 10 12 11 11 9 5 10 11 10 10 7 10 8 11 10 11 14 11 12 14 8 4 9 - 5 10 11 13 11 12	2 2 2 2 2 2 1b 1b 1b 2 2 1b 1b 1b 1b 2 1b 1c 2 1b 1b 1c 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

NCA06A	NCA06A 018	6 ST PETERS STREET ST PETERS	Residential	0	3	NW	10	1b
NCA06A	NCA06A_018	6 ST PETERS STREET ST PETERS	Residential	1	1	SE	7	1b
NCA06A	NCA06A_018	6 ST PETERS STREET ST PETERS	Residential	1	2	SW	-	No treatment
NCA06A	NCA06A_018	6 ST PETERS STREET ST PETERS	Residential	1	3	NW	10	1b
NCA06A	NCA06A_020	6 UNWINS BRIDGE ROAD ST PETERS	Residential	0	1	SE	-	No treatment
NCA06A	NCA06A_020	6 UNWINS BRIDGE ROAD ST PETERS	Residential	0	2	N	-	No treatment
NCA06A	NCA06A_020	6 UNWINS BRIDGE ROAD ST PETERS	Residential	1	1	SE	3	1a
NCA06A	NCA06A_020	6 UNWINS BRIDGE ROAD ST PETERS	Residential	1	2	N	-	No treatment
NCA06A	NCA06A_021	8 UNWINS BRIDGE ROAD ST PETERS	Residential	0	1	SE	-	No treatment
NCA06A	NCA06A_021	8 UNWINS BRIDGE ROAD ST PETERS	Residential	0	2	N	-	No treatment
NCA06A	NCA06A_021	8 UNWINS BRIDGE ROAD ST PETERS	Residential	1	1	SE	2	1a
NCA06A	NCA06A_021	8 UNWINS BRIDGE ROAD ST PETERS	Residential	1	2	N	-	No treatment
NCA06A	NCA06A_022	10 UNWINS BRIDGE ROAD ST PETERS	Residential	0	1	SE	-	No treatment
NCA06A	NCA06A_022	10 UNWINS BRIDGE ROAD ST PETERS	Residential	0	2	N	-	No treatment
NCA06A	NCA06A_022	10 UNWINS BRIDGE ROAD ST PETERS	Residential	1	1	SE	1	1a
NCA06A	NCA06A_022	10 UNWINS BRIDGE ROAD ST PETERS	Residential	1	2	N CF	-	No treatment
NCA06A	NCA06A_024	14 UNWINS BRIDGE ROAD ST PETERS	Residential	0	1	SE	-	No treatment
NCA06A	NCA06A_024	14 UNWINS BRIDGE ROAD ST PETERS	Residential Residential	1	3 1	NW SE	1	No treatment
NCA06A NCA06A	NCA06A_024 NCA06A_024	14 UNWINS BRIDGE ROAD ST PETERS 14 UNWINS BRIDGE ROAD ST PETERS	Residential	1	3	NW	-	1a No treatment
NCA06A	NCA06A_024 NCA06A_026	18 UNWINS BRIDGE ROAD ST PETERS	Residential	0	1	SE	<u> </u>	No treatment
NCA06A	NCA06A_026	18 UNWINS BRIDGE ROAD ST PETERS	Residential	0	2	SW	_	No treatment
NCA06A	NCA06A_026	18 UNWINS BRIDGE ROAD ST PETERS	Residential	0	3	NW		No treatment
NCA06A	NCA06A_026	18 UNWINS BRIDGE ROAD ST PETERS	Residential	1	1	SE	1	1a
NCA06A	NCA06A_026	18 UNWINS BRIDGE ROAD ST PETERS	Residential	1	2	SW	<u>.</u>	No treatment
NCA06A	NCA06A_026	18 UNWINS BRIDGE ROAD ST PETERS	Residential	1	3	NW	_	No treatment
NCA06A	NCA06A_026 NCA06A_032	32 UNWINS BRIDGE ROAD ST PETERS	Residential	0	1	SE	-	No treatment
NCA06A	NCA06A_032	32 UNWINS BRIDGE ROAD ST PETERS	Residential	0	2	SW		No treatment
NCA06A	NCA06A_032	32 UNWINS BRIDGE ROAD ST PETERS	Residential	0	3	NW	-	No treatment
NCA06A	NCA06A_032	32 UNWINS BRIDGE ROAD ST PETERS	Residential	0	4	NE	-	No treatment
NCA06A	NCA06A_032	32 UNWINS BRIDGE ROAD ST PETERS	Residential	0	5	NW	-	No treatment
NCA06A	NCA06A_032	32 UNWINS BRIDGE ROAD ST PETERS	Residential	0	6	NE	1	1a
NCA06B	NCA06B_041	15 BROWN STREET ST PETERS	Residential	0	1	SE	2.3	1a
NCA06B	NCA06B_041	15 BROWN STREET ST PETERS	Residential	0	2	NW	1.3	1a
NCA06B	NCA06B_041	15 BROWN STREET ST PETERS	Residential	0	3	NE	-	No treatment
NCA06B	NCA06B_042	16 BROWN STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_042	16 BROWN STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_042	16 BROWN STREET ST PETERS	Residential	0	3	NW	3.3	1a
NCA06B	NCA06B_043	17 BROWN STREET ST PETERS	Residential	0	1	SE	1.7	1a
NCA06B	NCA06B_043	17 BROWN STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_043	17 BROWN STREET ST PETERS	Residential	0	3	NW	0.8	1a
NCA06B	NCA06B_044	19 BROWN STREET ST PETERS	Residential	0	1	SE	0.7	1a
NCA06B	NCA06B_044	19 BROWN STREET ST PETERS	Residential	0	2	NW	0.9	1a
NCA06B	NCA06B_044	19 BROWN STREET ST PETERS	Residential	0	3	NE	-	No treatment
NCA06B	NCA06B_046	22 BROWN STREET ST PETERS	Residential	0	1	SE	3.1	1a
NCA06B	NCA06B_046	22 BROWN STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_046	22 BROWN STREET ST PETERS	Residential	0	3	NW	1	1a
NCA06B	NCA06B_046	22 BROWN STREET ST PETERS	Residential	0	4	NE	1	1 a
NCA06B	NCA06B_048	24 BROWN STREET ST PETERS	Residential	0	1	SE	2	1a
NCA06B	NCA06B_048	24 BROWN STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_048	24 BROWN STREET ST PETERS	Residential	0	3	NW	1	1a
NCA06B	NCA06B_048	24 BROWN STREET ST PETERS	Residential	0	4	NE	-	No treatment
NCA06B	NCA06B_048	24 BROWN STREET ST PETERS	Residential	0	5	SE	2	1a
NCA06B	NCA06B_048	24 BROWN STREET ST PETERS	Residential	0	6	NE	2.4	1a
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	0	2	NW	7.1	1b
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	0	3	NE	1.1	1a
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	0	4	SE	-	No treatment
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	0	5	NE	-	No treatment
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	1	1	SE	0.6	1 a
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	1	2	NW	8.1	1b
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	1	3	NE	2.6	1a
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	1	4	SE	-	No treatment
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	1	5	NE	-	No treatment
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	2	1	SE	4.3	1a
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	2	2	NW	9	1b
NCA06B	NCA06B 090	83 CHURCH STREET ST PETERS		2	3	NE	8.6	1b
			Residential					1a
NCA06B	NCA06B_090	83 CHURCH STREET ST PETERS	Residential	2	4	SE	4.2	
NCA06B NCA06B	NCA06B_090 NCA06B_090	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS	Residential Residential	2	4 5	NE	3.8	1a
NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_090 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential Residential Residential	2 2 0	4 5 1	NE SE	3.8	1a No treatment
NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_090 NCA06B_091 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential Residential Residential Residential	2 2 0 0	4 5 1 2	NE SE NW	3.8 - 6	1a No treatment 1b
NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_090 NCA06B_091 NCA06B_091 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential	2 2 0 0	4 5 1 2 4	NE SE NW SE	3.8	1a No treatment 1b 1a
NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_090 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential	2 2 0 0	4 5 1 2 4 5	NE SE NW SE SW	3.8 - 6 1	1a No treatment 1b 1a No treatment
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_090 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential	2 2 0 0 0 0	4 5 1 2 4 5	NE SE NW SE SW	3.8 - 6 1 - 1	1a No treatment 1b 1a No treatment 1a
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_090 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential Residential Residential	2 2 0 0 0 0 0	4 5 1 2 4 5 1 2	NE SE NW SE SW SE NW	3.8 - 6 1 - 1 7	1a No treatment 1b 1a No treatment 1a 1b
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_090 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 0 1 1	4 5 1 2 4 5 1 2	NE SE NW SE SW SE NW SE SE NW	3.8 - 6 1 - 1 7 2	1a No treatment 1b 1a No treatment 1a 1b 1a
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 0 1 1 1	4 5 1 2 4 5 1 2 4 5	NE SE NW SE SW SE NW SE SW SE NW SE SW	3.8 - 6 1 - 1 7 2	1a No treatment 1b 1a No treatment 1a 1b 1a No treatment
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_090 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 1 1 1 1 2	4 5 1 2 4 5 1 2 4 5	NE SE NW SE SW SE NW SE SW SE SW SE SW SE SW	3.8 - 6 1 - 1 7 2 - 3	1a No treatment 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a No treatment 1a
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 1 1 1 1 2 2	4 5 1 2 4 5 1 2 4 5 1 2	NE SE NW SE SW SE NW SE NW SE NW SE NW	3.8 6 1 - 1 7 2 - 3 8	No treatment 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a No treatment 1a 1b
NCA06B	NCA06B_090 NCA06B_090 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 1 1 1 1 2 2	4 5 1 2 4 5 1 2 4 5 1 2 4 5	NE SE NW SE SW SE NW SE NW SE SW SE SW SE SW SE SW SE	3.8 6 1 - 1 7 2 - 3 8 5	1a No treatment 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_090 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 1 1 1 1 2 2 2	4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5	NE SE NW SE SW SE NW SE NW SE SW SE SW SE SW SE NW	3.8 - 6 1 - 1 7 2 - 3 8 5 -	1a No treatment 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a No treatment 1a 1b No treatment
NCA06B	NCA06B_090 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 1 1 1 1 2 2 2 2	4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1	NE SE NW SE SW SE NW SE NW SE SW SE SW SE NW SE SW SE NW SE SW SE SW	3.8 - 6 1 - 1 7 2 - 3 8 5 - 1	1a No treatment 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a 1b 1a
NCA06B	NCA06B_090 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS 87 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 1 1 1 1 2 2 2 2 2 0	4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5	NE SE NW SE SW SE NW SE NW SE SW SE NW SE NW SE NW SE NW	3.8 - 6 1 - 1 7 2 - 3 8 5 - 1 5	1a No treatment 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a 1a 1b 1a 1a 1b 1a
NCA06B	NCA06B_090 NCA06B_091 NCA06B_092 NCA06B_092	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS 87 CHURCH STREET ST PETERS 87 CHURCH STREET ST PETERS 87 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 1 1 1 1 2 2 2 2 0 0	4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5	NE SE NW SE SW SE NW SE SW SE NW SE NW SE NW SE SW SE NW SE SW SE SW SE SW SE SW	3.8 - 6 1 - 1 7 2 - 3 8 5 - 1 5	1a No treatment 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a
NCA06B	NCA06B_090 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS 87 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 1 1 1 1 2 2 2 2 0 0	4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 5 1 2 4 5 5 5 1 2 4 5 5 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 5 1 2 4 5 5 5 1 2 4 5 5 5 1 2 4 5 5 5 1 2 4 5 5 1 2 4 5 5 1 2 2 4 5 5 1 2 2 2 4 5 5 5 1 2 2 4 5 5 1 2 2 4 5 5 1 2 4 5 5 2 4 5 5 1 2 4 5 5 4 5 5 1 2 4 5 5 1 2 4 5 5 5 1 2 2 4 5 5 5 1 2 4 5 1 2 4 5 1 2 4 5 5 5 5 1 2 4 5 5 1 2 4 5 5 1 2 2 4 5 5 1 2 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	NE SE NW SE SW SE NW SE SW SE NW	3.8 - 6 1 - 1 7 2 - 3 8 5 - 1 5 1	1a No treatment 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a 1a 1a 1a 1a 1a 1a
NCA06B	NCA06B_090 NCA06B_091 NCA06B_092 NCA06B_092 NCA06B_092 NCA06B_092 NCA06B_092	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS 87 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 1 1 1 1 2 2 2 2 0 0 0	4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 1 2 4 5 1 1 2 1 2 1 2 1 1 2 1 1 2 1 1 1 2 1 1 1 1 2 1	NE SE NW SE SW SE NW SE SW SE NW SE NW SE NW SE NW SE SW SE NW SE SW SE NW SE SW SE NW SE SW SE NW	3.8 - 6 1 - 1 7 2 - 3 8 5 - 1 5 1 1 3	1a No treatment 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a 1a 1a 1a 1a 1a 1a
NCA06B	NCA06B_090 NCA06B_091	83 CHURCH STREET ST PETERS 83 CHURCH STREET ST PETERS 85 CHURCH STREET ST PETERS 87 CHURCH STREET ST PETERS	Residential	2 2 0 0 0 0 1 1 1 1 2 2 2 2 0 0	4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 5 1 2 4 5 5 5 1 2 4 5 5 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 1 2 4 5 5 5 1 2 4 5 5 5 1 2 4 5 5 5 1 2 4 5 5 5 1 2 4 5 5 1 2 4 5 5 1 2 2 4 5 5 1 2 2 2 4 5 5 5 1 2 2 4 5 5 1 2 2 4 5 5 1 2 4 5 5 2 4 5 5 1 2 4 5 5 4 5 5 1 2 4 5 5 1 2 4 5 5 5 1 2 2 4 5 5 5 1 2 4 5 1 2 4 5 1 2 4 5 5 5 5 1 2 4 5 5 1 2 4 5 5 1 2 2 4 5 5 1 2 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	NE SE NW SE SW SE NW SE SW SE NW	3.8 - 6 1 - 1 7 2 - 3 8 5 - 1 5 1	1a No treatment 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a No treatment 1a 1b 1a 1a 1a 1a 1a 1a 1a

NCA06B								
	NCA06B_092	87 CHURCH STREET ST PETERS	Residential	2	1	SE	4	1a
NCA06B	NCA06B 092	87 CHURCH STREET ST PETERS	Residential	2	2	NW	8	1b
NCA06B	NCA06B_092	87 CHURCH STREET ST PETERS	Residential	2	4	SE	4	1a
NCA06B	 NCA06B_092	87 CHURCH STREET ST PETERS	Residential	2	5	NE	4	1a
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS	Residential	0	3	NW	4	1a
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS	Residential	0	5	SE	1	1a
NCA06B	NCA06B 093	89 CHURCH STREET ST PETERS	Residential	0	6	SW	-	No treatment
NCA06B	NCA06B 093	89 CHURCH STREET ST PETERS	Residential	1	1	SE	-	No treatment
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS	Residential	1	3	NW	6	1b
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS	Residential	1	5	SE	3	1a
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS	Residential	1	6	SW	-	No treatment
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS	Residential	2	1	SE	-	No treatment
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS	Residential	2	2	SW		No treatment
NCA06B		89 CHURCH STREET ST PETERS	Residential	2	3	NW	7	1b
NCA06B	NCA06B_093 NCA06B_093	89 CHURCH STREET ST PETERS		2	5	SE	4	
			Residential Residential				-	1a
NCA06B	NCA06B_093	89 CHURCH STREET ST PETERS		2	6	SW		No treatment
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	0	3	NW	-	No treatment
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	0	4	SW	-	No treatment
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	0	5	NW	1	1a
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	1	1	SE	1	1a
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	1	2	SW	-	No treatment
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	1	3	NW	-	No treatment
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	1	4	SW	-	No treatment
NCA06B	NCA06B_094	91A CHURCH STREET ST PETERS	Residential	1	5	NW	3	1a
NCA06B	NCA06B_095	91B CHURCH STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_095	91B CHURCH STREET ST PETERS	Residential	0	2	NW	2	1a
NCA06B	NCA06B_095	91B CHURCH STREET ST PETERS	 Residential	0	3	NE	-	No treatment
NCA06B	NCA06B_095	91B CHURCH STREET ST PETERS	Residential	0	4	NW	-	No treatment
NCA06B	NCA06B_095	91B CHURCH STREET ST PETERS	Residential	1	1	SE	1	1a
NCA06B	NCA06B_095	91B CHURCH STREET ST PETERS	Residential	1	2	NW	3	1a
NCA06B	NCA06B_095	91B CHURCH STREET ST PETERS	Residential	1	3	NE	-	No treatment
NCA06B	NCA06B_095	91B CHURCH STREET ST PETERS	Residential	1	4	NW	-	No treatment
NCA06B	NCA06B_096	91C CHURCH STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_096	91C CHURCH STREET ST PETERS	Residential	0	2	NW	-	No treatment
NCA06B	NCA06B_096	91C CHURCH STREET ST PETERS	Residential	0	3	SW	-	No treatment
NCA06B	NCA06B_096	91C CHURCH STREET ST PETERS	Residential	0	4	NW	2	1a
NCA06B	NCA06B_096	91C CHURCH STREET ST PETERS	Residential	1	1	SE	2	1a
NCA06B	NCA06B_096	91C CHURCH STREET ST PETERS	Residential	1	2	NW	-	No treatment
NCA06B	NCA06B_096	91C CHURCH STREET ST PETERS	Residential	1	3	SW	-	No treatment
NCA06B	NCA06B_096	91C CHURCH STREET ST PETERS	Residential	1	4	NW	4	1a
NCA06B	NCA06B_097	91D CHURCH STREET ST PETERS	Residential	0	1	SE	1	1a
NCA06B	NCA06B_097	91D CHURCH STREET ST PETERS	Residential	0	2	NW	1	1a
NCA06B	NCA06B 097	91D CHURCH STREET ST PETERS	Residential	0	4	NW	-	No treatment
NCA06B	NCA06B 097	91D CHURCH STREET ST PETERS	Residential	1	1	SE	2	1a
NCA06B	NCA06B 097	91D CHURCH STREET ST PETERS	Residential	1	2	NW	3	1a
NCA06B	NCA06B_097	91D CHURCH STREET ST PETERS	Residential	1	4	NW	-	No treatment
NCA06B	NCA06B_098	95 CHURCH STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_098	95 CHURCH STREET ST PETERS	Residential	0	2	NW	-	No treatment
NCA06B	NCA06B_098	95 CHURCH STREET ST PETERS	Residential	0	3	NE	-	No treatment
NCA06B	NCA06B_098	95 CHURCH STREET ST PETERS	Residential	1	1	SE	2	1a
NCA06B	NCA06B_098	33 CHORCH STREET ST FETERS	Residential	1	1			No treatment
		OF CHILDCH STREET ST DETERS	Posidontial	1	2	NI\A/	_	
NCA06B	NCA06B_098	95 CHURCH STREET ST PETERS	Residential	1	2	NW	-	
	NICAOCD OOO	95 CHURCH STREET ST PETERS	Residential	1	3	NE	-	No treatment
NCA06B	NCA06B_099	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS	Residential Residential	1 0	3 1	NE SE	- - -	No treatment No treatment
NCA06B	NCA06B_099	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS	Residential Residential Residential	1 0 0	3 1 3	NE SE NW	-	No treatment No treatment No treatment
NCA06B NCA06B	NCA06B_099 NCA06B_099	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS	Residential Residential Residential Residential	1 0 0	3 1 3 1	NE SE NW SE	- - - - 2	No treatment No treatment No treatment 1a
NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential	1 0 0 1 1	3 1 3 1 3	NE SE NW SE NW	- - - 2	No treatment No treatment No treatment 1a No treatment
NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential	1 0 0 1 1	3 1 3 1 3	NE SE NW SE NW	-	No treatment No treatment No treatment 1a No treatment No treatment
NCA06B NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential	1 0 0 1 1 0	3 1 3 1 3 1 2	NE SE NW SE NW SE NW NW	- - -	No treatment No treatment 1a No treatment No treatment No treatment No treatment
NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential Residential	1 0 0 1 1 0 0	3 1 3 1 3 1 2	NE SE NW SE NW SE NW SE NW SE NW	-	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS	Residential Residential Residential Residential Residential Residential Residential Residential Residential	1 0 0 1 1 0 0	3 1 3 1 2 1 2	NE SE NW SE NW SE NW SE NW NW NW	- - - 5	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a No treatment
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS	Residential	1 0 0 1 1 0 0 1 1	3 1 3 1 3 1 2 1 2 3	NE SE NW SE NW SE NW SE NW NE	- - - 5 -	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a No treatment 1a No treatment
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 0 0 0 1 1 1 1	3 1 3 1 2 1 2 3 1	NE SE NW SE NW SE NW SE NW SE NW SE SE SE	- - - 5 - -	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a No treatment 1a No treatment 1b
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 0 0 0 1 1 1 1 0	3 1 3 1 2 1 2 3 1 2 2 3	NE SE NW SE NW SE NW SE NW SE NW SE NW NE NE SE NW	- - - 5 - - 8 9.8	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a No treatment 1b 1b
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 0 0 1 1 1 0 0	3 1 3 1 2 1 2 3 1 2 3 1 2 3 1	NE SE NW SE NW SE NW SE NW SE NW NE NE NE	- - - 5 - - 8 9.8	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a No treatment 1b 1b 2
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_138	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0	3 1 3 1 2 1 2 3 1 2 3 1 2 3 1	NE SE NW SE NW SE NW SE NW SE NW NE SE SE NW NE SE SE	- - - 5 - - - 8 9.8 11.6	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a No treatment 1b 1b 1c 2 1b
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0	3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 2 3 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW NE	- - 5 - - 8 9.8 11.6 6.7	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a No treatment 1b 1b 2 1b 1b 1b
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_138	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0	3 1 3 1 2 1 2 3 1 2 3 1 2 3 1	NE SE NW SE NW SE NW SE NW SE NW NE SE SE NW NE SE SE	- - - 5 - - - 8 9.8 11.6	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a No treatment 1b 1b 1c 2 1b
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0	3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 3 1 3 1 3	NE SE NW SE NW SE NW SE NW NE SE NW	- - 5 - - 8 9.8 11.6 6.7 7.8 8.3 9.2	No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1a No treatment 1b 1b 1b 1b 1b 1b 1b
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 1 0 0 1 1 1 0 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 3 1 2 1 2 3 1 2 3 1 3 1 3 4	NE SE NW SE NW SE NW SE NW NE SE NW	- - 5 - - 8 9.8 11.6 6.7 7.8 8.3 9.2	No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1a No treatment 1b 1b 2 1b 1b 1b 1b 1b 1b
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 1 0 0 1 1 1 0 0 0 0 0 0 0 0 0	3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 3 1 3 1 3	NE SE NW SE NW SE NW SE NW NE SE NW	- - 5 - - 8 9.8 11.6 6.7 7.8 8.3 9.2	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a No treatment 1b 1b 2 1b 1b 1b 1b 1b
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 1 0 0 1 1 1 0 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 3 1 2 1 2 3 1 2 3 1 3 1 3 4	NE SE NW SE NW SE NW SE NW NE SE NW	- - 5 - - 8 9.8 11.6 6.7 7.8 8.3 9.2	No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1a No treatment 1b 1b 2 1b 1b 1b 1b 1b 1b
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 1 0 0 0 1 1 1 0 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 3 1 2 1 2 3 1 2 3 1 3 1 3 4 1	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW NE SE NW NE SE NW	- - - 5 - - 8 9.8 11.6 6.7 7.8 8.3 9.2 10.5	No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1b 1b 2 1b 1b 1b 1b 1b 1b 1b 1b
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 FLORENCE STREET ST PETERS 8 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 1 0 0 0 1 1 1 0 0 0 0 0 1 1 1 0	3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 2 3 1 2 2 3 1 2 2 3 1 2 2 3 1 2 2 3 1 2 2 3 1 2 2 3 1 2 2 2 3 2 2 3 2 2 3 2 2 3 2 2 2 3 2 2 2 3 2 2 2 3 2 2 2 3 2 2 2 3 2 2 2 2 3 2 2 2 2 3 2	NE SE NW SE NW SE NW SE NW NE NW NE	- - - 5 - - 8 9.8 11.6 6.7 7.8 8.3 9.2 10.5 5.6 2.6	No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1a No treatment 1b
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_140	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 1 0 0 0 1 1 1 0 0 0 0 0 0 0 0	3 1 3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 2 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW NE SE NW	- - - 5 - - 8 9.8 11.6 6.7 7.8 8.3 9.2 10.5 5.6 2.6	No treatment No treatment 1a No treatment No treatment No treatment No treatment 1a No treatment 1b 1b 1b 2 1b
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 1 0 0 0 1 1 1 0 0 0 0 0 0 0 0	3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 2 1 2 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW NE SE NW SE NW SE NW SE NW SE NW SE NW NE NE SE NW NE NE NE NW NE NE NE NW NE NE NE NW NE NE NE NW NE NW NE NE NW NE NE NW	- - 5 - 8 9.8 11.6 6.7 7.8 8.3 9.2 10.5 5.6 2.6 7.1	No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1a No treatment 1b 1b 1b 1c 1b
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_141	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 1 0 0 0 1 1 1 1 0 0 0 0 0 0 0	3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 2 1 2 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW	5 5 8 8 9.8 11.6 6.7 7.8 8.3 9.2 10.5 5.6 2.6 7.1 4	No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1b 1b 2 1b 1b 1b 1b 1b 1b 1b 1b 1b 1a 1a
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_141 NCA06B_141	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 FLORENCE STREET ST PETERS	Residential	1 0 0 1 1 1 0 0 0 1 1 1 1 0 0 0 0 0 0 0	3 1 3 1 2 1 2 1 2 3 1 2 3 1 2 1 2 1 2 1	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW SE NW SE SE NW	5 8 8 9.8 11.6 6.7 7.8 8.3 9.2 10.5 5.6 2.6 7.1 4	No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1b 1b 2 1b 1b 1b 1b 1b 1b 1b 1c 1c 1c 1d
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_141 NCA06B_141 NCA06B_141	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 A FLORENCE STREET ST PETERS 8 A FLORENCE STREET ST PETERS	Residential	1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 3 1 2 1 2 1 2 3 1 3 1 2 3 1 2 3 1 2 3 1 2 3 1 2 3 1 3 4 1 2 1 2 1 2 3	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW SE NW SE NW NE SE NW SE NW SE NW NE NW NE SE NW NE NW		No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1b 1b 2 1b 1b 1b 1b 1b 1c 1c 1c 1d
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_141 NCA06B_141 NCA06B_141 NCA06B_141 NCA06B_141	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 A FLORENCE STREET ST PETERS	Residential	1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 1 1 1 0	3 1 3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 2 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW NE SE NW		No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1b 1b 1b 1b 1b 1b 1b 1b 1c 1c 1c 1c 1c 1c 1d
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_141 NCA06B_141 NCA06B_141 NCA06B_141 NCA06B_141 NCA06B_141 NCA06B_141 NCA06B_141	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 A FLORENCE STREET ST PETERS	Residential	1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 1	3 1 3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 2 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW NE SE NW SE NW SE NW SE NW SE NW SE NW SE SE NW SE SE SE NW SE	5 8 8 9.8 11.6 6.7 7.8 8.3 9.2 10.5 5.6 2.6 7.1 4 4.3 - 2.8 5.7	No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1b 1b 1b 1c 1b 1b 1b 1b 1c 1c 1c 1c 1c 1d
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_141	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 A FLORENCE STREET ST PETERS	Residential	1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 1	3 1 3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 2 3 1 2 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW NE SE NW NW SE NW NW NE SE SW NW	5 8 8 9.8 11.6 6.7 7.8 8.3 9.2 10.5 5.6 2.6 7.1 4 4.3 - 2.8 5.7 - 4	No treatment No treatment 1a No treatment 1a No treatment No treatment No treatment 1a No treatment 1b 1b 2 1b 1b 1b 1c 1c 1b 1d 1c 1d
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_141	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 A FLORENCE STREET ST PETERS	Residential	1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 1	3 1 3 1 3 1 2 1 2 1 2 3 1 2 3 1 2 3 1 2 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW SE SW NW SE SW NW		No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1b 1b 2 1b 1b 1b 1c 1c 1c 1c 1d
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_141	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 A FLORENCE STREET ST PETERS 9 A FLORENCE STREET ST PETERS	Residential	1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 1 1 1 0	3 1 3 1 3 1 2 1 2 1 2 3 1 2 3 1 2 3 1 2 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW NW SE NW NW SE NW NW SE NW		No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1b 1b 2 1b 1b 1b 1b 1b 1c 1c 1c 1d
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_141	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 A FLORENCE STREET ST PETERS 9 A FLORENCE STREET ST PETERS	Residential	1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 3 1 3 1 2 1 2 3 1 2 3 1 2 3 1 2 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW SE SW NW SE SW NW SE SW NW		No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1b 1c 1c 1c 1c 1d
NCA06B	NCA06B_099 NCA06B_099 NCA06B_099 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_101 NCA06B_138 NCA06B_138 NCA06B_138 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_139 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_140 NCA06B_141	95 CHURCH STREET ST PETERS 97 CHURCH STREET ST PETERS 101 CHURCH STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 4 FLORENCE STREET ST PETERS 6 FLORENCE STREET ST PETERS 8 A FLORENCE STREET ST PETERS 9 A FLORENCE STREET ST PETERS	Residential	1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 3 1 3 1 2 1 2 1 2 3 1 2 3 1 2 3 1 2 1 2	NE SE NW SE NW SE NW SE NW NE SE NW NE SE NW NE SE NW NW SE SW NW NW SE SW NW		No treatment No treatment 1a No treatment 1a No treatment No treatment 1a No treatment 1b 1c 1c 1b 1b 1b 1c 1c 1c 1d

NCA06B	NCA06B 143	11 FLORENCE STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_143	11 FLORENCE STREET ST PETERS	Residential	0	3	NW	8	1b
NCA06B	NCA06B_144	12 FLORENCE STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_144	12 FLORENCE STREET ST PETERS	Residential	0	2	NW	2	1a
NCA06B	NCA06B_144	12 FLORENCE STREET ST PETERS	Residential	1	1	SE	-	No treatment
NCA06B NCA06B	NCA06B_144	12 FLORENCE STREET ST PETERS	Residential Residential	0	1	NW SW	3	1a
NCA06B	NCA06B_145 NCA06B_145	13 FLORENCE STREET ST PETERS 13 FLORENCE STREET ST PETERS	Residential	0	2	NW	4	No treatment
NCA06B	NCA06B_145	13 FLORENCE STREET ST PETERS	Residential	0	3	NE	-	No treatment
NCA06B	NCA06B_145	13 FLORENCE STREET ST PETERS	Residential	0	4	SE	3	1a
NCA06B	NCA06B_146	14 FLORENCE STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_146	14 FLORENCE STREET ST PETERS	Residential	0	2	NW	1	1a
NCA06B	NCA06B_146	14 FLORENCE STREET ST PETERS	Residential	1	1	SE	-	No treatment
NCA06B	NCA06B_146	14 FLORENCE STREET ST PETERS	Residential	0	2	NW NW	2	1a
NCA06B NCA06B	NCA06B_147 NCA06B_147	15 FLORENCE STREET ST PETERS 15 FLORENCE STREET ST PETERS	Residential Residential	0	2	NE NE	-	1a No treatment
NCA06B	NCA06B_147	15 FLORENCE STREET ST PETERS	Residential	0	3	SE	1	1a
NCA06B	NCA06B_148	16 FLORENCE STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_148	16 FLORENCE STREET ST PETERS	Residential	0	2	NW	1	1a
NCA06B	NCA06B_148	16 FLORENCE STREET ST PETERS	Residential	1	1	SE	-	No treatment
NCA06B	NCA06B_148	16 FLORENCE STREET ST PETERS	Residential	1	2	NW	2	1a
NCA06B	NCA06B_149	17 FLORENCE STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_149	17 FLORENCE STREET ST PETERS	Residential	0	3	SW NW	2	No treatment
NCA06B NCA06B	NCA06B_149 NCA06B_150	17 FLORENCE STREET ST PETERS 18 FLORENCE STREET ST PETERS	Residential Residential	0	1	SE	-	1a No treatment
NCA06B	NCA06B_150	18 FLORENCE STREET ST PETERS	Residential	0	2	NW	-	No treatment
NCA06B	NCA06B_150	18 FLORENCE STREET ST PETERS	Residential	1	1	SE	-	No treatment
NCA06B	NCA06B_150	18 FLORENCE STREET ST PETERS	Residential	1	2	NW	2	1a
NCA06B	NCA06B_151	19 FLORENCE STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_151	19 FLORENCE STREET ST PETERS	Residential	0	2	NW	1	1a
NCA06B	NCA06B_151	19 FLORENCE STREET ST PETERS	Residential	0	3	NE	-	No treatment
NCA06B	NCA06B_151	19 FLORENCE STREET ST PETERS	Residential	1	1	SE	-	No treatment
NCA06B NCA06B	NCA06B_151 NCA06B_151	19 FLORENCE STREET ST PETERS 19 FLORENCE STREET ST PETERS	Residential Residential	1	3	SW NW	2	No treatment
NCA06B	NCA06B_151 NCA06B_151	19 FLORENCE STREET ST PETERS 19 FLORENCE STREET ST PETERS	Residential	1	4	NE NE	2	1a
NCA06B	NCA06B_152	20 FLORENCE STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA06B	NCA06B_152	20 FLORENCE STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_152	20 FLORENCE STREET ST PETERS	Residential	0	3	NW	-	No treatment
NCA06B	NCA06B_152	20 FLORENCE STREET ST PETERS	Residential	1	1	SE	1	1a
NCA06B	NCA06B_152	20 FLORENCE STREET ST PETERS	Residential	1	2	SW	-	No treatment
NCA06B	NCA06B_152	20 FLORENCE STREET ST PETERS	Residential	1	3	NW	2	1a
NCA06B	NCA06B_153	21 FLORENCE STREET ST PETERS	Residential	0	1	SE	1	No treatment
NCA06B NCA06B	NCA06B_153 NCA06B_154	21 FLORENCE STREET ST PETERS 22 FLORENCE STREET ST PETERS	Residential Residential	0	1	NW SE	1	1a 1a
NCA06B	NCA06B_154	22 FLORENCE STREET ST PETERS	Residential	0	2	NW	-	No treatment
NCA06B	NCA06B_154	22 FLORENCE STREET ST PETERS	Residential	0	3	NE	-	No treatment
NCA06B	NCA06B_339	13 SILVER STREET ST PETERS	Residential	0	1	NE	-	No treatment
NCA06B	NCA06B_339	13 SILVER STREET ST PETERS	Residential	0	2	SE	-	No treatment
NCA06B	NCA06B_339	13 SILVER STREET ST PETERS	Residential	0	3	SW	-	No treatment
NCA06B	NCA06B_339	13 SILVER STREET ST PETERS	Residential	0	4	NW	- 0.7	No treatment
NCA06B NCA06B	NCA06B_339 NCA06B_339	13 SILVER STREET ST PETERS 13 SILVER STREET ST PETERS	Residential Residential	1	2	NE SE	0.7	1a No treatment
NCA06B	NCA06B_339	13 SILVER STREET ST PETERS	Residential	1	3	SW	-	No treatment
NCA06B	NCA06B_339	13 SILVER STREET ST PETERS	Residential	1	4	NW	-	No treatment
NCA06B	NCA06B_401	1 ST PETERS STREET ST PETERS	Residential	0	1	SE	7.9	1b
NCA06B	NCA06B_401	1 ST PETERS STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_401	1 ST PETERS STREET ST PETERS	Residential	0	3	NW	9.5	1b
NCA06B	NCA06B_401	1 ST PETERS STREET ST PETERS	Residential	0	4	NE	12.4	2
NCA06B	NCA06B_402	5 ST PETERS STREET ST PETERS	Residential	0	1	SE	3.6	1a
NCA06B NCA06B	NCA06B_402 NCA06B_402	5 ST PETERS STREET ST PETERS 5 ST PETERS STREET ST PETERS	Residential Residential	0	3	NW NE	8.4	1b 1b
NCA06B	NCA06B_402	5 ST PETERS STREET ST PETERS	Residential	0	4	SE	-	No treatment
NCA06B	NCA06B_402	5 ST PETERS STREET ST PETERS	Residential	0	5	NE	4.4	1a
NCA06B	NCA06B_402	5 ST PETERS STREET ST PETERS	Residential	1	1	SE	5.4	1 a
NCA06B	NCA06B_402	5 ST PETERS STREET ST PETERS	Residential	1	2	NW	9.3	1b
NCA06B	NCA06B_402	5 ST PETERS STREET ST PETERS	Residential	1	3	NE	9.7	1b
NCA06B	NCA06B_402	5 ST PETERS STREET ST PETERS	Residential	1	4	SE	5.2	1a
NCA06B	NCA06B_402	5 ST PETERS STREET ST PETERS 7 ST DETERS STREET ST DETERS	Residential	1	5	NE SE	7.2	1b
NCA06B NCA06B	NCA06B_403 NCA06B_403	7 ST PETERS STREET ST PETERS 7 ST PETERS STREET ST PETERS	Residential Residential	0	3	SE NW	2.9	1a No treatment
NCA06B	NCA06B_403	7 ST PETERS STREET ST PETERS 7 ST PETERS STREET ST PETERS	Residential	1	1	SE	5	1a
NCA06B	NCA06B_403	7 ST PETERS STREET ST PETERS	Residential	1	2	SW	-	No treatment
NCA06B	 NCA06B_403	7 ST PETERS STREET ST PETERS	Residential	1	3	NW	-	No treatment
NCA06B	NCA06B_404	8 ST PETERS STREET ST PETERS	Residential	0	1	SE	7	1b
NCA06B	NCA06B_404	8 ST PETERS STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_404	8 ST PETERS STREET ST PETERS	Residential	0	3	NW	7	1b
NCA06B	NCA06B_404	8 ST PETERS STREET ST PETERS	Residential	0	4	NE CE	- 1	No treatment
NCA06B NCA06B	NCA06B_405 NCA06B_405	9 ST PETERS STREET ST PETERS 9 ST PETERS STREET ST PETERS	Residential Residential	0	2	SE SW	1	1a No treatment
NCA06B	NCA06B_405	9 ST PETERS STREET ST PETERS 9 ST PETERS STREET ST PETERS	Residential	0	3	NW	2	1a
NCA06B	NCA06B_406	11 ST PETERS STREET ST PETERS	Residential	0	1	SE	1	1a
NCA06B	NCA06B_406	11 ST PETERS STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_406	11 ST PETERS STREET ST PETERS	Residential	0	3	NW	3	1 a
NCA06B	NCA06B_406	11 ST PETERS STREET ST PETERS	Residential	0	4	NE	2	1 a
NCA06B	NCA06B_407	12 ST PETERS STREET ST PETERS	Residential	0	1	SE	1	1a
NCA06B	NCA06B_407	12 ST PETERS STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA06B	NCA06B_407	12 ST PETERS STREET ST PETERS	Residential	0	3	NW	5	1a
NCAGER	NCAGER 407	12 ST DETERS STREET ST DETERS	Recidential	0	1	NE	_	No treatment
NCA06B NCA06B	NCA06B_407 NCA06B_408	12 ST PETERS STREET ST PETERS 13 ST PETERS STREET ST PETERS	Residential Residential	0	1	NE SE	-	No treatment

NCA06B NCA06B NCA06B								
	NCA06B 408	13 ST PETERS STREET ST PETERS	Residenti	al 0	2	SW	-	No treatment
	NCA06B_408	13 ST PETERS STREET ST PETERS	Residenti	al 0	3	NW	3	1a
	NCA06B_408	13 ST PETERS STREET ST PETERS	Residenti	al 0	4	NE	-	No treatment
NCA06B	 NCA06B_409	15 ST PETERS STREET ST PETERS	Residenti		1	SE	-	No treatment
NCA06B	NCA06B_409	15 ST PETERS STREET ST PETERS	Residenti		2	NW	-	No treatment
NCA06B	NCA06B_409	15 ST PETERS STREET ST PETERS	Residenti		4	SE	-	No treatment
NCA06B	NCA06B_409	15 ST PETERS STREET ST PETERS	Residenti	al 0	5	NE	-	No treatment
NCA06B	NCA06B_409	15 ST PETERS STREET ST PETERS	Residenti	al 1	1	SE	1	1a
NCA06B	NCA06B_409	15 ST PETERS STREET ST PETERS	Residenti	al 1	2	NW	2	1a
NCA06B	NCA06B_409	15 ST PETERS STREET ST PETERS	Residenti	al 1	3	NE	4	1a
NCA06B	NCA06B_409	15 ST PETERS STREET ST PETERS	Residenti	al 1	4	SE	1	1a
NCA06B	NCA06B_409	15 ST PETERS STREET ST PETERS	Residenti	al 1	5	NE	2	1a
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 0	1	SE	1	1a
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 0	2	SW	-	No treatment
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 0	3	NW	-	No treatment
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 0	4	SW	-	No treatment
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 0	5	NW	1	1a
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 0	6	NE	-	No treatment
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 1	1	SE	3	1a
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 1	2	SW	-	No treatment
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 1	3	NW	-	No treatment
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 1	4	SW	-	No treatment
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 1	5	NW	3	1a
NCA06B	NCA06B_410	16 ST PETERS STREET ST PETERS	Residenti	al 1	6	NE	4	1a
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti	al 0	1	SE	2	1a
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti	al 0	2	SW	-	No treatment
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti	al 0	3	W	-	No treatment
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti	al 0	4	NW	-	No treatment
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti		5	NE	5	1a
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti		6	SE	5	1a
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti		7	NE NE	5	1a
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti		1	SE	3	1a
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti		2	SW	-	No treatment
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti		3	W	-	No treatment
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti		4	NW	2	1a
NCA06B	NCA06B 412	18 ST PETERS STREET ST PETERS	Residenti		5	NE	7.1	1b
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti		6	SE	5.9	1b
NCA06B	NCA06B_412	18 ST PETERS STREET ST PETERS	Residenti		7	NE	5.9	1b
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti		1	SE	-	No treatment
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti		2	SW	_	No treatment
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti		3	NW	-	No treatment
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti		4	SW	-	No treatment
NCA06B	NCA06B 418	27-31 ST PETERS STREET ST PETERS	Residenti		5	NW	_	No treatment
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti		6	SW	_	No treatment
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti		7	NW	-	No treatment
NCA06B	NCA06B 418	27-31 ST PETERS STREET ST PETERS	Residenti		8	NE	<u>-</u>	No treatment
NCA06B	NCA06B 418	27-31 ST PETERS STREET ST PETERS	Residenti		9	NW	-	No treatment
NCA06B	NCA06B 418	27-31 ST PETERS STREET ST PETERS	Residenti		10	NE	1.6	1a
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti		11	SE	1.1	1a
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti		12	NE	1.4	1a
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti		13	SE	0.9	1a
NCA06B	NCA06B_418				14	NE	1	1a
NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti					
		27-31 ST PETERS STREET ST PETERS 27-31 ST PETERS STREET ST PETERS	Residenti Residenti	al 1	1	SE	-	No treatment
NCA06B		27-31 ST PETERS STREET ST PETERS 27-31 ST PETERS STREET ST PETERS 27-31 ST PETERS STREET ST PETERS	Residenti Residenti Residenti		2	SE SW	-	No treatment No treatment
	NCA06B_418	27-31 ST PETERS STREET ST PETERS 27-31 ST PETERS STREET ST PETERS	Residenti Residenti	al 1			- -	No treatment
NCA06B	NCA06B_418 NCA06B_418	27-31 ST PETERS STREET ST PETERS 27-31 ST PETERS STREET ST PETERS 27-31 ST PETERS STREET ST PETERS	Residenti Residenti Residenti	al 1 al 1	2	SW	- - -	No treatment
NCA06B NCA06B	NCA06B_418 NCA06B_418 NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti Residenti Residenti Residenti	al 1 al 1	2 3 4	SW NW		No treatment No treatment No treatment
NCA06B	NCA06B_418 NCA06B_418	27-31 ST PETERS STREET ST PETERS 27-31 ST PETERS STREET ST PETERS 27-31 ST PETERS STREET ST PETERS	Residenti Residenti Residenti	al 1 al 1 al 1	2	SW NW SW	-	No treatment
NCA06B NCA06B NCA06B	NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti Residenti Residenti Residenti	al 1 al 1 al 1 al 1 al 1	2 3 4 5	SW NW SW NW	- - - - -	No treatment No treatment No treatment No treatment
NCA06B NCA06B NCA06B	NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti Residenti Residenti Residenti Residenti	al 1	2 3 4 5 6	SW NW SW NW SW	- - - - - - -	No treatment No treatment No treatment No treatment No treatment
NCA06B NCA06B NCA06B NCA06B	NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti Residenti Residenti Residenti Residenti Residenti	al 1	2 3 4 5 6 7	SW NW SW NW SW	- - - - - - - 1	No treatment No treatment No treatment No treatment No treatment No treatment
NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti Residenti Residenti Residenti Residenti Residenti Residenti	al 1	2 3 4 5 6 7 8	SW NW SW NW SW NW	- - - - - - - 1	No treatment
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418 NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9	SW NW SW NW SW NW NW		No treatment 1a
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9	SW NW SW NW SW NW NW NE NW	3	No treatment 1a 1a
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10	SW NW SW NW SW NW NE NW NE SE	3 2	No treatment 1a 1a 1a
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11	SW NW SW NW SW NW NE NW NE NE NE	3 2 3	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12	SW NW SW NW SW NW NE NW NE SE NE SE	3 2 3 2	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1a
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13	SW NW SW NW SW NW NE NW NE SE NE SE NE	3 2 3 2 2	No treatment No treatment No treatment No treatment No treatment No treatment 10 treatment 11 12 12 12 12 12 12 12 12 12 12 12 12 1
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_418	27-31 ST PETERS STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14	SW NW SW NW SW NW NE NE NE NE SE NE SE NE	3 2 3 2 2 7.6	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1a 1a 1b
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_418 NCA07_011	27-31 ST PETERS STREET ST PETERS 212 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14	SW NW SW NW SW NW NE NW NE NW NE	3 2 3 2 2 7.6 8.4	No treatment 1a 1a 1a 1a 1a 1a 1b 1b
NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B NCA06B	NCA06B_418 NCA07_011 NCA07_011	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 1140 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1	SW NW SW NW SW NW NE NW NE NE NE NE SE NE NE SE NE NW NW NE SE	3 2 3 2 2 7.6 8.4	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA06C NCA07 NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_015	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 1140 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1	SW NW SW NW SW NW NE NW NE NW NE SE NE NW NW SE SE SW	3 2 3 2 2 7.6 8.4	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA07 NCA07 NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_015	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 1140 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1	SW NW SW NW SW NW NE NW NE NW NE SE NE SE	3 2 3 2 2 7.6 8.4	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1b 1b No treatment No treatment
NCA06B NCA07 NCA07 NCA07 NCA07 NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_015 NCA07_015	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 1 2	SW NW SW NW SW NW NE NW NE NW NE SE NE SE SE NE SE NW NW NW SE SW SE NW	3 2 3 2 2 7.6 8.4 - -	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1b 1b No treatment No treatment No treatment No treatment
NCA06B NCA06C NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_015 NCA07_015 NCA07_015	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 1 2 3 4	SW NW SW NW SW NW NE NW NE NW NE SE NE SE NE SE NE SE NW SE SW SE NW	3 2 3 2 2 7.6 8.4 - -	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1b 1b No treatment No treatment No treatment
NCA06B NCA06C NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_015 NCA07_015 NCA07_015 NCA07_015 NCA07_015 NCA07_015 NCA07_015	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 1 2 3 4	SW NW SW NW SW NW NE NW NE NW NE SE NE SE NE SE NE SE NW SE SW SE SW	3 2 3 2 2 7.6 8.4 - -	No treatment 1a 1a 1a 1a 1b 1b No treatment No treatment No treatment No treatment
NCA06B NCA06C NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 2 3 4 1 2 3	SW NW SW NW SW NW NE NW NE SE NE SE NE SE NE SE SE SW SE SW SE SW SE	3 2 3 2 2 7.6 8.4 - -	No treatment 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA06C NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 1 2 3 4	SW NW SW NW SW NW SW NW NE NW NE NW NE SE NE SE NE SE NE SE NE SE NW SE SW SE NW SE SW SE NW	3 2 3 2 2 7.6 8.4 - -	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 1 2 3 4 1	SW NW SW NW SW NW SW NW NE NW NE NW NE SE NE SE NE SE NE SE NW SE SW SE NW SE NW SE	3 2 3 2 2 7.6 8.4 - -	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 2 3 4 1 2	SW NW SW NW SW NW SW NW NE NW NE SE NE SE NE SE NE SE NW SE SW SE NW SE SW SE SW SE NW	3 2 3 2 2 7.6 8.4 - -	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA06C NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_017 NCA07_017	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 144 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 2 3 4 1 2 3 4	SW NW SW NW SW NW SW NW NE NW NE NW NE SE NE SE NE SE NE SE NW SE SW SE NW SE SW	3 2 3 2 2 7.6 8.4 - -	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA06C NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_017 NCA07_017 NCA07_017 NCA07_017	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 144 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 2 3 4 1 2 3 4	SW NW SW NW SW NW SW NW NE NW NE SE NE SE NE SE NE SE NW SE SW SE NW SE SW SE NW SE NW SE NW SE NW	3 2 3 2 7.6 8.4 0.7	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA06C NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_017 NCA07_017 NCA07_017 NCA07_017 NCA07_017 NCA07_017	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 144 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 2 3 4 1 2 3 4 1 1 2 1 3 4 1 1	SW NW SW NW SW NW SW NW NE NW NE SE NE SE NE SE NE SE NW SE SW SE NW SE SW SE NW SE NW SE SW SE NW SE SW SE NW SE SW SE NW SE SW	3 2 3 2 7.6 8.4 0.7	No treatment 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_017 NCA07_017 NCA07_017 NCA07_017 NCA07_017 NCA07_017 NCA07_017 NCA07_017 NCA07_017	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 144 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 2 3 4 1 2 3 4 1 2 3 4 1 2	SW NW SW NW SW NW SW NW NE NW NE SE NE SE NE SE NE SE NW SE SW SE NW SE SW SE NW SE SW	3 2 3 2 7.6 8.4 0.7	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_017	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 144 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 4 1 2 3 4 1 2 4 1 4 1	SW NW SW NW SW NW SW NW NE NW NE SE NE SE NE SE NE SE NE SE NW SE SW SE NW SE SW SE NW SE SW	3 2 3 2 7.6 8.4 0.7	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_017	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 144 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4	SW NW SW NW SW NW SW NW NE NW NE SE NE SE NE SE NE SE NW SE SW SE NW SE NW	3 2 3 2 7.6 8.4 0.7 1 1	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_017 NCA07_018 NCA07_018	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 144 CHURCH STREET ST PETERS 146 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 2 3 4 1 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	SW NW SW NW SW NW SW NW NE NW NE SE NE SE NE SE NE SE NW SE SW	3 2 3 2 7.6 8.4 0.7 1	No treatment 1a 1a 1a 1a 1a 1b 1b No treatment
NCA06B NCA07	NCA06B_418 NCA07_011 NCA07_011 NCA07_015 NCA07_017	27-31 ST PETERS STREET ST PETERS 112 CHURCH STREET ST PETERS 114 CHURCH STREET ST PETERS 140 CHURCH STREET ST PETERS 144 CHURCH STREET ST PETERS	Residenti	al 1	2 3 4 5 6 7 8 9 10 11 12 13 14 1 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 4 1 2 3 4 4 4 5 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8	SW NW SW NW SW NW SW NW NE NW NE SE NE SE NE SE NE SE NE SE NW SE SW	3 2 3 2 7.6 8.4 0.7 1	No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a 1b 1b No treatment

NCA07	NCA07 018	146 CHURCH STREET ST PETERS	Residential	1	3	NE	_	No treatment
NCA07	NCA07_019	146A CHURCH STREET ST PETERS	Residential	0	1	SE	-	No treatment
NCA07	NCA07_019	146A CHURCH STREET ST PETERS	Residential	0	3	NW		No treatment
NCA07	NCA07_019	146A CHURCH STREET ST PETERS	Residential	1	1	SE	1	1a
NCA07	NCA07_019	146A CHURCH STREET ST PETERS	Residential	1	2	SW	1	1a
NCA07	NCA07_019	146A CHURCH STREET ST PETERS	Residential	1	3	NW	-	No treatment
NCA07	NCA07_023	154 CHURCH STREET ST PETERS	Residential	0	1	SE	1	1a
NCA07	NCA07_023	154 CHURCH STREET ST PETERS	Residential	0	2	SW	-	No treatment
NCA07	NCA07_023	154 CHURCH STREET ST PETERS	Residential	0	3	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	0	1	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	0	2	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	0	4	E	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	0	5	Е	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	1	1	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	1	2	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	1	4	E	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	1	5	E	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	2	1	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	2	2	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	2	4	E	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	2	5	E	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	2	6	S	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	3	1	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	3	2	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	3	4	E	1.2	1a
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	3	5	Е	2	1a
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	3	6	S	1	1a
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	4	1	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	4	2	NW	-	No treatment
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	4	4	E	2	1a
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	4	5	E	3	1a
NCA07	NCA07_025	19-23 CROWN STREET, ST PETERS	Residential	4	6	S	3	1a
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	0	1	NW	-	No treatment
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	0	3	E	-	No treatment
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	1	1	NW	-	No treatment
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	1	3	E	-	No treatment
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	2	1	NW	-	No treatment
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	2	3	E	-	No treatment
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	2	4	S	-	No treatment
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	3	1	NW	-	No treatment
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	3	2	N	-	No treatment
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	3	3	E	2.2	1a
NCA07	NCA07_031	39 CROWN STREET ST PETERS	Residential	3	4	S	2.4	1a
NCA07	NCA07_043	65 CROWN STREET ST PETERS	Residential	0	1	W	-	No treatment
NCA07	NCA07_043	65 CROWN STREET ST PETERS	Residential	0	3	W	-	No treatment
NCA07	NCA07_043	65 CROWN STREET ST PETERS	Residential	0	5	Е	-	No treatment
NCA07	NCA07_043	65 CROWN STREET ST PETERS	Residential	1	1	W	-	No treatment
NCA07	NCA07_043	65 CROWN STREET ST PETERS	Residential	1	2	N	-	No treatment
NCA07	NCA07_043	65 CROWN STREET ST PETERS	Residential	1	3	W	-	No treatment
NCA07	NCA07_043	65 CROWN STREET ST PETERS	Residential	1	4	N	-	No treatment
NCA07	NCA07_043	65 CROWN STREET ST PETERS	Residential	1	5	E	1	1a
NCA07	NCA07_044	67 CROWN STREET ST PETERS	Residential	0	1	S	-	No treatment
NCA07	NCA07_044	67 CROWN STREET ST PETERS	Residential	0	2	W	-	No treatment
NCA07	NCA07_044	67 CROWN STREET ST PETERS	Residential	0	4	E	-	No treatment
NCA07	NCA07_044	67 CROWN STREET ST PETERS	Residential	0	5	S	-	No treatment
NCA07	NCA07_044	67 CROWN STREET ST PETERS	Residential	1	1	S	-	No treatment
NCA07	NCA07_044	67 CROWN STREET ST PETERS	Residential	1	2	W	-	No treatment
NCA07	NCA07_044	67 CROWN STREET ST PETERS	Residential	1	4	E	1.4	1a
NCA07	NCA07_044	67 CROWN STREET ST PETERS	Residential	1	5	S	-	No treatment
NCA07	NCA07_046	71 CROWN STREET ST PETERS	Residential	0	1	S	-	No treatment
NCA07	NCA07_046	71 CROWN STREET ST PETERS	Residential	0	2	W	- 1	No treatment
NCA07	NCA07_046	71 CROWN STREET ST PETERS	Residential	0	4	E	1	1a
NCA07	NCA07_047 NCA07_047	73 CROWN STREET ST PETERS	Residential Residential	0	2	S W	-	No treatment
NCA07	NCAU7_047 NCA07_047	73 CROWN STREET ST PETERS 73 CROWN STREET ST PETERS	Residential	0	3	N N	<u> </u>	No treatment No treatment
NCA07	NCA07_047 NCA07_047	73 CROWN STREET ST PETERS 73 CROWN STREET ST PETERS	Residential	0	4	W	-	No treatment No treatment
NCA07	NCAU7_047 NCA07_047	73 CROWN STREET ST PETERS 73 CROWN STREET ST PETERS	Residential	0	5	N N	<u> </u>	No treatment No treatment
NCA07	NCA07_047 NCA07_047	73 CROWN STREET ST PETERS 73 CROWN STREET ST PETERS	Residential	0	6	E E	2	1a
NCA07	NCA07_047 NCA07_047	73 CROWN STREET ST PETERS 73 CROWN STREET ST PETERS	Residential	0	7	S	-	No treatment
NCA07	NCA07_047 NCA07_048	75 CROWN STREET ST PETERS	Residential	0	1		-	No treatment
NCA07	NCA07_048	75 CROWN STREET ST PETERS	Residential	0	2	N N		No treatment
NCA07	NCA07_048	75 CROWN STREET ST PETERS	Residential	0	3	W	-	No treatment
NCA07	NCA07_048	75 CROWN STREET ST PETERS	Residential	0	4	N N	-	No treatment
NCA07	NCA07_048	75 CROWN STREET ST PETERS	Residential	0	5	SE	3.6	1a
NCA07	NCA07_049	77 CROWN STREET ST PETERS	Residential	0	1	S	-	No treatment
NCA07	NCA07_049	77 CROWN STREET ST PETERS	Residential	0	2	NW	-	No treatment
NCA07	NCA07_049	77 CROWN STREET ST PETERS	Residential	0	4	SE	5	1a
NCA07	NCA07_049	77 CROWN STREET ST PETERS	Residential	1	1	S	-	No treatment
NCA07	NCA07_049	77 CROWN STREET ST PETERS	Residential	1	2	NW	-	No treatment
NCA07	NCA07_049	77 CROWN STREET ST PETERS	Residential	1	3	N	-	No treatment
NCA07	NCA07_049	77 CROWN STREET ST PETERS	Residential	1	4	SE	7	1b
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Residential	0	1	W	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Residential	0	2	W	-	No treatment
	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Residential	0	3	W	-	No treatment
NCA07		60-82 PRINCES HIGHWAY ST PETERS	Residential	0	5	E	-	No treatment
	NCAU/ USS		nesidential	-	-			,223
NCA07 NCA07	NCA07_055 NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Residential	0	6	E	-	No treatment
NCA07		60-82 PRINCES HIGHWAY ST PETERS 60-82 PRINCES HIGHWAY ST PETERS	Residential Residential	0	6 7	E E	-	No treatment No treatment
NCA07 NCA07	NCA07_055						-	

NCA07 NCA07 NCA07								
	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 1	1	W	-	No treatment
	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 1	2	W	-	No treatment
NCAU/	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 1	3	W	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider		5	E	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			E	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			E	_	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			N	_	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			E	_	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			S	-	No treatment
NCA07								
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			W		No treatment
	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider					No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			W	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			N	•	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			E	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			E	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			E	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			N	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			E	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 2	10	S	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 3	1	W	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 3	2	W	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 3	3	W	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 3	4	N	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Residen	ntial 3	5	E	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 3	6	E	1	1a
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 3	7	E	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 3	8	N	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 3	9	E	2	1a
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 3	10	S	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 4	1	W	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 4	2	W	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 4	3	W	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			N	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			E	2	1a
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider		6	E	3	1a
NCA07	NCA07 055	60-82 PRINCES HIGHWAY ST PETERS	Resider			E	1	1a
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider	ntial 4	8	N	-	No treatment
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			E	5	1a
NCA07	NCA07_055	60-82 PRINCES HIGHWAY ST PETERS	Resider			S	-	No treatment
NCA07	NCA07_062	145 PRINCES HIGHWAY ST PETERS	Resider			SE	19.7	2
NCA07	NCA07_062	145 PRINCES HIGHWAY ST PETERS	Resider			NE NE	15.9	2
NCA07	NCA07_062	145 PRINCES HIGHWAY ST PETERS	Resider			NW	10.1	1b
NCA07	NCA07_062	145 PRINCES HIGHWAY ST PETERS	Resider			SE	19.9	2
NCA07	NCA07_062	145 PRINCES HIGHWAY ST PETERS	Resider			NE NE	16.9	2
NCA07	NCA07_062	145 PRINCES HIGHWAY ST PETERS	Resider			NW	11.2	2
NCA07	NCA07_063		Resider			SE	11.4	2
	NCA07_063	145 PRINCES HIGHWAY ST PETERS 145 PRINCES HIGHWAY ST PETERS						2
NCA07			Resider			NE NIA/	14.1	
NCA07	NCA07_063	145 PRINCES HIGHWAY ST PETERS	Resider			NW SE	10.2	1b
NCA07 NCA07	NCA07_063 NCA07_063	145 PRINCES HIGHWAY ST PETERS 145 PRINCES HIGHWAY ST PETERS	Resider Resider			NE	12.6	2
NCA07	NCA07_063	145 PRINCES HIGHWAY ST PETERS	Resider			NW	10.9	2
NCA07	NCA07_064	147 PRINCES HIGHWAY ST PETERS	Resider			SE	19.7	2
NCA07		147 PRINCES HIGHWAY ST PETERS	Resider			SE	19.8	2
	NCA07_064					S S		
NCA07	NCA07_065		Resider	itidi U				
NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Dacida	atial O			-	No treatment
NCA07		159 PRINCES HIGHWAY ST PETERS	Resider		2	SW	-	No treatment
	NCA07_065	159 PRINCES HIGHWAY ST PETERS 159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0	2	SW NW	-	No treatment
NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS 159 PRINCES HIGHWAY ST PETERS 159 PRINCES HIGHWAY ST PETERS	Resider Resider	ntial 0 ntial 0	2 3 5	SW NW SE	- - -	No treatment No treatment No treatment
NCA07	NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider Resider Resider	ntial 0 ntial 0 ntial 1	2 3 5 1	SW NW SE S	- - - -	No treatment No treatment No treatment No treatment
NCA07 NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS 159 PRINCES HIGHWAY ST PETERS 159 PRINCES HIGHWAY ST PETERS	Resider Resider	ntial 0 ntial 0 ntial 1	2 3 5 1 2	SW NW SE S	- - - - -	No treatment No treatment No treatment
NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider Resider Resider Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1	2 3 5 1 2 3	SW NW SE S SW	- - - - -	No treatment No treatment No treatment No treatment No treatment No treatment
NCA07 NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider Resider Resider Resider Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 1	2 3 5 1 2 3 5	SW NW SE S SW NW SE	- - - - - -	No treatment No treatment No treatment No treatment No treatment
NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider Resider Resider Resider Resider Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2	2 3 5 1 2 3 5	SW NW SE S SW NW SE S	- - - - - - -	No treatment No treatment No treatment No treatment No treatment No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider Resider Resider Resider Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2	2 3 5 1 2 3 5 1 2	SW NW SE S SW NW SE S SW NW SE S SW	- - - - - - - -	No treatment
NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider Resider Resider Resider Resider Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2	2 3 5 1 2 3 5 1 2	SW NW SE S SW NW SE S	- - - - - - - - 1	No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider Resider Resider Resider Resider Resider Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2	2 3 5 1 2 3 5 1 2 3	SW NW SE S SW NW SE S SW NW SE S SW	- - - - - - - -	No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2	2 3 5 1 2 3 5 1 2 3 4	SW NW SE S SW NW SE S SW NW NW	- - - - - - - - 1	No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 2	2 3 5 1 2 3 5 1 2 3 4	SW NW SE S SW NW SE S SW NW NE	- - - - - - - - 1	No treatment 1a 1b
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3	2 3 5 1 2 3 5 1 2 3 4 5	SW NW SE S SW NW SE S NW NW SE S SW NW	- - - - - - - 1 7	No treatment 1a 1b No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3	2 3 5 1 2 3 5 1 2 3 4 5	SW NW SE S SW NW SE S SW NW SE S SW NW NE SE S	- - - - - - - 1 7	No treatment 1a 1b No treatment No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065 NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3	SW NW SE S SW NW SE S SW NW SE S SW NW NE SE S SW	- - - - - - - 1 7 - -	No treatment 1a 1b No treatment No treatment No treatment No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4	SW NW SE S SW NW SE S SW NW SE S SW NW NE SE S SW NW	- - - - - - - 1 7 - - -	No treatment 1a 1b No treatment No treatment No treatment No treatment 1b No treatment No treatment No treatment No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 3	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE NW NE SE S SW NW NE SE S SW NW		No treatment 1a 1b No treatment No treatment No treatment No treatment No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 0 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 3	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 1 2 1 1 2 1 3 4 5 1 1 2 1 1 2 1 3 4 5 1 1 2 1 3 4 1 3 4 1 4 1 5 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE S SSW SSE S SW NW NE SE S SSW SSE SSW SSW SSE SSW SSE SSW SSE SSW SSE SSW SSE SSSW SSE SSE		No treatment 1a 1b No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 4 ntial 4	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE S SW SE S SW NW NE SE S SW NW NE SE S SW NW	- - - - - - - 1 7 - - - - 1 1 7	No treatment 1a 1b No treatment No treatment No treatment Vo treatment No treatment 12 No treatment No treatment
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 4 ntial 4 ntial 4	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE S SW SW NW NE SE S SW NW NE SE SSW NW		No treatment 1a 1b No treatment No treatment Vo treatment No treatment 1b No treatment No treatment No treatment No treatment No treatment No treatment 1b 1b
NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07 NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4 ntial 4 ntial 4 ntial 4	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 6 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	SW NW SE S SW NW SE S SW NW NE NE SE S SW NW NE NE SE S SW NW NE NE SE S SW NW		No treatment 1a 1b No treatment No treatment Vo treatment No treatment 1b No treatment 1c 1c 1d
NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4 ntial 4 ntial 4 ntial 4 ntial 4	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 5	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE NE SE SSW NW NE NE SE SE SW NW NE		No treatment 1a 1b No treatment No treatment No treatment 2 No treatment 1b 1b 1b 1a 2
NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 6	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE SE SE SW NW NE SE SE SE SW NW		No treatment 1a 1b No treatment No treatment No treatment No treatment 1b to treatment 1 b 1 b 1 b 1 a 2 2
NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 7	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE SE SE SW NW NE SE SE SW NW		No treatment 1a 1b No treatment No treatment No treatment 1 b No treatment No treatment 1 b 1 b 1 b 1 a 2 2 1 b
NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 6 7 8	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE SE SE SW NW NE SE SE SE SW NW NE SE SE SW NW NE SE SE SW SW NW		No treatment 1a 1b No treatment No treatment No treatment No treatment 1b 1b 1c
NCA07	NCA07_065	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 6 7 8 1	SW NW SE S SW NW SE S SW NW NE SE SE SW NW NE SE SE SW SW NW NE SE SE SW		No treatment 1a 1b No treatment No treatment No treatment 2 No treatment 2 No treatment 1a 1b 1b 1a 2 2 1b 1b 1b
NCA07	NCA07_065 NCA07_066	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4 ntial 6 ntial 9 ntial 9 ntial 0 ntial 0	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 6 7 8 1 2	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE SE SE SW SW NW NE SE SE SW SE SW SE SW SE SW SE SW SE		No treatment 1a 1b No treatment No treatment No treatment Vo treatment 1b 1b 1a 2 2 1b 1b 1b 1b 1b 1b 1c
NCA07	NCA07_065 NCA07_066 NCA07_066	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4 ntial 9 ntial 0 ntial 0 ntial 0 ntial 0	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 6 7 8 1 2 3	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE SE SW SW NW NE SE SE SW SW SE SE SW		No treatment 1a 1b No treatment No treatment No treatment No treatment 1b 1b 1b 1a 2 2 1b 1b 1b 1b 1b 1c
NCA07	NCA07_065 NCA07_066 NCA07_066 NCA07_066 NCA07_066 NCA07_066	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4 ntial 6 ntial 9 ntial 0 ntial 0 ntial 0 ntial 0 ntial 0	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 6 7 8 1 2 3 4 4 5 6 7 8 1 2 3 4	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE SE SE SW NW		No treatment 1a 1b No treatment No treatment No treatment No treatment 1b 1b 1b 1a 2 2 1b 1b 1b 1b 1b 1c
NCA07	NCA07_065 NCA07_066	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4 ntial 6 ntial 9 ntial 0 ntial 0 ntial 0 ntial 0 ntial 0	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7	SW NW SE S SW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE SE SE SW NW NE SE NE		No treatment 1a 1b No treatment No treatment No treatment No treatment 1b 1b 1b 1a 2 2 1b 1b 1b 1b 1c
NCA07	NCA07_065 NCA07_066	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4 ntial 6 ntial 7 ntial 9 ntial 9 ntial 1 ntial	2 3 5 1 2 3 5 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 5 1 1 2 3 4 5 5 1 1 2 3 4 5 5 1 1 2 3 4 5 5 1 1 2 3 4 5 5 1 2 3 4 5 5 1 2 3 4 5 5 1 2 3 4 5 5 1 2 3 4 5 5 1 2 3 4 5 5 1 2 3 4 5 5 1 2 3 4 5 5 1 2 3 4 5 5 1 2 3 4 5 5 1 2 3 4 5 5 6 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	SW NW SE S SW NW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE SE SE SW SE SE SW SE SE SW NW NW SE		No treatment 1a 1b No treatment No treatment No treatment No treatment 1b 1b 1a 2 2 1b 1b 1b 1b 1c
NCA07	NCA07_065 NCA07_066	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4 ntial 6 ntial 7 ntial 9 ntial 9 ntial 1	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 8 1 2 3 8 4 5 6 7 8 8 1 2 3 8 8 1 2 3 8 8 8 1 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	SW NW SE S SW NW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE SE SE SW SE SE SE SW		No treatment 1a 1b No treatment No treatment No treatment No treatment 1b 1b 1a 2 2 1b 1b 1b 1a 1b No treatment 1b 1c
NCA07	NCA07_065 NCA07_066	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4 ntial 6 ntial 7 ntial 9 ntial 9 ntial 1	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 4 5 6 7 8 8 1 2 3 8 4 5 1 2 3 8 4 5 1 2 3 8 4 5 1 2 3 8 8 8 1 2 3 8 8 8 1 2 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	SW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE SE SE SW SE SW SE SE SW SW SE SE SW SW SE SE SW SW NW NW NW SE SE SW NW		No treatment 1a 1b No treatment No treatment No treatment No treatment 1b 1b 1a 2 2 1b 1b 1b 1b 1b 1c
NCA07	NCA07_065 NCA07_066	159 PRINCES HIGHWAY ST PETERS	Resider	ntial 0 ntial 1 ntial 1 ntial 1 ntial 1 ntial 1 ntial 2 ntial 2 ntial 2 ntial 2 ntial 2 ntial 3 ntial 3 ntial 3 ntial 3 ntial 3 ntial 4 ntial 6 ntial 7 ntial 9 ntial 9 ntial 1	2 3 5 1 2 3 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 6 7 8 1 2 3 4 5 1 2 3 4 5 6 7 8 1 2 3 4 5 1 2 3 4 4 5 1 2 3 4 4 6 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1	SW NW SE S SW NW NW SE S SW NW NE SE S SW NW NE SE S SW NW NE SE SE SW SE SE SE SW		No treatment 1a 1b No treatment No treatment No treatment No treatment 1b 1b 1a 2 2 1b 1b 1b 1a 1b No treatment 1b 1c

NCA07	NCA07 066	159 PRINCES HIGHWAY ST PETERS	Residential	2	1	SE	4	1a
NCA07	NCA07_066	159 PRINCES HIGHWAY ST PETERS	Residential	2	2	SE	2	1a
NCA07	NCA07_066	159 PRINCES HIGHWAY ST PETERS	Residential	2	3	SW	-	No treatment
NCA07	NCA07_066	159 PRINCES HIGHWAY ST PETERS	Residential	2	4	NW	4	1a
NCA07	NCA07_066	159 PRINCES HIGHWAY ST PETERS	Residential	2	5	NW	6	1b
NCA07	NCA07_066	159 PRINCES HIGHWAY ST PETERS	Residential	2	6	NE NE	8	1b
NCA07	NCA07_000 NCA07_071	187 PRINCES HIGHWAY ST PETERS	Residential	0	1	NW	-	No treatment
NCA07	NCA07_071	187 PRINCES HIGHWAY ST PETERS	Residential	0	2	NE .		No treatment
NCA07	NCA07_071	187 PRINCES HIGHWAY ST PETERS	Residential	0	3	SE		No treatment
NCA07	NCA07_071	187 PRINCES HIGHWAY ST PETERS	Residential	0	4	SW	2	1a
NCA07	NCA07_071	187 PRINCES HIGHWAY ST PETERS	Residential	0	5	NW	-	No treatment
NCA07	NCA07_071	187 PRINCES HIGHWAY ST PETERS	Residential	0	6	NE	-	No treatment
NCA07	NCA07_071	187 PRINCES HIGHWAY ST PETERS	Residential	0	7	SE	-	No treatment
NCA07	NCA07_071	187 PRINCES HIGHWAY ST PETERS	Residential	0	8	NE	-	No treatment
NCA07	NCA07_081	22 VICTORIA STREET ST PETERS	Residential	0	1	NE	5.3	1a
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	0	1	S	-	No treatment
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	0	2	W	-	No treatment
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	0	3	N	-	No treatment
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	0	4	E	-	No treatment
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	1	1	S	-	No treatment
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	1	2	W	-	No treatment
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	1	3	N	-	No treatment
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	1	4	E	0.9	1a
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	2	1	S	-	No treatment
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	2	2	W	_	No treatment
						N N		
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	2	3		2	No treatment
NCA08	NCA08_003	31 BARWON PARK ROAD ST PETERS	Residential	2	4	E	3	1a
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS	Residential	0	2	W	-	No treatment
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS	Residential	0	3	N	-	No treatment
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS	Residential	0	4	Е	-	No treatment
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS	Residential	1	2	W	-	No treatment
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS	Residential	1	3	N	-	No treatment
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS	Residential	1	4	E	1	1 a
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS	Residential	2	1	S	2	1 a
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS	Residential	2	2	W	1	1 a
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS	Residential	2	3	N	-	No treatment
NCA08	NCA08_004	35 BARWON PARK ROAD ST PETERS	Residential	2	4	E	4	1a
NCA08	NCA08_005	47 BARWON PARK ROAD ST PETERS	Residential	0	1	SW	-	No treatment
NCA08	NCA08_005	47 BARWON PARK ROAD ST PETERS	Residential	0	2	W	-	No treatment
NCA08	NCA08 005	47 BARWON PARK ROAD ST PETERS	Residential	0	3	N	-	No treatment
NCA08		47 BARWON PARK ROAD ST PETERS	Residential	0	4	W		
	NCA08_005						-	No treatment
NCA08	NCA08_005	47 BARWON PARK ROAD ST PETERS	Residential	0	5	W		No treatment
NCA08	NCA08_005	47 BARWON PARK ROAD ST PETERS	Residential	0	6	E	6	1b
NCA08	NCA08_006	49 BARWON PARK ROAD ST PETERS	Residential	0	1	W	-	No treatment
NCA08	NCA08_006	49 BARWON PARK ROAD ST PETERS	Residential	0	2	E	6	1b
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	0	1	SW	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	0	2	NW	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	0	3	NE	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	0	4	W	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	0	8	E	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	0	10	E	8	1b
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	1	1	SW	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	1	2	NW	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	1	3	NE	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	1	4	W	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	1	5	NE NE	-	No treatment
					6			
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	1		NE	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	1	7	N	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	1	8	E	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	1	9	N	-	No treatment
NCA08	NCA08_007	51 BARWON PARK ROAD ST PETERS	Residential	1	10	E	9	1b
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	1	SW	18	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	2	NW	8	1b
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	3	NE	-	No treatment
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	4	NW	-	No treatment
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	5	SW	-	No treatment
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	6	NW	-	No treatment
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	8	E	11	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	9	SW	19	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	10	NW	16	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	11	SW	16	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	0	12	SE	16	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	1	1	SW	19	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	1	2	NW	10	1b
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	1	3	NE NE		No treatment
NCA08			Residential	1	4	NW		No treatment No treatment
	NCA08_008	53 BARWON PARK ROAD ST PETERS						
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	1	5	SW	-	No treatment
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	1	6	NW	-	No treatment
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	1	8	E	12	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	1	9	SW	19	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	1	10	NW	17	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	1	11	SW	17	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	1	12	SE	17	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	2	1	SW	19	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	2	2	NW	11	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	2	3	NE	1	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	2	4	NW	2	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	2	5	SW	2	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Residential	2	6	NW	2	1a
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NCA08									
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	2	7	NE	1	1a
140/100	NCA08_008	53 BARWON PARK ROAD ST PETERS		esidential	2	8	E	12	2
NCAGO					2	9	SW	19	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS		esidential					
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	2	10	NW	17	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	2	11	SW	17	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	2	12	SE	17	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	1	SW	9	1b
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	2	NW	5	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	3	SW	4	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS		esidential	3	4	NW	5	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS		esidential	3	5	NE	2	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	6	SE	3	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	7	NE	3	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	8	SE	4	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	9	NE	4	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS		esidential	3	10	SE	5	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS		esidential	3	11	NE	4	1a
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	12	SE	14	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	13	SW	19	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	14	NW	17	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS	Re	esidential	3	15	SW	17	2
					3		NW	11	2
NCA08	NCA08_008	53 BARWON PARK ROAD ST PETERS		esidential		16			
NCA08	NCA08_009	19 CAMPBELL STREET ST PETERS	Re	esidential	0	1	SW	18	2
NCA08	NCA08_009	19 CAMPBELL STREET ST PETERS	Re	esidential	0	2	NE	-	No treatment
NCA08	NCA08_009	19 CAMPBELL STREET ST PETERS	Re	esidential	0	3	SE	8	1b
NCA08	NCA08_009	19 CAMPBELL STREET ST PETERS	Re	esidential	1	1	SW	19	2
NCA08		19 CAMPBELL STREET ST PETERS	Re	esidential	1	2	NE	-	No treatment
	NCA08_009								
NCA08	NCA08_009	19 CAMPBELL STREET ST PETERS		esidential	1	3	SE	10	1b
NCA08	NCA08_010	21 CAMPBELL STREET ST PETERS	Re	esidential	0	1	SW	18	2
NCA08	NCA08_010	21 CAMPBELL STREET ST PETERS	Re	esidential	0	2	NW	9	1b
NCA08	NCA08_010	21 CAMPBELL STREET ST PETERS	Re	esidential	0	3	NE	-	No treatment
NCA08	NCA08_010	21 CAMPBELL STREET ST PETERS	Re	esidential	1	1	SW	19	2
NCA08	NCA08_010	21 CAMPBELL STREET ST PETERS		esidential	1	2	NW	10	1b
NCA08	NCA08_010	21 CAMPBELL STREET ST PETERS	Re	esidential	1	3	NE	-	No treatment
NCA08	NCA08_0105	1/23 CAMPBELL STREET ST PETERS	Re	esidential	0	1	SW	18	2
NCA08	NCA08_0105	1/23 CAMPBELL STREET ST PETERS	Re	esidential	0	2	NE	-	No treatment
NCA08	NCA08_0105	1/23 CAMPBELL STREET ST PETERS	Re	esidential	0	3	SE	5	1a
NCA08	NCA08_0106	2/23 CAMPBELL STREET ST PETERS		esidential	1	1	SW	19	2
		·							
NCA08	NCA08_0106	2/23 CAMPBELL STREET ST PETERS	Re	esidential	1	2	NE	1	1a
NCA08	NCA08_0106	2/23 CAMPBELL STREET ST PETERS	Re	esidential	1	3	SE	11	2
NCA08	NCA08_011	25 CAMPBELL STREET ST PETERS	Re	esidential	0	1	SW	18	2
NCA08	NCA08_011	25 CAMPBELL STREET ST PETERS	Re	esidential	0	2	NW	1	1a
NCA08	NCA08_011	25 CAMPBELL STREET ST PETERS	R	esidential	0	3	NE	-	No treatment
								10	
NCA08	NCA08_011	25 CAMPBELL STREET ST PETERS		esidential	0	4	SE		1b
NCA08	NCA08_011	25 CAMPBELL STREET ST PETERS	Re	esidential	1	1	SW	19	2
NCA08	NCA08_011	25 CAMPBELL STREET ST PETERS	Re	esidential	1	2	NW	3	1a
NCA08	NCA08_011	25 CAMPBELL STREET ST PETERS	Re	esidential	1	3	NE	-	No treatment
NCA08	NCA08_011	25 CAMPBELL STREET ST PETERS	Re	esidential	1	4	SE	11	2
NCA08	NCA08_012	27 CAMPBELL STREET ST PETERS	R	esidential	0	1	SW	18	2
								-	
NCA08	NCA08_012	27 CAMPBELL STREET ST PETERS		esidential	0	2	NE		No treatment
NCA08	NCA08_012	27 CAMPBELL STREET ST PETERS	Re	esidential	0	3	SE	3	1a
NCA08	NCA08_012	27 CAMPBELL STREET ST PETERS	Re	esidential	1	1	SW	19	2
NCA08	NCA08_012	27 CAMPBELL STREET ST PETERS	Re	esidential	1	2	NE	-	No treatment
NCA08	NCA08_012	27 CAMPBELL STREET ST PETERS	Re	esidential	1	3	SE	5	1a
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS	Re	esidential	0	1	SW	5	1a
								3	
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS		esidential	0	2	NW		1a
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS	Re	esidential	0	3	NE	-	No treatment
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS	Re	esidential	0	5	SW	18	2
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS	Re	esidential	0	6	NW	9	1b
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS	Re	esidential	1	1	SW	8	1b
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS		esidential	1	2	NW	7	1b
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS		esidential	1	3	NE SW		No treatment
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS		esidential	1	5	SW	19	2
NCA08	NCA08_013	29 CAMPBELL STREET ST PETERS	Re	esidential	1	6	NW	12	2
	NCA08_014	31 CAMPBELL STREET ST PETERS	Re	esidential	0	1	S	17	2
NCA08						2	NE	-	No treatment
NCA08 NCA08	NCA08_014	31 CAMPBELL STREET ST PETERS	Re	esidential	0	2		-	No treatment
	NCA08_014 NCA08_014	31 CAMPBELL STREET ST PETERS 31 CAMPBELL STREET ST PETERS		esidential esidential		3	E	5	1a
NCA08 NCA08	NCA08_014	31 CAMPBELL STREET ST PETERS	Re	esidential	0	3	E		1a
NCA08 NCA08 NCA08	NCA08_014 NCA08_015	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS	Re Re	esidential esidential	0 0 0	3 1	E S	5 17	1a 2
NCA08 NCA08 NCA08	NCA08_014 NCA08_015 NCA08_015	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS	Re Re	esidential esidential esidential	0 0 0	3 1 2	E S NE	5 17 -	1a 2 No treatment
NCA08 NCA08 NCA08	NCA08_014 NCA08_015	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS	Re Re	esidential esidential	0 0 0	3 1 2 1	E S NE S	5 17 - 18	1a 2
NCA08 NCA08 NCA08	NCA08_014 NCA08_015 NCA08_015	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS	Re Re Re	esidential esidential esidential	0 0 0	3 1 2	E S NE	5 17 -	1a 2 No treatment
NCA08 NCA08 NCA08 NCA08 NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS	Re Re Re Re	esidential esidential esidential esidential	0 0 0 0	3 1 2 1	E S NE S	5 17 - 18	1a 2 No treatment 2
NCA08 NCA08 NCA08 NCA08 NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS	Re Re Re Re	esidential esidential esidential esidential	0 0 0 0 0	3 1 2 1 2	E S NE S	5 17 - 18	1a 2 No treatment 2
NCA08 NCA08 NCA08 NCA08 NCA08 NCA08 NCA08 NCA08 NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re Re Re Re Re	esidential esidential esidential esidential esidential esidential esidential	0 0 0 0 0 0	3 1 2 1 2 3 1	E S NE S W NE	5 17 - 18	1a 2 No treatment 2 2 No treatment No treatment
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS 42 CROWN STREET ST PETERS	Re Re Re Re Re	esidential esidential esidential esidential esidential esidential esidential esidential	0 0 0 0 0 0 0	3 1 2 1 2 3 1 2	E S NE S W NE SE SE	5 17 - 18 12 - -	1a 2 No treatment 2 2 No treatment No treatment No treatment
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030 NCA08_030 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS 42 CROWN STREET ST PETERS 42 CROWN STREET ST PETERS	Re Re Re Re Re Re	esidential esidential esidential esidential esidential esidential esidential esidential esidential	0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3	E S NE S W NE SE SW SW	5 17 - 18 12 - - - 0.7	1a 2 No treatment 2 2 No treatment No treatment No treatment No treatment 1a
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS 42 CROWN STREET ST PETERS	Re Re Re Re Re Re	esidential esidential esidential esidential esidential esidential esidential esidential	0 0 0 0 0 0 0	3 1 2 1 2 3 1 2	E S NE S W NE SE SE	5 17 - 18 12 - -	1a 2 No treatment 2 2 No treatment No treatment No treatment
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030 NCA08_030 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS 42 CROWN STREET ST PETERS 42 CROWN STREET ST PETERS	Re Re Re Re Re Re Re	esidential esidential esidential esidential esidential esidential esidential esidential esidential	0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3	E S NE S W NE SE SW SW	5 17 - 18 12 - - - 0.7	1a 2 No treatment 2 2 No treatment No treatment No treatment No treatment 1a
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030 NCA08_030 NCA08_030 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re	esidential	0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4	E S NE S W NE SE SW SW	5 17 - 18 12 - - - 0.7 1.7	1a 2 No treatment 2 2 No treatment No treatment No treatment 1a 1a
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030 NCA08_030 NCA08_030 NCA08_030 NCA08_030 NCA08_030 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re	esidential	0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5	E S NE S W NE SE SW SW W	5 17 - 18 12 - - - 0.7 1.7	1a 2 No treatment 2 2 No treatment No treatment No treatment 1a 1a 1a No treatment
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030 NCA08_030 NCA08_030 NCA08_030 NCA08_030 NCA08_030 NCA08_030 NCA08_030 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re	esidential	0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8	E S NE S W NE SE SW W W W R E N	5 17 - 18 12 - - 0.7 1.7 0.9	1a 2 No treatment 2 2 No treatment No treatment No treatment 1a 1a 1a No treatment No treatment
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re R	esidential	0 0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8 1	E S NE S W NE SE SW W W SW W SW SW SW SW SW SSE	5 17 - 18 12 - - 0.7 1.7 0.9 -	1a 2 No treatment 2 2 No treatment No treatment No treatment 1a 1a 1a No treatment No treatment No treatment
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re R	esidential	0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8 1 2	E S NE S W NE SE SW W W E N SE SW	5 17 - 18 12 - - 0.7 1.7 0.9 - - 1.2	1a 2 No treatment 2 2 No treatment No treatment No treatment 1a 1a 1a No treatment No treatment 1a 1a
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re R	esidential	0 0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8 1	E S NE S W NE SE SW W W SW W SW SW SW SW SW SSE	5 17 - 18 12 - - 0.7 1.7 0.9 -	1a 2 No treatment 2 2 No treatment No treatment No treatment 1a 1a 1a No treatment No treatment No treatment
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re R	esidential	0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8 1 2	E S NE S W NE SE SW W W E N SE SW	5 17 - 18 12 - - 0.7 1.7 0.9 - - 1.2	1a 2 No treatment 2 2 No treatment No treatment No treatment 1a 1a 1a No treatment No treatment 1a 1a 1a No treatment No treatment 1a
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re R	esidential	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8 1 2 3	E S NE S W NE SE SW W W SSE SW SW W SSE SW SSE SW SSE SW SSE SW SSE SW	5 17 - 18 12 - - 0.7 1.7 0.9 - - 1.2 3.6	1a 2 No treatment 2 2 No treatment No treatment No treatment 1a 1a 1a No treatment No treatment No treatment 1a
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re R	esidential	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8 1 2 3 4 5 5 7 8 1 2 3 4 5	E S NE S W NE SE SW W W W E N SE SW W W W W W W W W W W W W W W W W W	5 17 - 18 12 - - 0.7 1.7 0.9 - - 1.2 3.6 4.7	1a 2 No treatment 2 2 No treatment No treatment No treatment 1a 1a 1a No treatment No treatment No treatment 1a
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re R	esidential	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8 1 2 3 4 5 6	E S NE S W NE SE SW W W W E N SE SW SW W W W N	5 17 - 18 12 - - 0.7 1.7 0.9 - - 1.2 3.6 4.7 3.8	No treatment 2 No treatment 2 No treatment No treatment No treatment 1a 1a No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a No treatment
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re R	esidential	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8 1 2 3 4 5 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	E S NE S W NE SE SW W W W E N SE SW W W W E N SE SW SW W W T SE SW SW W W T SE SW SW T SW W T SE SW SW T SW T	5 17 - 18 12 - 0.7 1.7 0.9 - - 1.2 3.6 4.7 3.8	No treatment 2 No treatment 2 No treatment No treatment No treatment 1a 1a No treatment No treatment No treatment No treatment 1a 1a 1a 1a 1a No treatment No treatment
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re R	esidential	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8 1 2 3 4 5 6 7 8	E S NE S W NE SE SW W W W E N SE SW W W W E N SE SW SW W N SE SW N SW W N N E N N	5 17 - 18 12 - - 0.7 1.7 0.9 - - 1.2 3.6 4.7 3.8	No treatment 2 No treatment 2 No treatment No treatment No treatment 1a 1a No treatment No treatment No treatment No treatment No treatment No treatment 1a 1a 1a No treatment No treatment No treatment No treatment No treatment
NCA08	NCA08_014 NCA08_015 NCA08_015 NCA08_016 NCA08_016 NCA08_016 NCA08_030	31 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 33 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 35 CAMPBELL STREET ST PETERS 42 CROWN STREET ST PETERS	Re R	esidential	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 1 2 1 2 3 1 2 3 4 5 7 8 1 2 3 4 5 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	E S NE S W NE SE SW W W W E N SE SW W W W E N SE SW SW W W T SE SW SW W W T SE SW SW T SW W T SE SW SW T SW T	5 17 - 18 12 - 0.7 1.7 0.9 - - 1.2 3.6 4.7 3.8	No treatment 2 2 No treatment No treatment No treatment 1a 1a 1a No treatment No treatment No treatment 1a 1a 1a No treatment

	NCA08 031	42 CROWN STREET ST PETERS	Residential	0	3	SW		No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	0	4	NW		No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	0	5	S	<u>-</u>	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	0	6	W	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	0	7	N	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	0	8	W	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	0	9	W	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	0	10	N	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	1	1	E	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	1	2	S	1	1a
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	1	3	SW	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	1	4	NW	0.5	1a
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	1	5	S	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	1	6	W	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	1	7	N	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	1	8	W	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	1	9	W	-	No treatment
NCA08	NCA08_031	42 CROWN STREET ST PETERS	Residential	1	10	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	1	S	3	1a
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	2	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	3	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	4	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	5	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	6	N	-	No treatment
NCA11	NCA11 015	61 CHURCH AVENUE MASCOT	Residential	0	7	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	8	E	-	No treatment
NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	9	S	-	No treatment
NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT	 Residential	0	10		_	No treatment
NCA11 NCA11		61 CHURCH AVENUE MASCOT	Residential	0	10	W	-	
	NCA11_015					S S		No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	12	E E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential		13		-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	14	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	15	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	16	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	17	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	18	W	12	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	19	W	12	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	20	W	12	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	0	21	W	12	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	1	S	4	1 a
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	2	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	3	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	4	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	5	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	6	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	7	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	8	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	9	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	10	W	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	11	w	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	12	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	13	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	14	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	15	Е	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	16	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	17	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	18	W	12	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	19	W	12	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	20	W	12	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	1	21	W	12	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2	1	S	4	2 1a
NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2	2	s	-	No treatment
NCA11 NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2	3	s	-	No treatment No treatment
NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2	4	S	-	No treatment No treatment
NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2	5	N N	-	No treatment No treatment
NCA11		61 CHURCH AVENUE MASCOT	 Residential	2	6	N N	-	No treatment No treatment
NCA11 NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2	7	E E	-	No treatment No treatment
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2	8	E		No treatment
	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2	9	S	-	No treatment
NCA11	NICA44 O45	61 CHURCH AVENUE MASCOT	Residential	2	10	W	-	No treatment
NCA11	NCA11_015	٠	Dacidontial					No treatment
NCA11 NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2	11	W	-	
NCA11 NCA11 NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2	12	S	-	No treatment
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NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential Residential Residential Residential Residential Residential Residential Residential	2 2 2 2 2 2 2 2 2	12 13 14 15 16 17 18	S E E E N W W	- - - - - 12	No treatment No treatment No treatment No treatment No treatment 2 2
NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2 2 2 2 2 2 2 2 2 2 2	12 13 14 15 16 17 18 19 20	S E E N W W	- - - - - 12 12	No treatment No treatment No treatment No treatment Vo treatment Vo treatment 2 2 2
NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	12 13 14 15 16 17 18 19 20 21	S E E N N W W W	- - - - - 12 12 12	No treatment No treatment No treatment No treatment No treatment 2 2 2 2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 3	12 13 14 15 16 17 18 19 20 21	S E E N N W W W W S	- - - - - 12 12 12 12 12	No treatment No treatment No treatment No treatment Vo treatment 2 2 2 2 1
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2 2 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3	12 13 14 15 16 17 18 19 20 21 1	S E E E N N W W W S S S	- - - - - 12 12 12 12 14	No treatment No treatment No treatment No treatment No treatment 2 2 2 1 No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2 2 2 2 2 2 2 2 2 2 2 2 3 3 3	12 13 14 15 16 17 18 19 20 21 1 2	S E E E N N W W W W S S S S	- - - - - 12 12 12 12 14	No treatment No treatment No treatment No treatment Vo treatment 2 2 2 1 1 No treatment No treatment No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2 2 2 2 2 2 2 2 2 2 2 3 3 3 3	12 13 14 15 16 17 18 19 20 21 1 2	S E E E N N W W W S S S S E E	- - - - - 12 12 12 12 12 - -	No treatment No treatment No treatment No treatment No treatment 2 2 2 1 1 No treatment No treatment No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Residential	2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3	12 13 14 15 16 17 18 19 20 21 1 2 3 4	S E E E N N W W W S S S S E E N	- - - - - 12 12 12 12 12 - -	No treatment No treatment No treatment No treatment No treatment 2 2 2 2 1a No treatment No treatment No treatment No treatment No treatment No treatment

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	NCA11_015	61 CHURCH AVENUE MASCOT		idential				-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	3	11	W	-	No treatment
	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	3	12	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	3	13	Е	-	No treatment
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		idential		14		<u> </u>	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	3	15	Е	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	3	16	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	3	17	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Rasio	idential	3	18	W	11	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	3	19	W	11	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	3	20	W	11	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	3	21	W	11	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Rasia	idential	4	1	S	4	1a
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	4	2	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	4	3	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	4	4	Е	-	No treatment
NCA11		61 CHURCH AVENUE MASCOT		idential	4	5	N	_	
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	4	6	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	4	7	Е	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	4	8	Е	-	No treatment
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		idential	4			-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	4	10	W	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	4	11	W	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	4	12	S	-	No treatment
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		idential		13	E	-	No treatment
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	4	15	E		No treatment
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		idential		17	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	4	18	W	11	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	4	19	W	11	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Rosi	idential	4	20	W	11	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		idential		21	W	11	2
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	5	1	S	3	1a
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	5	2	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	5	3	S	-	No treatment
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		idential	5	4		-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	5	5	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	5	6	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	5	7	Е	-	No treatment
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		idential	5		Е.	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	5	9	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	5	10	W	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	5	11	W	-	No treatment
NCA11	NCA11 015	61 CHURCH AVENUE MASCOT		idential		12	S	_	
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	5	13	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resid	idential	5	14	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	5	15	Е	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		idential		16	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resi	idential	5	17	N	-	No treatment
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NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resil	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	S S S S E N N N E E E S W W S S E E E N N N W W W W	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resil	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	S S S S E N N E E S W W S E E E N N W W S W W S E E E E N N N W W	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resident Res	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	S S S S E N N N E E E S W W S S E E E N N N W W W W	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resil	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1	S S S S S S S S S S S S S S S S S S S	10 3	1b 1b 1a No treatment 1b 1b 1b 1b 1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1	S S S S E N N E E E S W W S E E E W W S S S S S S S S	10 3	1b 1b 1a No treatment 1b 1b 1b 1b 1b 1c
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1	S S S S E N N E E E S W W W S E E E S S S S S S S	10 3	1b 1b 1a No treatment 1b 1b 1b 1b 1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1	S S S S E N N E E E S W W S E E E W W S S S S S S S S	10 3	1b 1b 1a No treatment 1b 1b 1b 1b 1b 1c
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1 2 3	S S S S E N N E E E S W W W S E E E S S S S S S S	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1 2 3 4 5	S S S S E N N N W W W S S S S E N N	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resident Res	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1 2 3 4 5 6	S S S E N N N	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resident Res	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1 2 3 4 5	S S S S E N N N W W W S S S S E N N	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1 2 3 4 5 6	S S S E N N N	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1 2 3 4 5 6 7	S S S E N N E E	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1 2 3 4 5 6 7 8 9	S S S S E N N N W W W S S S E E N N N E E E S S S E E N N N E E E S S S S	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1 2 3 4 5 6 7 8 9 10	S S S S E N N W W W S S S S E N N N E E S W W	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1 2 3 4 5 6 7 8 9 10 11	S S S E N N W W W S S S S E N N N E E E S W W W W W W W W W W W W W W W W	10 3	1b 1b 1a No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT	Resis	idential	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	21 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 1 2 3 4 5 6 7 8 9 10	S S S S E N N W W W S S S S E N N N E E S W W	10 3	1b 1b 1a No treatment

NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	7	14	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	7	15	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	7	16	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	7	17	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	7	18	W	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	7	19	W	9	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	7	20	W	9	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	7	21	W	9	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	1	S	2	1a
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	2	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	3	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	4	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	5	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	6	N	-	No treatment
NCA11 NCA11	NCA11_015	61 CHURCH AVENUE MASCOT 61 CHURCH AVENUE MASCOT		Residential	8		E E	-	No treatment No treatment
NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT		Residential Residential	8	9	S	-	No treatment
NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	10		-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	11	W	_	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	12	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	13	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	14	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	15	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	16	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	17	N	-	No treatment
NCA11	 NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	18	W	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	19	W	9	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	20	W	9	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	8	21	W	9	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	1	S	2	1a
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	2	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	3	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	4	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	5	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	6	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	7	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	8	Е	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	9	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	10	W	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	11	W	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	12	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	13	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	14	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	15	Е	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	16	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	17	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	18	W	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	19	W	9	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	20	W	8	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	9	21	W	8	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	1	<u> </u>	1	1a
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	2	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	3	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	4	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	5	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	6 7	N E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10				No treatment
NCA11 NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT 61 CHURCH AVENUE MASCOT		Residential Residential	10	9	E S	-	No treatment No treatment
NCA11 NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	10	S W	-	No treatment No treatment
NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	11	W	-	No treatment No treatment
NCA11	NCA11_015 NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	12	S	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	13	5 E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	14	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	15	E	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	16	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	17	N	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	18	W	-	No treatment
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	19	W	8	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	20	W	8	1b
NCA11	NCA11_015	61 CHURCH AVENUE MASCOT		Residential	10	21	W	8	1b
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	0	1	Е	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	0	2	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	0	3	Е	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	0	4	N	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	0	5	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	0	6	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	0	7	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	0	8	S	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	1	1	Е	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	1	2	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	1	3	Е	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	1	4	N	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	1	5	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	1	6	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	1	7	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	1	8	S	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	2	1	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	2	2	Е	-	No treatment

110144	NO.44 025	CT2 CARRENTES ROAD AAACOT		5 11 111			-		
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	2	3	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	2	4	N	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	2	5	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	2	6	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	2	7	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	2	8	S	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	3	1	Е	-	No treatment
							E	-	
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	3	2		-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	3	3	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	3	4	N	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	3	5	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	3	6	W	-	No treatment
NCA11	NCA11 036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	3	7	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	3	8	S	-	No treatment
NCA11	NCA11 036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	4	1	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	4	2	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	4	3	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	4	4	N	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	4	5	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	4	6	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	4	7	W	-	No treatment
								-	
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	4	8	S		No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	5	1	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	5	2	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	5	3	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	5	4	N	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	5	5	W		No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22 Apartment development DA approved DA-22	Residential	5	6	W	-	
								-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	5	7	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	5	8	S	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	6	1	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	6	2	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	6	3	E	_	No treatment
					6	4	N N		No treatment No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential		·		-	
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	6	5	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	6	6	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	6	7	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	6	8	S	-	No treatment
NCA11	NCA11 036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	7	1	Е	-	No treatment
NCA11	NCA11 036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	7	2	E	_	No treatment
			<u> </u>						
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	7	3	Е	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	7	4	N	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	7	5	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	7	6	W	-	No treatment
NCA11	NCA11 036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	7	7	W	-	No treatment
NCA11	NCA11 036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	7	8	S		No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	8	1	E		No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	8	2	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	8	3	Е	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	8	4	N	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	8	5	W	-	No treatment
NCA11	NCA11 036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	8	6	W	-	No treatment
NCA11	NCA11 036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	8	7	W	_	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	8	8	S	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	9	1	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	9	2	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	9	3	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	9	4	N	-	No treatment
NCA11	NCA11 036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	9	5	W	-	No treatment
NCA11		653 GARDENERS ROAD MASCOT		Residential	9	6	W	-	
	NCA11_036		Apartment development DA approved DA-22					-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	9	7	W		No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	9	8	S	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	10	1	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	10	2	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	10	3	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	10	4	N	-	No treatment
NCA11	NCA11 036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	10	5	W	-	No treatment
								<u> </u>	
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	10	6	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	10	7	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	10	8	S	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	11	1	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	11	2	Е	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	11	3	Е	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	11	Л	N	-	No treatment
						4			
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	11	5	W		No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	11	6	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	11	7	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	11	8	S		No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	12	1	Е	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	12	2	E	-	No treatment
			· · · · · · · · · · · · · · · · · · ·						
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	12	3	E		No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	12	4	N	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	12	5	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	12	6	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	12	7	W		No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	12	8	S	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	13	1	E		No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	13	2	E	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	13	3	E	-	No treatment

NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	13	4	N	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	13	5	W	6	1b
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	13	6	W	2	1a
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	13	7	W	-	No treatment
NCA11	NCA11_036	653 GARDENERS ROAD MASCOT	Apartment development DA approved DA-22	Residential	13	8	S	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Mariton approved DA	Residential	0	1	S S	-	No treatment
NCA11	NCA11_044a NCA11_044a	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	0	3	S	-	No treatment No treatment
NCA11	NCA11_044a NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	0	4	N N	<u> </u>	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	1	W	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	2	S	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	3	Е	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	4	N	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	1	W	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	2	S	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	3	E	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	4	N	-	No treatment
NCA11 NCA11	NCA11_044a NCA11_044a	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	3	2	S S	-	No treatment No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	3	3	E	-	No treatment
NCA11	NCA11 044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	3	4	N	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	1	W	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	2	S	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	3	Е	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	4	N	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	1	W	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	2	<u>s</u>	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	3	E N	-	No treatment
NCA11	NCA11_044a NCA11_044a	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	6	1	N W	-	No treatment No treatment
NCA11	NCA11_044a NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	6	2	S	-	No treatment No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	6	3	E	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	6	4	N	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	1	W	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	2	S	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	3	E	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	4	N	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	1	W	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	2	S	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Mariton approved DA	Residential	8	3 4	E N	10	No treatment
NCA11 NCA11	NCA11_044a NCA11_044a	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	9	1	W	-	1b No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	9	2	S	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	9	3	E	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	9	4	N	9	1b
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	1	W	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	2	S	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	3	Е	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	4	N	9	1b
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	1	W	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Maritan approved DA	Residential	11	2	S E	-	No treatment
NCA11 NCA11	NCA11_044a NCA11_044a	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	11	3 4	N N	9	No treatment 1b
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	1	W	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	2	S	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	3	E	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	4	N	9	1b
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	1	W	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	2	S	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	3	E	-	No treatment
NCA11	NCA11_044a	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	4	N	9	1b
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	2	S S	-	No treatment
NCA11	NCA11_044b NCA11_044b	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	0	3	E E	-	No treatment No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	4	N	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	1	W	-	No treatment
NCA11	 NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	2	S	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	3	E	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	4	N	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	1	W	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	2	S .	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	3	E	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	1	N W	-	No treatment
NCA11 NCA11	NCA11_044b NCA11_044b	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	3	2	S S	-	No treatment No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	3	3		-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	3	4	N	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	1	W	-	No treatment
NCA11	 NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	2	S	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	3	E	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	4	N	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	1	W	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	2	S .	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	3	E	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	6	1	N W	-	No treatment
NCA11 NCA11	NCA11_044b NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	6	2	S	-	No treatment No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	6	3	5 E	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	6	4	N	-	No treatment
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NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	1	W	-	No treatment
NCA11	NCA11 044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	2	S	-	No treatment
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NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	3	E	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7	4	N	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	1	W	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	2	S	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	3	E	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	8	4	N	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	9	1	W	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	9	2	S	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	9	3	E	-	No treatment
NCA11	NCA11 044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	9	4	N	-	No treatment
			<u> </u>			•			
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	1	W		No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	2	S	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	3	E	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	4	N	5	1a
NCA11	NCA11 044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	1	W	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	2	S	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	3	E	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	4	N	5	1a
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	1	W	-	No treatment
NCA11	NCA11 044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	2	S	-	No treatment
NCA11	NCA11 044b	1-5 KENT ROAD MASCOT	, ,,	Residential	12	3	E	_	No treatment
			Kiara by Meriton approved DA						
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	4	N	5	1a
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	1	W	-	No treatment
NCA11	NCA11_044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	2	S	-	No treatment
NCA11	NCA11 044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	3	E	-	No treatment
NCA11	NCA11 044b	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	4	N N	5	1a
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NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	1	S	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	2	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	3	E	-	No treatment
NCA11	NCA11 045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	4	N	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	5	W		No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	0	6	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	1	S	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	2	E	=	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	3	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	4	N	_	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	5	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	1	6	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	1	S	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	2	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	3	E	-	No treatment
						-			
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	4	N	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	5	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	2	6	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	3	1	S	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	3	2	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	3	3	Е	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	3	4	N	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	3	5	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	3	6	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	1	S	-	No treatment
								-	
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	2	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	3	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	4	N	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	5	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	4	6	W	-	No treatment
NCA11		1-5 KENT ROAD MASCOT		Residential	5	1	S	_	
	NCA11_045		Kiara by Meriton approved DA						No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	2	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	3	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	4	N	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	5	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	5	6	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT		Residential	6	1	S		No treatment
			Kiara by Meriton approved DA						
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	6	2	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	6	3	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	6	4	N	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	6	5	W	-	No treatment
NCA11	 NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	6	6	W	-	No treatment
	NCA11_045		, approved b/1		7	1	S	_	
NCA11		1-5 VENIT DOAD MASCOT	Kiara by Maritan approved DA			1	3		No treatment
		1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential		_	_		
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential	7	2	E	-	No treatment
NCA11						2	E E	-	No treatment No treatment
	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7			- - - -	
NCA11	NCA11_045 NCA11_045	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential	7		E	- - -	No treatment
NCA11 NCA11 NCA11	NCA11_045 NCA11_045 NCA11_045 NCA11_045	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA Kiara by Meriton approved DA Kiara by Meriton approved DA Kiara by Meriton approved DA	Residential Residential Residential Residential	7 7 7 7	3 4 5	E N W	- - - -	No treatment No treatment No treatment
NCA11 NCA11 NCA11 NCA11	NCA11_045 NCA11_045 NCA11_045 NCA11_045 NCA11_045	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential Residential Residential Residential Residential	7 7 7 7	3 4 5 6	E N W	- - - -	No treatment No treatment No treatment No treatment
NCA11 NCA11 NCA11 NCA11 NCA11	NCA11_045 NCA11_045 NCA11_045 NCA11_045 NCA11_045 NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential Residential Residential Residential Residential Residential	7 7 7 7 7 8	3 4 5 6 1	E N W W	- - - -	No treatment No treatment No treatment No treatment No treatment
NCA11 NCA11 NCA11 NCA11	NCA11_045 NCA11_045 NCA11_045 NCA11_045 NCA11_045	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential Residential Residential Residential Residential	7 7 7 7	3 4 5 6	E N W	- - - - - -	No treatment No treatment No treatment No treatment
NCA11 NCA11 NCA11 NCA11 NCA11	NCA11_045 NCA11_045 NCA11_045 NCA11_045 NCA11_045 NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential Residential Residential Residential Residential Residential	7 7 7 7 7 8	3 4 5 6 1	E N W W	- - - - - - -	No treatment No treatment No treatment No treatment No treatment
NCA11 NCA11 NCA11 NCA11 NCA11 NCA11	NCA11_045 NCA11_045 NCA11_045 NCA11_045 NCA11_045 NCA11_045 NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential Residential Residential Residential Residential Residential Residential	7 7 7 7 7 8 8	3 4 5 6 1 2	E N W W S	-	No treatment No treatment No treatment No treatment No treatment No treatment
NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential Residential Residential Residential Residential Residential Residential Residential Residential	7 7 7 7 7 8 8 8 8	3 4 5 6 1 2 3 4	E N W W S E E N	-	No treatment
NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7 7 7 7 7 7 8 8 8 8	3 4 5 6 1 2 3 4	E N W W S E N W W	- - -	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7 7 7 7 7 8 8 8 8 8	3 4 5 6 1 2 3 4 5 6	E N W W S E E N W W	- - - -	No treatment
NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7 7 7 7 7 7 8 8 8 8	3 4 5 6 1 2 3 4	E N W W S E N W W	- - -	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7 7 7 7 7 8 8 8 8 8	3 4 5 6 1 2 3 4 5 6	E N W W S E E N W W	- - - -	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7 7 7 7 7 8 8 8 8 8 8 8	3 4 5 6 1 2 3 4 5 6	E N W W S E E N W W	- - - - -	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7 7 7 7 7 8 8 8 8 8 8 8 9 9	3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 3	E N W W S E E N W W S E E E N E E N E E E E E	- - - - - - -	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7 7 7 7 7 8 8 8 8 8 9 9 9	3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 4	E N W W S E E N W W S E E N W N N S E E N N N N S E E N N N N N N S E E N N N N	- - - - - - - -	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7 7 7 7 7 8 8 8 8 8 9 9 9	3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 5	E N W W S E E N W W S E E N W W S E E N W W S E E N W W	- - - - - - - -	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7 7 7 7 7 8 8 8 8 8 9 9 9	3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 4	E N W W S E E N W W S E E N W N N S E E N N N N S E E N N N N N N S E E N N N N	- - - - - - - -	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT 1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	7 7 7 7 7 8 8 8 8 8 9 9 9	3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 1 2 3 4 5 6 5	E N W W S E E N W W S E E N W W S E E N W W S E E N W W	- - - - - - - -	No treatment

NCA11	NCA11 045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	2	Е	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	3	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	4	N	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	5	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	10	6	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	1	S	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	2	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	3	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	4	N	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	5	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	11	6	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	1	S	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	2	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	3	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	4	N	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	5	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	12	6	W	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	1	S	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	2	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	3	E	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	4	N	-	No treatment
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	5	W	5	1 a
NCA11	NCA11_045	1-5 KENT ROAD MASCOT	Kiara by Meriton approved DA	Residential	13	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	1	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	8	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	9	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	10	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	0	11	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1	1	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1	3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1	4	S .	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1	8	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	1	9	N F	-	No treatment
NCA11 NCA11	NCA11_047 NCA11_047	9 KENT ROAD MASCOT 9 KENT ROAD MASCOT	Esprit by Bridgehill under construction Esprit by Bridgehill under construction	Residential Residential	1	10	E		No treatment No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	1	N N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	3	E	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	5	S	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	6	W	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	7	W	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	8	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	9	N	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	10	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	2	11	E	-	No treatment
NCA11	 NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	1	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	2	Е	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	8	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	9	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	10	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	3	11	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	1	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	8	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	9	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	10	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	4	11	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	5	1	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	5	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	5	3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	5	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	5	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	5	7	W		No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	5	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	5	8	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential Residential	5	9	N E	-	No treatment
NCA11 NCA11	NCA11_047 NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction Esprit by Bridgehill under construction		5	10	E	-	No treatment
INCALL	11CA11 U4/	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	J	11	L	-	No treatment

NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6	1	N	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6	3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6	6	W	-	No treatment
NCA11		9 KENT ROAD MASCOT		Residential	6	7	W		
	NCA11_047		Esprit by Bridgehill under construction						No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6	8	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6	9	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6	10	E	-	No treatment
NCA11	 NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	6	11	E	_	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7	1	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7	3	Е	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7	4	S	_	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7	7	W	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7	8	W	-	No treatment
		9 KENT ROAD MASCOT	. , , ,			9			
NCA11	NCA11_047		Esprit by Bridgehill under construction	Residential	7		N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7	10	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	7	11	E	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	1	N	-	No treatment
							E		
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	2		-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	8	W	=	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	9	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	10	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	8	11	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9	1	N	=	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9	2	Е	-	No treatment
				Residential	9	3	E		
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Kesidentiai		3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9	8	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9	9	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9	10	Е	-	No treatment
							E	-	
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	9	11		-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10	1	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10	3	Е	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10	8	W	-	No treatment
						9			
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10		N		No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10	10	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	10	11	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11	1	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11	3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11	6	W		No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11	8	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11	9	N		No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	11	10	Е	-	No treatment
NCA11		9 KENT ROAD MASCOT		Residential	11	11	E	-	
	NCA11_047		Esprit by Bridgehill under construction						No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	1	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	4	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	8	W	-	No treatment
								7	
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	9	N	7	1b
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	10	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	12	11	E	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	1	N	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	2	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	3	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	4	S	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	5	S	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	6	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	7	W	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	8	W	-	No treatment
NCA11	NCA11 047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	9	N	7	1b
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	10	E	-	No treatment
NCA11	NCA11_047	9 KENT ROAD MASCOT	Esprit by Bridgehill under construction	Residential	13	11	E	-	No treatment
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	0	1	N	-	No treatment

March Marc	NCA11	NCA11 049	39 KENT ROAD MASCOT	Residential	0	2	E	-	No treatment
Month Mont								-	No treatment
1.00 1.00								9	1b
March Marc									1b
Manual M								1	1a
Month Month Market Month Mon			39 KENT ROAD MASCOT	Residential	0	7	E	-	No treatment
Month Mont	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	1	1	N	-	No treatment
Section Sect	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	1	2	Е	-	No treatment
Cold	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	1	3	S	-	No treatment
MANUAL M	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	1	4	W	10	1b
March 1,000 1,000 March (MARCHEST) Services 1 7 2 March March (MARCHEST) Services 2 1 1 March March (MARCHEST) Services 2 2 2 1 1 March (MARCHEST) Services 2 2 2 2 2 2 2 2 2	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	1	5	w	10	1b
Month Mont	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	1	6	N	1	1a
Model Mode	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	1	7	E	-	No treatment
March Marc	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	2	1	N	-	No treatment
Model Mode	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	2	2	E	-	No treatment
March Marc	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	2	3	S	-	No treatment
March Marc	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	2	4	W	10	1b
MACH	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	2	5	W	10	1b
Model Mode	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	2	6	N	2	1a
MACS	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	2	7	E	-	No treatment
Model Mode	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential				-	No treatment
									No treatment
March March 1981 1987		NCA11_049	39 KENT ROAD MASCOT	Residential					No treatment
MACI DOC 100 MICH READ WORDS Best									1b
Model Mode									1b
Media Media Sec Media Sec Media Media Media Sec Media Media Sec Media									1a
No. No.								-	No treatment
MODITY M								-	No treatment
MACLE MACLE 200 20 cm Fold MACOT September 4									No treatment
Model Mode									No treatment
Model Model 2009 10 10 10 10 10 10 10									1b
MACH									1b
MCALL MCAL									1a
MACH MACH D68 39-000 MACH MACH D68								-	No treatment
MAST								-	No treatment
Metal Meta				5				<u> </u>	No treatment
ROAD MONTAL DEST PRINT NOT MONTAL								8	No treatment
MACH MACH 1909 SPEED FROM MACCOTT Residencial S									
MCALL MCALL SP 29 NET FROM DARGOT Resistential S 7 E									
MAIL MAIL See								-	
NCALL MCALL 096 29 KM FROM MORDOT Residential 6 2 6 No for FROAD MORDOT								-	No treatment
MCALL MCALL DRIVER 39 SENT RODO MASCOT Residential 6 3 5 No. 196								-	No treatment
MCA11 MCA1								-	No treatment
MCA11 MCA11 MR BERT REGIONACCT Microstrial G S W B D D								8	1b
Metall M									1b
NASI									1a
MCA11 MCA11_089 39 KENT ROAD MASCOT Residential 7 1 N - No.TOT									No treatment
NCA11 NCA11_049 39 NEWT ROAD MASCOT Residential 7 3 5 No tree								-	No treatment
NCALI NCALI 049 39 KENT ROAD MASCOT Residential 7 3 5 No Intel NCALI NCALI 049 39 KENT ROAD MASCOT Residential 7 4 W 7 1 1 1 1 1 1 1 1 1								-	No treatment
NCALL NCALL 089 39 KENT ROAD MASCOT Residential 7								-	No treatment
NCA11 NCA1_049 39 KENT FOLD MASCOT Residential 7								7	1b
NCA11 NCA1 089 39 KENT ROAD MASCOT Residential 7								8	1b
NCA11 NCA11 099 39 ENT ROAD MASCOT Residential 7 7 E - No tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 8 1 N No tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 8 2 E - No tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 8 3 S No tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 8 4 W 7 11 NCA11 049 39 ENT ROAD MASCOT Residential 8 5 W 7 12 NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 8 5 W 7 12 NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 8 7 E NO tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 8 7 E NO tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 9 1 N NO tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 9 2 E NO tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 9 2 E NO tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 9 2 E NO tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 9 3 S NO tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 9 3 S NO tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 9 3 S NO tree NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 049 39 ENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 049 39 ENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 049 39 ENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 049 39 ENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 049 39 ENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 049 39 ENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 049 39 ENT ROAD MASCOT Residential 10 1 N NO TREE NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 10 1 N NO TREE NCA11 NCA11 049 39 ENT ROAD MASCOT Residential 10 4 W 6 11 NCA11 049 39 ENT ROAD MASCOT Residential 10 6 N NO TREE NCA11 NCA11 049 39 ENT ROAD MASCOT							N	1	1a
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 8 1 N No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 8 2 E No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 8 3 S NO TREE NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 8 4 W 7 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 8 5 W 7 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 8 6 N 1 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 8 7 E No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 8 7 E No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 2 E No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 2 E No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 2 E No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 2 E No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 7 E No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 7 E No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 1 N No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 1 N No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 1 N No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 4 W 6 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 5 W 7 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N No Tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N No Tree	NCA11		39 KENT ROAD MASCOT	Residential	7	7	E	-	No treatment
NCA11								-	No treatment
NCA11								-	No treatment
NCA11			39 KENT ROAD MASCOT	Residential	8		S	-	No treatment
NCA11			39 KENT ROAD MASCOT		8	4	W	7	1b
NCA11 NCA11 049 39 KENT ROAD MASCOT Residential 8 6 N 1 1								7	1b
NCA11								1	1a
NCA11			39 KENT ROAD MASCOT	Residential	8	7	E	-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 2 E No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 3 S - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 5 W 7 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 3 S - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 4 W							N	-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 3 5 - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 5 W 7 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 7	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	9	2	Е	-	No treatment
NCA11 NCA12 049 39 KENT ROAD MASCOT Residential 9 5 W 7 11 NCA11 NCA11 049 39 KENT ROAD MASCOT Residential 9 6 N - No tree NCA11 NCA11 049 39 KENT ROAD MASCOT Residential 9 7 E - No tree NCA11 NCA11 049 39 KENT ROAD MASCOT Residential 10 1 N - No tree NCA11 NCA11 049 39 KENT ROAD MASCOT Residential 10 2 E - No tree NCA11 NCA11 049 39 KENT ROAD MASCOT Residential 10 3 S - No tree NCA11 NCA11 049 39 KENT ROAD MASCOT Residential 10 5 W 7 11 NCA11 NCA11 049 39 KENT ROAD MASCOT Residential 10 5 W 7 11 NCA11 NCA11 049 39 KENT ROAD MASCOT Residential 10 7	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	9	3	S	-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 5 W 7 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 1 </td <td>NCA11</td> <td>NCA11_049</td> <td>39 KENT ROAD MASCOT</td> <td>Residential</td> <td>9</td> <td>4</td> <td>W</td> <td>6</td> <td>1b</td>	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	9	4	W	6	1b
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 9 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 5 W 7 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 3 </td <td>NCA11</td> <td>NCA11_049</td> <td>39 KENT ROAD MASCOT</td> <td>Residential</td> <td>9</td> <td>5</td> <td>W</td> <td>7</td> <td>1b</td>	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	9	5	W	7	1b
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 3 5 - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 5 W 7 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	9	6	N	-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 3 S - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 3 S - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	9	7	E	-	No treatment
NCA11 NCA12 OR A11 NCA12 NCA13 S - No tree NCA11 NCA11 NCA11 NCA11 NCA11 NCA11 Q 4 W 6 11 NCA11 NCA11 NCA11 OA11 OA11 <td>NCA11</td> <td>NCA11_049</td> <td>39 KENT ROAD MASCOT</td> <td>Residential</td> <td>10</td> <td>1</td> <td>N</td> <td>-</td> <td>No treatment</td>	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	10	1	N	-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 5 W 7 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 3 S - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 6	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	10	2	E	-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 5 W 7 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 3 S - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	10	3	S	-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 6 N - No treatment NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 10 7 E - No treatment NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 1 N - No treatment NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 3 S - No treatment NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 4 W 6 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7 E - No treatment NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 </td <td>NCA11</td> <td>NCA11_049</td> <td>39 KENT ROAD MASCOT</td> <td>Residential</td> <td>10</td> <td>4</td> <td>W</td> <td>6</td> <td>1b</td>	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	10	4	W	6	1b
NCA11 NCA12_049 39 KENT ROAD MASCOT Residential 10 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 3 S - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 4 W 6 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 1 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	10	5	W	7	1b
NCA11 NCA1_049 39 KENT ROAD MASCOT Residential 11 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 2<	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	10	6	N	-	No treatment
NCA11 NCA12_049 39 KENT ROAD MASCOT Residential 11 2 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 3 S - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 2 E - No tree	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	10	7	Е	-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 3 5 - No treat NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7 E - No treat NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No treat NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No treat NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 2 E - No treat	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	11	1	N	-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 4 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 2 E - No tree	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	11	2	Е	-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 5 W 6 11 NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 6 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 2 E - No tree	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	11	3			No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 6 N - No treat NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7 E - No treat NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No treat NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 2 E - No treat	NCA11		39 KENT ROAD MASCOT	Residential	11	4	W		1b
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 11 7 E - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No tree NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 2 E - No tree	NCA11		39 KENT ROAD MASCOT	Residential	11			6	1b
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 1 N - No treat NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 2 E - No treat	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	11			-	No treatment
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 2 E - No treat	NCA11		39 KENT ROAD MASCOT	Residential				-	No treatment
	NCA11			Residential				-	No treatment
NCA11 NCA11 049 39 KENT ROAD MASCOT								-	No treatment
-	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	12	3	S	-	No treatment
									1a
•									1b
NCA11 NCA11_049 39 KENT ROAD MASCOT Residential 12 6 N - No treat	NCA11	NCA11_049	39 KENT ROAD MASCOT	Residential	12	6	N	-	No treatment

NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	12	7	E	-	No treatment
							N	<u>-</u>	
NCA11 NCA11	NCA11_049 NCA11_049	39 KENT ROAD MASCOT 39 KENT ROAD MASCOT		Residential Residential	13	2	E E	-	No treatment No treatment
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	13	3	S		No treatment
						4		5	
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	13			6	1a
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	13	5	W	-	1b
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	13	6	N		No treatment
NCA11	NCA11_049	39 KENT ROAD MASCOT		Residential	13	7	E	-	No treatment
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	0	1	NE	2.9	1a
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	0	2	SE	2.1	1a
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	0	3	SE	1.4	1a
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	0	4	SW	-	No treatment
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	1	1	NE	5	1a
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	1	2	SE	3	1a
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	1	3	SE	3	1 a
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	1	4	SW	2	1a
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	2	1	NE	7	1b
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	2	2	SE	6	1b
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	2	3	SE	6	1b
OSR	OSR_105	95 BURROWS ROAD ALEXANDRIA	Little Learning School child care centr	Childcare Sleeping	2	4	SW	5	1a
OSR	OSR 125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	0	1	NE	1	1a
OSR	OSR 125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	0	2	NE	-	No treatment
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	0	3	SE	6	1b
								4	
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	0	4	SE		1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Children Sleeping	0	5	SW	2	1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	0	6	SW	2	1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	0	7	NW	3	1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	0	8	SW	2	1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	0	9	NW	5	1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	1	1	NE	4	1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	1	2	NE	4	1 a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	1	3	SE	7	1b
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	1	4	SE	6	1b
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	1	5	SW	3	1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	1	6	SW	3	1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	1	7	NW	4	1a
						8		4	
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	1		SW		1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	1	9	NW	6	1b
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	2	1	NE	7	1b
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	2	2	NE	7	1b
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	2	3	SE	9	1b
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	2	4	SE	7	1b
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	2	5	SW	5	1 a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	2	6	SW	5	1a
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	2	7	NW	6	1b
OSR	OSR_125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	2	8	SW	6	1b
OSR	OSR 125	4B HUNTLEY STREET ALEXANDRIA	Oz Education child care centre	Childcare Sleeping	2	9	NW	8	1b
OSR	OSR 130	4H HUNTLEY STREET ALEXANDRIA	Child care centre	Childcare Sleeping	0	1	NE	-	No treatment
OSR	OSR 130	4H HUNTLEY STREET ALEXANDRIA	Child care centre	Childcare Sleeping	0	2	NE	-	No treatment
OSR	OSR_130	4H HUNTLEY STREET ALEXANDRIA	Child care centre	Childcare Sleeping	0	3	E	-	No treatment
						4		3	
OSR	OSR_130	4H HUNTLEY STREET ALEXANDRIA	Child care centre	Childcare Sleeping	0		SW		1a
OSR	OSR_130	4H HUNTLEY STREET ALEXANDRIA	Child care centre	Childcare Sleeping	0	5	SW	3	1a
OSR	OSR_130	4H HUNTLEY STREET ALEXANDRIA	Child care centre	Childcare Sleeping	0	6	NW	3	1a
OSR	OSR_176	ST PETERS PUBLIC SCHOOL		School Classroom	0	1	SE	1	1a
OSR	OSR_176	ST PETERS PUBLIC SCHOOL		School Classroom	0	2	NW	2	1a
OSR	OSR_176	ST PETERS PUBLIC SCHOOL		School Classroom	0	3	NE	2	1a
OSR	OSR_176	ST PETERS PUBLIC SCHOOL		School Classroom	1	1	SE	3	1 a
OSR	OSR_176	ST PETERS PUBLIC SCHOOL		School Classroom	1	2	NW	5	1a
OSR	OSR_176	ST PETERS PUBLIC SCHOOL		School Classroom	1	3	NE	6	1b
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	1	SE	4	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	2	SW	-	No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	3	SW	-	No treatment
OSR	OSR 177	ST PETERS PUBLIC SCHOOL		School Classroom	0	4	NW	-	No treatment
OSR	OSR 177	ST PETERS PUBLIC SCHOOL		School Classroom	0	5	SW	-	No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	6	SE	-	No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL		School Classroom	0	8	NW	2	
								-	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	10	SE		No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	11	SW	-	No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	12	SE	1	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	13	NE	-	No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	14	NE	-	No treatment
OSR	OSR 177	ST PETERS PUBLIC SCHOOL		School Classroom	0	15	NW	-	No treatment
OSR	U3K_1//							-	No treatment
OSK	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	16	SW		
OSR		ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL		School Classroom School Classroom	0	16 17	SW NW	-	No treatment
	OSR_177							-	No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0	17	NW	-	
OSR OSR	OSR_177 OSR_177 OSR_177	ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL		School Classroom School Classroom	0	17 18	NW NE	-	No treatment
OSR OSR OSR	OSR_177 OSR_177 OSR_177 OSR_177 OSR_177	ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL		School Classroom School Classroom School Classroom	0 0 0	17 18 19	NW NE NW	- - -	No treatment
OSR OSR OSR OSR OSR	OSR_177 OSR_177 OSR_177 OSR_177 OSR_177 OSR_177 OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom School Classroom School Classroom School Classroom	0 0 0 0	17 18 19 20 21	NW NE NW SW	- - - -	No treatment No treatment No treatment No treatment
OSR OSR OSR OSR OSR OSR	OSR_177 OSR_177 OSR_177 OSR_177 OSR_177 OSR_177 OSR_177 OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom School Classroom School Classroom School Classroom School Classroom	0 0 0 0 0	17 18 19 20 21 22	NW NE NW SW NW	- - - - - 4	No treatment No treatment No treatment No treatment 1a
OSR OSR OSR OSR OSR OSR OSR	OSR_177 OSR_177 OSR_177 OSR_177 OSR_177 OSR_177 OSR_177 OSR_177 OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom School Classroom School Classroom School Classroom School Classroom School Classroom	0 0 0 0 0	17 18 19 20 21 22 23	NW NE NW SW NW NE	- - - - - 4 4	No treatment No treatment No treatment No treatment 1a 1a
OSR OSR OSR OSR OSR OSR OSR OSR OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0 0 0 0 0 0	17 18 19 20 21 22 23 24	NW NE NW SW NW NE NW NE	- - - - - 4 4 5	No treatment No treatment No treatment No treatment 1a 1a 1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0 0 0 0 0 0	17 18 19 20 21 22 23 24 25	NW NE NW SW NW NE NW NE SE	- - - - - 4 4 5	No treatment No treatment No treatment 1a 1a 1a No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0 0 0 0 0 0 0 0	17 18 19 20 21 22 23 24 25 27	NW NE NW SW NW NE NW SE NW	- - - - 4 4 5	No treatment No treatment No treatment 1a 1a 1a No treatment No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0 0 0 0 0 0	17 18 19 20 21 22 23 24 25	NW NE NW SW NW NE NW NE SE	- - - - - 4 4 5 - - 5	No treatment No treatment No treatment 1a 1a 1a No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0 0 0 0 0 0 0 0	17 18 19 20 21 22 23 24 25 27	NW NE NW SW NW NE NW SE NW	- - - - 4 4 5	No treatment No treatment No treatment 1a 1a 1a No treatment No treatment
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0 0 0 0 0 0 0 0	17 18 19 20 21 22 23 24 25 27 28	NW NE NW SW NW NE NW NE NW NE SE NE SE	- - - - - 4 4 5 - - 5	No treatment No treatment No treatment Ia Ia Ia No treatment No treatment Ia
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	0 0 0 0 0 0 0 0 0	17 18 19 20 21 22 23 24 25 27 28 29	NW NE NW SW NW NE NW NE NW SE NE SE NE	- - - - 4 4 5 - - 5	No treatment No treatment No treatment 1a 1a 1a No treatment 1a 1a 1a No treatment No treatment 1a 1a 1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL		School Classroom	0 0 0 0 0 0 0 0 0	17 18 19 20 21 22 23 24 25 27 28 29 30	NW NE NW SW NW NE NW NE SE NE SE NE SE	- - - - 4 4 5 - - 5	No treatment No treatment No treatment 1a 1a 1a No treatment No treatment 1a 1a 1a No treatment 1a

OSR	OSR_177 OSR_177 OSR_177 OSR_177 OSR_177 OSR_177	ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL		School Classroom School Classroom School Classroom	1 1 1	4 5	SW NW SW	-	No treatment No treatment
OSR OSR OSR OSR OSR OSR OSR	OSR_177 OSR_177	ST PETERS PUBLIC SCHOOL			1	5	SW	-	No treatment
OSR OSR OSR OSR OSR OSR	OSR_177								
OSR OSR OSR OSR		CT DETERS BURLIS SCHOOL		School Classroom	1	6	SE	2	1a
OSR OSR OSR	OSR 177	31 PETERS PUBLIC SCHOOL		School Classroom	1	7	SW	3	1a
OSR OSR OSR		ST PETERS PUBLIC SCHOOL		School Classroom	1	8	NW	4	1a
OSR OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	9	NE	6	1b
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	10	SE	2	1a
	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	11	SW	3	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	12	SE	3	1a
	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	13	NE	3	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	14	NE	3	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	15	NW	1	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	16	SW	2	1a
OSR	OSR_177 OSR 177	ST PETERS PUBLIC SCHOOL		School Classroom School Classroom	1	17	NW NE	2	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL ST PETERS PUBLIC SCHOOL		School Classroom	1	19	NW	1	1a 1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	20	SW	3	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	21	NW	2	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	22	NE	7	1b
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	23	NW	6	1b
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	24	NE	7	1b
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	25	SE	5	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	27	NE	6	1b
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	28	SE	6	1b
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	29	NE	6	1b
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	30	SE	5	1a
OSR	OSR_177	ST PETERS PUBLIC SCHOOL		School Classroom	1	31	NE	5	1a
OSR	OSR_178	ST PETERS PUBLIC SCHOOL		School Classroom	0	1	SE	3	1a
OSR	OSR_178	ST PETERS PUBLIC SCHOOL		School Classroom	0	2	SW	3	1a
OSR	OSR_178	ST PETERS PUBLIC SCHOOL		School Classroom	0	3	NW	-	No treatment
OSR	OSR_178	ST PETERS PUBLIC SCHOOL		School Classroom	0	4	NE	1	1a
OSR	OSR_178	ST PETERS PUBLIC SCHOOL		School Classroom	0	5	NW	-	No treatment
OSR	OSR_178	ST PETERS PUBLIC SCHOOL		School Classroom	0	6	SE	1	1a
OSR	OSR_178	ST PETERS PUBLIC SCHOOL		School Classroom	0	7	SW	2	1a
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	1	NE	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	2	SE	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	3	SW	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	4	SE	8	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship Places of worship	0	6	SW SE	8	1b
OSR	OSR_216 OSR 216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	7	SW	7	1b
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS 187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church St Peters Anglican Church	Places of worship	0	8	NW	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	9	SW	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	10	NW	-	No treatment
OSR	OSR 216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	11	NE	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	12	NW	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	13	NE	2	1a
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	14	NW	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	15	NE	8	1b
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	16	SE	8	1b
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	17	NE	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	18	SE	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	1	NE	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	2	SE	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	3	SW	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	4	SE	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	5	SW	10	No treatment
OSR	OSR_216 OSR_216	187 PRINCES HIGHWAY ST PETERS 187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship Places of worship	1	7	SE SW	8	1b
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church St Peters Anglican Church	Places of worship	1	8	NW	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	9	SW	2	1a
OSR	OSR 216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	10	NW	2	1a
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	11	NE	2	1a
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	12	NW	2	1a
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	13	NE	5	1a
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	14	NW	2	1a
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	15	NE	9	1b
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	16	SE	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	17	NE	-	No treatment
OSR	OSR_216	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	1	18	SE	-	No treatment
OSR	OSR_217	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	1	NE	7	1b
OSR	OSR_217	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	2	SE	8	1b
OSR	OSR_217	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	3	SE	-	No treatment
OSR	OSR_217	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	4	SW	3	1a
OSR	OSR_217	187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	5	SE	3	1a
OSR	OSR_217	187 PRINCES HIGHWAY ST PETERS 187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church	Places of worship	0	7	SW	2	1a
OSR OSR	OSR_217 OSR_217	187 PRINCES HIGHWAY ST PETERS 187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church St Peters Anglican Church	Places of worship Places of worship	0	8	NW	- -	1a No treatment
OSR	OSR_217 OSR_217	187 PRINCES HIGHWAY ST PETERS 187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church St Peters Anglican Church	Places of worship	0	9	NE NE	1	No treatment 1a
OSR	OSR_217	187 PRINCES HIGHWAY ST PETERS 187 PRINCES HIGHWAY ST PETERS	St Peters Anglican Church St Peters Anglican Church	Places of worship	0	10	NW	-	No treatment
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	0	1	SE	_	No treatment
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	0	2	SW	2	1a
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	0	3	NW	2.7	1a
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	0	4	SW	1.7	1a
	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	0	5	NW	-	No treatment
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	0	6	NW	-	No treatment
OSR OSR									
	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	1	1	SE	-	No treatment

OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	1	3	NW	4	1a
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	1	4	SW	4	1a
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	1	5	NW	5	1a
OSR	OSR_326	2/160 BOURKE ROAD ALEXANDRIA	Alexandria Montessori Academy child car	Childcare Sleeping	1	6	NW	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	0	1	SE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	0	2	SE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	0	8	NE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	0	9	NE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	0	10	NE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	1	1	SE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	1	2	SE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	1	8	NE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	1	9	NE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	1	10	NE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	2	1	SE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	2	2	SE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	2	6	NW	5	1a
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	2	7	NW	5	1 a
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	2	8	NE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	2	9	NE	-	No treatment
OSR	OSR_389	61-67 O'RIORDAN STREET ALEXANDRIA	Kiddie Academy child care centre	Childcare Sleeping	2	10	NE	-	No treatment

RENZO TONIN & ASSOCIATES 27 SEPTEMBER 2019

APPENDIX D Proposed noise monitoring locations





- O Road traffic noise monitoring location
- Fixed facilities noise monitoring location
- Fixed facilities
- Noise catchment area

Client:

WestConnex New M5







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WestConnex New M5

Description: Noise Monitoring Locations



P: 02 8218 0500 F: 02 8218 0501

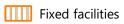
1/418A Elizabeth Street, SURRY HILLS NSW 2010 Scale:

TH014-15 6 0 001 (r0) 29.03.2019 1:5000





• Fixed facilities noise monitoring location



Noise catchment area



WestConnex New M5 WestConnex New M5







Project:

Description: Noise Monitoring Locations



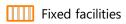
29.03.2019 1:5000





Legend:

Fixed facilities noise monitoring location



Noise catchment area

Client:

WestConnex New M5





Project:

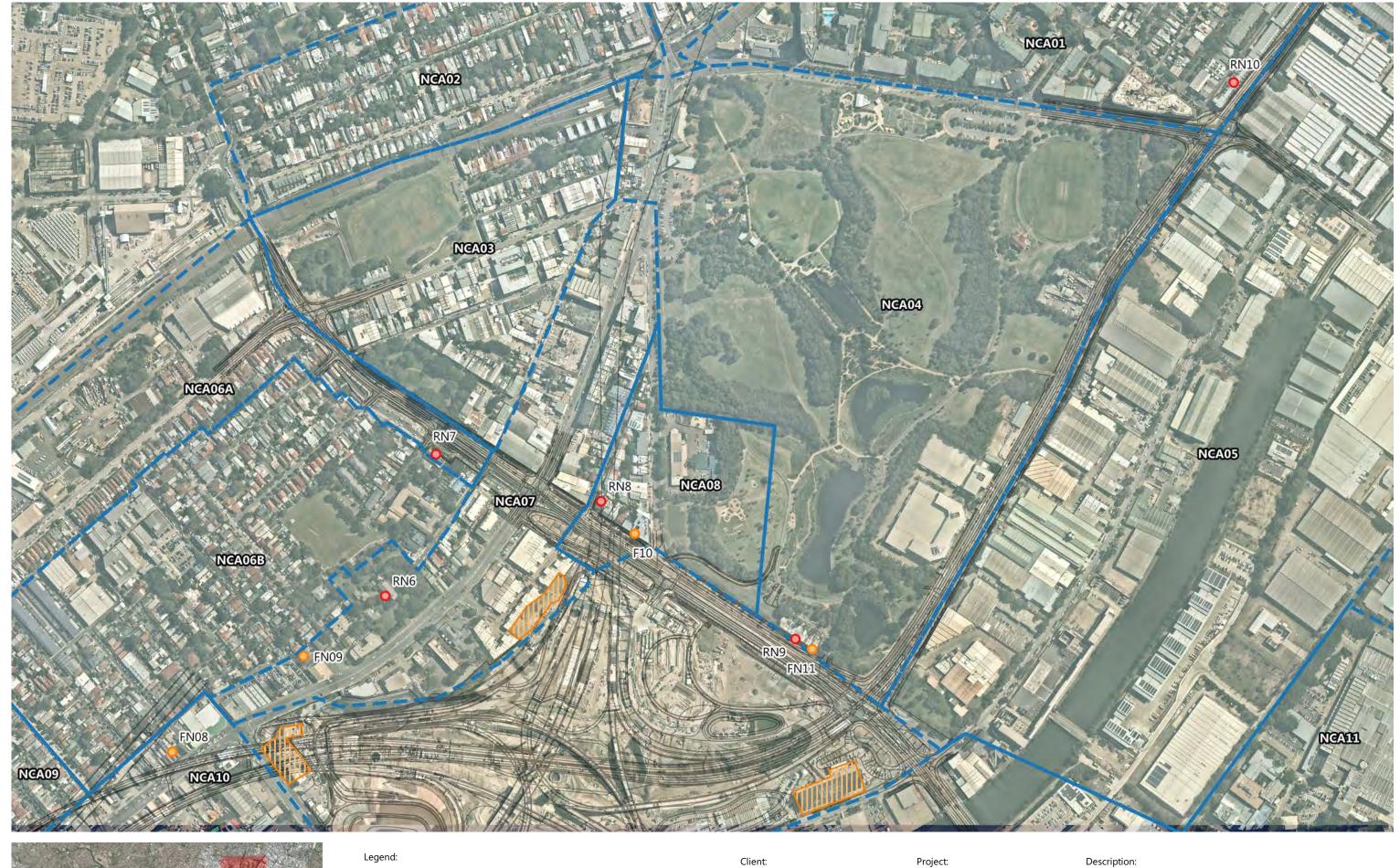
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WestConnex New M5

Description: Noise Monitoring Locations



Created by: RV Figure No: TH014-15 6 0 001 (r0) 29.03.2019 1:5000 @ A3





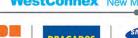
- Road traffic noise monitoring location
- Fixed facilities noise monitoring location

Fixed facilities

Noise catchment area



WestConnex New M5 WestConnex New M5





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Description: Noise Monitoring Locations



Figure No: TH014-15 6 0 001 (r0) 29.03.2019 1:5000

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APPENDIX E Operational ancillary facility noise management sub-plan



WESTCONNEX NEW M5

Operational Ancillary Facility Noise Management Sub-Plan

28 May 2019

CDS JV

TH014-15F02 OAFNMSP (r1)





Document details

Detail	Reference
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Date	Revision history	Non-issued revision	Issued revision	Prepared	Instructed	Authorised
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We have prepared this report in accordance with the usual care and thoroughness of the consulting profession, for the sole purpose described above and by reference to applicable standards, guidelines, procedures and practices at the date of issue of this report. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report, to the extent permitted by law.

The information contained herein is for the purpose of acoustics only. No claims are made and no liability is accepted in respect of design and construction issues falling outside of the specialist field of acoustics engineering including and not limited to structural integrity, fire rating, architectural buildability and fit-for-purpose, waterproofing and the like. Supplementary professional advice should be sought in respect of these issues.

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Introduction

Renzo Tonin & Associates (NSW) Pty Ltd, on behalf of CPB Dragados Samsung Joint Venture (CDS) has prepared this Operational Ancillary Facility Noise Management Sub-Plan (OAFNMSP) which provides details of the noise assessment and mitigation measures for the ancillary fixed facilities associated with the operation of the WestConnex New M5 Project (the Project). It forms a part of the Operational Environmental Management Plan (ONMP).

This OAFNMSP meets the requirements of Condition E34 (h) in Schedule 2, Part E of the Minister's Conditions of Approval (MCoA), dated 20th April 2016.

The noise assessment and mitigation measures outlined in this OAFNMSP have been based on the requirements of the NSW 'Industrial Noise Policy' (INP, 2000), in accordance with Schedule 2, Part E of the MCoA. The outcomes of the noise and vibration mitigation design are presented in detail in the Operational Noise and Vibration Review (ONVR) prepared as part of the detailed design for the Project.

The key noise mitigation measures referred to in this plan were determined as part of the detailed design phase for the Project, and are presented in detail in the Operational Noise and Vibration Review (ONVR).

The following sections of the sub-plan addresses the requirements of Condition E34 (h) of the MCoA. Based on the proposed operations the ancillary facilities and the large distances to nearby sensitive receiver locations, vibration generated by the operation of the ancillary facilities is not significant and has not been considered further in this OAFNMSP.

1 Site and receiver assessment locations

Figure 1, Figure 2, Figure 3 and Figure 4 below show the locations of the Motorway Operation Complexes (MOCs) and the receiver locations that have been considered for the design of noise mitigation. The most affected receiver locations and their distances from the MOC are listed in Table 1.

Table 1 Receiver locations

МОС	Receiver Type	Address	Distance
MOC1 Kingsgrove	Residential	99 Glamis Street	160m
		113 Tallawalla Street	470m
		14 Sutcliffe Street	270m
MOC2 Bexley	Residential	1 Kingsgrove Avenue	85m
		94 Wolli Avenue	115m
MOC3 Arncliffe	Residential	41 Flora Street	65m
		26 - 32 Marsh St (apartments)	140m
MOC4 St Peters	Residential	311 Princes Highway	115
		1 Edith Street	80m
	Church	187 Princes Highway	180m
MOC5 MCC	Residential	Campbell Road terraces	180m

Figure 1 MOC1 and assessment locations



Figure 2 MOC2 and assessment locations



Figure 3 MOC3 and assessment locations



Figure 4 MOC4, MOC5, FWC1 and assessment locations



2 Noise sources

2.1 Ventilation fan noise levels

The noise assessment of the main ventilation fans for each MOC has been undertaken based on the fan sound power data presented in Table 2. MOC5 is a motorway control centre only and therefore has no ventilation fan noise sources.

Table 2 Fan sound power levels

			Sound	Sound power level, dB re1x10 ⁻¹² W (per fan)							
Building	No of fans operating at 100% capacity	Flow rate m³/s per fan	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total dB(A)
MOC1											
Exhaust	4	210	113	122	118	116	113	108	104	99	118
MOC2											
Smoke exhaust	3	177	113	123	121	120	117	113	109	104	122
мос3											
Exhaust EB	3	247	124	122	124	122	118	113	109	104	123
Exhaust SC NB	3	273	119	128	125	123	120	115	111	106	125
Supply EB/WB	4	263	124	122	122	120	116	111	107	102	121
Supply SC SB	2	125	111	121	118	118	115	110	106	101	120
MOC4											
Exhaust	3	243	118	127	123	122	118	114	109	105	124
Supply	4	126	111	120	118	118	115	111	106	101	120

2.2 Jet Fans

Jet fans are to be installed at intervals along the length of the tunnel, suspended from the roof as part of the ventilation system. The preferred supplier of jet fans has conducted factory acceptance testing of noise levels from their fan and silencer combination, in accordance with ISO 13350:2015. The measured sound levels are shown in Table 3 and have been used for noise modelling.

Table 3 Jet fan sound power levels

Jet fan model	Direction	Sound Power Level, dB re1x10-12 W								Overall
Jet fall filodel	Direction	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dB(A)
1250mm	Forward	89	91	95	92	91	91	87	82	97
diameter with 2300mm silencer	Reverse	92	97	101	93	93	91	88	83	99

2.3 Ancillary equipment noise sources

Mechanical and Electrical drawing packages were provided by the design team showing the proposed locations of ancillary buildings such as substations and fire pump rooms. As the design progressed, the design team provided equipment selections and noise levels, which were added into the noise model and the total noise level from each fixed facility site was recalculated. Noise attenuation measures such as acoustic attenuators and screens were incorporated into ancillary facilities so that the total noise level from all sources did not exceed the noise criteria.

The key ancillary noise sources that could potentially add to the overall external noise level at receivers are listed below.

Table 4 Ancillary equipment sound levels

Plant Item	No. off	Indicative sound level
MOC1		
Substation		
Rooftop condenser OSA294	6	75dB(A) sound power
Rooftop condenser OSA116	4	75dB(A) sound power
Supply air fan	2	72dB(A) sound pressure @3m
HV room dry type transformer	2	80dB(A) maximum sound power
Fire pump room		
Fire pump (duty)	2	105dB(A) sound pressure @1m
Fire pump exhaust	2	95dB(A) sound power with muffler
Exhaust fan	2	102dB(A) sound power
MOC2		
Substation		
Rooftop condenser OSA294	6	75dB(A) sound power
Rooftop condenser OSA139	2	71dB(A) sound power
Supply air fan	2	70dB(A) sound pressure @3m
HV room dry type transformer	2	80dB(A) maximum sound power
MOC3		
Substation		
Rooftop condenser OSA294	5 duty, 2 standby	75dB(A) sound power
Supply air fan	2	74dB(A) sound pressure @3m
HV room dry type transformer	2	80dB(A) maximum sound power
MOC4		
Substation		
Rooftop condenser OSA324	6	71dB(A) sound power

Plant Item	No. off	Indicative sound level
Rooftop condenser OSA139	6	71dB(A) sound power
Supply air fan	2	77dB(A) sound pressure @3m
HV room dry type transformer	2	80dB(A) maximum sound power
Fire pump room		
Fire pump (duty)	2	105dB(A) sound pressure @1m
Fire pump exhaust	2	95dB(A) sound power with muffler
Exhaust fan	2	104dB(A) sound power
MOC5		
Substation		
Rooftop condenser OSA324	6	71dB(A) sound power
Ground level condenser OSA380	1 duty, 1 standby	80dB(A) sound power
Supply air fan	1 duty, 1 standby	68dB(A) sound pressure @3m
HV room dry type transformer	2	80dB(A) maximum sound power
MCC building		
Air handling unit	1 duty, 1 standby	63dB(A) sound pressure @4m
Air handling unit	2 duty	67dB(A) sound pressure @4m
Rooftop condenser unit	2 duty, 2 standby	61dB(A) sound pressure @3m

2.4 Transformers within Substation Buildings

Transformers within substation buildings will be required to meet AS60076.10 noise levels which are very stringent, and the sound power level of each transformer is expected to be in the range of 69dB(A) to 76dB(A) depending on the rated power. Noise modelling has conservatively assumed up to 80dB(A) sound power. The transformers are contained within rooms that have blockwork walls and concrete slab rooves, so transformer noise is well contained.

All substations are located at least 60m from the nearest receivers. Allowing for noise reductions from the substation building envelope, distance losses, ground absorption, directivity and shielding from buildings and structures, predicted noise levels at the nearest receivers to each substation are below 30dB(A). This is well below the total noise limit for each MOC and ensures that cumulative noise from the MOC as a whole does not exceed the night time noise limits specified in Table 5.

3 Operational Noise Criteria

3.1 NSW Industrial Noise Policy (INP) Criteria

The EIS noise criteria for ventilation facilities and any modifications to the criteria are presented in Table 5. These criteria have been set in accordance with the NSW 'Industrial Noise Policy' (INP) and confirmed by additional noise monitoring conducted by SLR in October 2015. The goals are for total noise from all noise sources associated with each fixed facility including:

- ventilation exhaust noise
- noise breakout from fan buildings
- jet fan noise from portals
- ancillary equipment such as substation transformers, condensers and fans associated with substation buildings, fire pump buildings, and water treatment plants.

Table 5 L_{Aeq} Noise criteria for fixed facilities, dB(A)

Period	Kingsgrove MOC1	Bexley Road South MOC2	Arncliffe MOC3	St Peters MOC4 and FWC1	Motorway Control Centre MOC5
Day	50	52	52	47	59
Evening	45	45	50	45	51
Night	38	40	44	41 ¹	45

Notes: 1. The criteria for St Peters is lower than the EIS reported criteria based on additional noise monitoring in accordance with

3.2 INP modifying factor adjustments

Where the character of the industrial noise is assessed as particularly annoying (i.e. if it has an inherently tonal, low frequency, impulsive or is intermittent at night), then an adjustment is to be added to penalise the noise for its potential increase in annoyance. The INP provides definitive procedures for determining whether a penalty or adjustment should be applied.

Noise from ventilation facilities has been assessed and it has been determined that noise emissions would likely have low-frequency characteristics, and therefore a 5dB penalty has been applied. This penalty has been applied to noise from the main ventilation fans but not to building services equipment.

3.3 EPA's sleep disturbance criteria

The NSW EPA has made the following policy statement with respect to sleep disturbance as part of the INP Application Notes (December 2010):

Peak noise level events, such as reversing beepers, noise from heavy items being dropped or other high noise level events, have the potential to cause sleep disturbance. The potential for high noise

level events at night and effects on sleep should be addressed in noise assessments for both the construction and operational phases of a development. The INP does not specifically address sleep disturbance from high noise level events.

Research on sleep disturbance is reviewed in the NSW Road Noise Policy. This review concluded that the range of results is sufficiently diverse that it was not reasonable to issue new noise criteria for sleep disturbance.

From the research, the EPA recognised that the current sleep disturbance criterion of an LA1, (1 minute) not exceeding the LA90, (15 minute) by more than 15 dB(A) is not ideal. Nevertheless, as there is insufficient evidence to determine what should replace it, the EPA will continue to use it as a guide to identify the likelihood of sleep disturbance. This means that where the criterion is met, sleep disturbance is not likely, but where it is not met, a more detailed analysis is required.

The detailed analysis should cover the maximum noise level or LA1, (1 minute), that is, the extent to which the maximum noise level exceeds the background level and the number of times this happens during the night-time period. Some guidance on possible impact is contained in the review of research results in the NSW Road Noise Policy. Other factors that may be important in assessing the extent of impacts on sleep include:

- how often high noise events will occur
- time of day (normally between 10pm and 7am)
- whether there are times of day when there is a clear change in the noise environment (such as during early morning shoulder periods).

The LA1, (1 minute) descriptor is meant to represent a maximum noise level measured under 'fast' time response. The EPA will accept analysis based on either LA1, (1 minute) or LA, (Max).

Source: http://www.epa.nsw.gov.au/noise/applicnotesindustnoise.htm

In summary, the sleep disturbance criteria of $L_{A1(1min)} \le L_{A90(15min)} + 15dB(A)$ is to be used for initial assessment. The L_{Amax} descriptor may be used as an alternative to the $L_{A1(1min)}$. It is noted that the background L_{A90} noise level used for establishing the sleep disturbance criteria includes all background noise including noise from the project.

Where the background noise level is very low, this may result in a limit which is unnecessarily strict. Therefore, where the screening limit L_{A90} + 15 is less than 55dB(A) outside, a value of 55dB(A) would be appropriate to ensure the internal noise level does not exceed 45dB(A), on the assumption that there is a 10dB(A) outside-to-inside noise loss through an open window (see INP, p17). Where windows are likely to remain closed on the basis of adequate ventilation that meets the Building Code of Australia's ventilation requirements, then outside noise levels can be greater than 65dB(A), on the assumption that there is a minimum 20dB(A) outside-to-inside noise loss through a closed window.

The project sleep disturbance criteria are presented in Table 6.

Table 6 Sleep Disturbance Screening Limits, dB(A)

	Kingsgrove MOC1	Bexley Road South MOC2	Arncliffe MOC3	St Peters MOC4 and FWC1	Motorway Control Centre (MOC5)
RBL	41	41	39	36	40
Screening limit	56	56	55 ²	55 ²	55

Notes:

1. The criteria apply for the night time period only

^{2.} Set at 55dB(A) in accordance with EPA lower limit

4 Noise Assessment

The following sections present the predicted noise levels from the operational fixed facilities impacting the nearest affected receivers and assessments against the nominated noise criteria. Noise contour maps showing the predicted operational fixed facility noise levels overlaid on aerial photos are presented in APPENDIX B.

4.1 Ventilation buildings and support facilities

Based on the equipment noise levels presented in Section 2, and the noise mitigation measures in Section 5.1.2, the following mitigated L_{Aeq} noise levels are predicted at the nearest and most affected residential receivers. The predicted noise levels are for the night time period which is the controlling period, and in each case the predicted noise level complies with the criteria. All other surrounding receivers not mentioned in Table 7 have noise levels less than those shown.

Table 7 Noise compliance for fixed facilities

		LAeq noise	level contrib	Total	Noise		
Facility	Receiver location	Exhaust building	Supply building	Substation	Fire pumps	predicted noise level, dB(A)	Criteria (Night)
MOC1	Glamis Street, Kingsgrove	28	-	33	33	37	38
MOC2	Kingsgrove Avenue, Bexley North	30	-	34	-	36	40
MOC3	Flora Street, Arncliffe	28	37	37	-	40	44
MOC4	Edith Street, St Peters	24	28	33	33	37	41
MOC5	Campbell Road, St Peters	-	-	<35	-	<35	45

4.2 Jet fan noise from portals

Jet fan noise breakout from portals has been considered for receivers near to portals. Table 8 shows the predicted jet fan noise level at the nearest receivers for the western and eastern portals assuming a set of three jet fans with silencers located inside the mainline tunnel. The distance from the portal opening to the first jet fan bank inside the tunnel is 120 metres for the St Peters portal and 300 metres for the Western Interchange portal.

Noise levels at all residential receiver locations nearest to portals are predicted to comply with the set criteria.

Table 8 Predicted environmental noise from jet fans

Portal	Receiver location	Noise Criteria, dB(A)	Predicted jet fan noise level, dB(A)
Western Portal	Glamis Street, Kingsgrove	38	29
Eastern Portal	Edith Street, St Peters	41	36

5 Noise Mitigation Measures

Section 4.2 of the ONMP describes the methodology by which the following mitigation measures were determined.

5.1 Ventilation facilities

5.1.1 Fan attenuators

The attenuators for the ventilation fans are required to achieve the static insertion losses requirements specified in the tables below.

Table 9 Kingsgrove MOC1 attenuator requirements

Building Side of fans	Cido of four	Attenuator	Minimu	ım insertic	on loss, dE	3				
	length (m)	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	46 32	
Exhaust Building	Airside	5	22	36	60	60	60	60	46	32
	Tunnel side	5	16	27	50	50	50	50	30	25

Table 10 Bexley MOC2 attenuator requirements

Building Side of fans	Attenuator	Minimu	um inserti	on loss, dE	3					
	length (m)	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz 38	
Exhaust	Airside	5	22	43	58	61	62	60	52	38
Building	Tunnel side	5	12	26	41	50	50	50	33	23

Table 11 Arncliffe MOC3 attenuator requirements

Building Side of	Cido of force	Attenuator	Minimum insertion loss, dB									
	Side of fans	length (m)	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz 8kHz			
Exhaust EB	Airside	6	29	48	60	60	60	60	58	43		
	Tunnel side	6	18	30	50	50	50	50	30	25		
Supply	Airside	6	32	49	65	65	65	65	58	44		
EB/WB	Tunnel side	6	18	28	50	50	50	50	30	25		

Table 12 St Peters MOC4 attenuator requirements

Building S	Side of fans	Attenuator	Minimum insertion loss, dB							
	Side of fans	length (m)	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Exhaust	Airside	6	30	50	65	65	65	65	59	43
Building	Tunnel side	5	17	28	50	50	50	50	30	25
Supply Building	Airside	6	30	50	65	65	65	65	60	45
	Tunnel side	5	30	50	65	65	65	65	59	43

5.1.2 Noise mitigation for ventilation buildings

Critical acoustic elements of ventilation buildings such as concrete wall thicknesses and acoustic ratings for doors have been developed with the design team and are marked on the construction drawings.

Table 13 contains a summary of the general approach for noise treatment of ventilation buildings.

Table 13 Ventilation facility building construction

Duilding classes	Ventilation facility			
Building element	MOC1 Kingsgrove	MOC2 Bexley	MOC3 Arncliffe	MOC4 St Peters
Exhaust building walls	300mm precast concrete	300mm precast concrete	300mm precast concrete	300mm precast concrete
Exhaust building roof/floor	n/a	No acoustic requirement	300mm precast concrete	300mm precast concrete
Exhaust building fan access doors	300mm precast concrete with 20mm steel plate over perimeter gaps	n/a	n/a	n/a
Exhaust building personnel doors	Solid core doors with acoustic seals for doors exposed to fan chamber	Solid core doors with acoustic seals for doors exposed to fan chamber	Solid core doors with acoustic seals for doors exposed to fan chamber	Solid core doors with acoustic seals for doors exposed to fan chamber
Fan service hatches over lifting void	n/a	Rebated concrete hatch to match floor slab thickness	Rebated concrete hatch to match floor slab thickness	No acoustic requirement
Supply building walls and roof	n/a	n/a	150mm precast concrete for lower section	n/a
Supply building internal lining	n/a	n/a	Acoustic lining on underside of soffit	n/a

5.2 Other M&E plant noise mitigation

5.2.1 Surface buildings noise mitigation

In addition to the main ventilation exhaust and supply buildings, there are various surface buildings located within each ventilation facility or nearby to it. The surface buildings are listed below:

- MOC1 Kingsgrove Substation building, Fire Pump building, Maintenance Facility and Workshop
- MOC2 Bexley Substation building
- MOC3 Arncliffe Substation building and water treatment plant
- St Peters Fire Water Complex (FWC) at Albert Street, St Peters
- MOC5 Motorway Control Centre (MCC) at corner of Campbell Road and Burrows Road, St Peters

These buildings can contain noisy equipment and include mechanical services equipment for ventilation and cooling. The noise mitigation measures for these buildings are summarised in Table 14.

Table 14 Surface buildings acoustic treatments summary

Facility	Building	Noise mitigation
Kingsgrove	Substation	Walls: precast concrete / core filled blockwork
		Roof: concrete slab
		Acoustic screen around rooftop plant
	Fire pump room	Walls: precast concrete
		Roof: concrete slab
		Acoustic attenuators behind wall discharge louvres
		Acoustically rated service doors and personnel doors
		Acoustic attenuators on supply air ducts
		Mufflers on exhaust of diesel pumps and discharged to wall
Bexley	Substation	Walls: precast concrete / core filled blockwork
		Roof: concrete slab
		Acoustic screen around rooftop plant
Arncliffe	Substation	Walls: precast concrete / core filled blockwork
		Roof: concrete slab
		Acoustic screen around rooftop plant
St Peters	Fire pump rooms	Walls: precast concrete
		Roof: concrete slab
		Acoustic attenuators behind wall discharge louvres
		Acoustically rated service doors and personnel doors
		Acoustic attenuators on supply air ducts
		Mufflers on exhaust of diesel pumps and discharged to wall
Campbell Road	MCC	Acoustic screen around rooftop plant
		Walls around substation transformers

6 Maintenance and inspection schedules

Conditional maintenance of plant, equipment and other ancillary facilities will be conducted periodically by the Operator in accordance with the SWTC, the manufacturer's recommendations and the Operation and Maintenance Manual (ref. XXXX). Code of Maintenance Standards (CoMS) form part of the manual and will be reviewed annually to ensure compliance with the SWTC, as relevant to the infrastructure and fixed facilities of the Project. The manual contains details of maintenance and inspection schedules to ensure plant, equipment and other operational ancillary facilities are operating at optimal levels.

APPENDIX A Glossary of terminology

The following is a brief description of the technical terms used to describe noise to assist in understanding the technical issues presented.

Adverse weather	Weather effects that enhance noise (particularly wind and temperature inversions) occurring at a site for a significant period of time. In the NSW INP this occurs when wind occurs for more than 30% of the time in any assessment period in any season and/or temperature inversions occurring more than 30% of nights in winter.
Air-borne noise	Noise which is fundamentally transmitted by way of the air and can be attenuated by the use of barriers and walls placed physically between the noise source and receiver.
Ambient noise	The all-encompassing noise associated within a given environment at a given time, usually composed of sound from all sources near and far.
Amenity	A desirable or useful feature or facility of a building or place.
AS	Australian Standard
Assessment period	The time period in which an assessment is made. e.g. Day 7am-6pm, Evening 6pm-10pm, Night 10pm-7am.
Assessment Point	A location at which a noise or vibration measurement is taken or estimated.
Attenuation	The reduction in the level of sound or vibration.
Audible Range	The limits of frequency which are audible or heard as sound. The normal hearing in young adults detects ranges from 20 Hz to 20 kHz, although some people can detect sound with frequencies outside these limits.
A-weighting	A filter applied to the sound recording made by a microphone to approximate the response of the human ear.
Background noise	Background noise is the term used to describe the underlying level of noise present in the ambient noise, measured in the absence of the noise under investigation. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the LA90 noise level if measured as an overall level or an L90 noise level when measured in octave or third-octave bands.
Barrier (Noise)	A natural or constructed physical barrier which impedes the propagation of sound and includes fences, walls, earth mounds or berms and buildings.
Berm	Earth or overburden mound.
Buffer	An area of land between a source and a noise-sensitive receiver and may be an open space or a noise-tolerant land use.
Bund	A bund is an embankment or wall of brick, stone, concrete or other impervious material, which may form part or all of the perimeter of a compound.
BS	British Standard
CoRTN	United Kingdom Department of Environment entitled "Calculation of Road Traffic Noise (1988)"

Decibel [dB]	The units of sound measurement. The following are examples of the decibel readings of every day sounds:
	0dB The faintest sound we can hear, defined as 20 micro Pascal
	30dB A quiet library or in a quiet location in the country
	45dB Typical office space. Ambience in the city at night
	60dB CBD mall at lunch time
	70dB The sound of a car passing on the street
	80dB Loud music played at home
	90dB The sound of a truck passing on the street
	100dB The sound of a rock band
	110dB Operating a chainsaw or jackhammer
	120dB Deafening
dB(A)	A-weighted decibel. The A- weighting noise filter simulates the response of the human ear at relatively low levels, where the ear is not as effective in hearing low frequency sounds as it is in hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the "A" filter. A sound level measured with this filter is denoted as dB(A). Practically all noise is measured using the A filter.
dB(C)	C-weighted decibels. The C-weighting noise filter simulates the response of the human ear at relatively high levels, where the human ear is nearly equally effective at hearing from mid-low frequency (63Hz) to mid-high frequency (4kHz), but is less effective outside these frequencies. The dB(C) level is not widely used but has some applications.
Diffraction	The distortion of sound waves caused when passing tangentially around solid objects.
DIN	German Standard
ECRTN	Environmental Criteria for Road Traffic Noise, NSW, 1999
EPA	Environment Protection Authority
Field Test	A test of the sound insulation performance in-situ. See also 'Laboratory Test'
	The sound insulation performance between building spaces can be measured by conducting a field test, for example, early during the construction stage or on completion.
	A field test is conducted in a non-ideal acoustic environment. It is generally not possible to measure the performance of an individual building element accurately as the results can be affected by numerous field conditions.
Fluctuating Noise	Noise that varies continuously to an appreciable extent over the period of observation.
Free-field	An environment in which there are no acoustic reflective surfaces. Free field noise measurements are carried out outdoors at least 3.5m from any acoustic reflecting structures other than the ground.
Frequency	Frequency is synonymous to pitch. Sounds have a pitch which is peculiar to the nature of the sound generator. For example, the sound of a tiny bell has a high pitch and the sound of a bass drum has a low pitch. Frequency or pitch can be measured on a scale in units of Hertz or Hz.
Ground-borne noise	Vibration propagated through the ground and then radiated as noise by vibrating building elements such as wall and floor surfaces. This noise is more noticeable in rooms that are well insulated from other airborne noise. An example would be vibration transmitted from an underground rail line radiating as sound in a bedroom of a building located above.
Habitable Area	Includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom.
	Excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.
Heavy Vehicle	A truck, transporter or other vehicle with a gross weight above a specified level (for example: over 8 tonnes).
Impulsive noise	Having a high peak of short duration or a sequence of such peaks. A sequence of impulses in rapid succession is termed repetitive impulsive noise.

INID	NOW LAND BY FRANCE
INP	NSW Industrial Noise Policy, EPA 1999
Intermittent noise	The level suddenly drops to that of the background noise several times during the period of observation. The time during which the noise remains at levels different from that of the ambient is one second or more.
Intrusive noise	Refers to noise that intrudes above the background level by more than 5 dB(A).
ISEPP	State Environmental Planning Policy (Infrastructure), NSW, 2007
ISEPP Guideline	Development Near Rail Corridors and Busy Roads - Interim Guideline, NSW Department of Planning, December 2008
L ₁	The sound pressure level that is exceeded for 1% of the time for which the given sound is measured.
L ₁₀	The sound pressure level that is exceeded for 10% of the time for which the given sound is measured.
L _{10(1hr)}	The L10 level measured over a 1 hour period.
L _{10(18hr)}	The arithmetic average of the L10(1hr) levels for the 18 hour period between 6am and 12 midnight on a normal working day.
L ₉₀	The level of noise exceeded for 90% of the time. The bottom 10% of the sample is the L90 noise level expressed in units of $dB(A)$.
L _{Aeq} or L _{eq}	The "equivalent noise level" is the summation of noise events and integrated over a selected period of time, which would produce the same energy as a steady sound level occurring over the same period of time. When A-weighted, this is written as the L _{Aeq} .
LAeq(1hr)	The L_{Aeq} noise level for a one-hour period. In the context of the NSW EPA's Road Noise Policy it represents the highest tenth percentile hourly A-weighted L_{eq} during the period 7am to 10pm, or 10pm to 7am (whichever is relevant).
L _{Aeq(8hr)}	The L _{Aeq} noise level for the period 10pm to 6am.
L _{Aeq(9hr)}	The L _{Aeq} noise level for the period 10pm to 7am.
L _{Aeq(15hr)}	The L _{Aeq} noise level for the period 7am to 10pm.
L _{Aeq} (24hr)	The L _{Aeq} noise level during a 24 hour period, usually from midnight to midnight.
L _{max}	The maximum sound pressure level measured over a given period. When A-weighted, this is usually written as the L_{Amax} .
L _{min}	The minimum sound pressure level measured over a given period. When A-weighted, this is usually written as the L_{Amin} .
Loudness	A rise of 10 dB in sound level corresponds approximately to a doubling of subjective loudness. That is, a sound of 85 dB is twice as loud as a sound of 75 dB which is twice as loud as a sound of 65 dB and so on. That is, the sound of 85 dB is four times or 400% the loudness of a sound of 65 dB.
Microphone	An electro-acoustic transducer which receives an acoustic signal and delivers a corresponding electric signal.
NCA	Noise Catchment Area. An area of study within which the noise environment is substantially constant.
NCG	Roads and Maritime 'Noise Criteria Guideline'
NMG	Roads and Maritime 'Noise Mitigation Guideline'
Noise	Unwanted sound
Pre-construction	Work in respect of the proposed project that includes design, survey, acquisitions, fencing, investigative drilling or excavation, building/road dilapidation surveys, minor clearing (except where threatened species, populations or ecological communities would be affected), establishing ancillary facilities such as site compounds, or other relevant activities determined to have minimal environmental impact (e.g. minor access roads).
RBL	Rating Background Level is the representative LA90 background noise level for a period, as defined in the NSW EPA's noise ploicies.

Reflection	Sound wave reflected from a solid object obscuring its path.
RMS	Root Mean Square value representing the average value of a signal.
Rw	Weighted Sound Reduction Index
	A measure of the sound insulation performance of a building element. It is measured in very controlled conditions in a laboratory.
	The term supersedes the value STC which was used in older versions of the Building Code of Australa. Rw is measured and calculated using the procedure in ISO 717-1. The related field measurement is the DnT,w.
	The higher the value the better the acoustic performance of the building element.
R'w	Weighted Apparent Sound Reduction Index.
	As for Rw but measured in-situ and therefore subject to the inherent accuracies involved in such a measurement.
	The higher the value the better the acoustic performance of the building element.
RNP	Road Noise Policy, NSW, March 2011
Sabine	A measure of the total acoustic absorption provided by a material.
	It is the product of the Absorption Coefficient (alpha) and the surface area of the material (m2). For example, a material with alpha = 0.65 and a surface area of $8.2m2$ would have $0.65 \times 8.2 = 5.33$ Sabine.
	Sabine is usually calculated for each individual octave band (or third-octave).
SEL	Sound Exposure Level (SEL) is the constant sound level which, if maintained for a period of 1 second would have the same acoustic energy as the measured noise event. SEL noise measurements are useful as they can be converted to obtain Leq sound levels over any period of time and can be used for predicting noise at various locations.
Sound	A fluctuation of air pressure which is propagated as a wave through air.
Sound absorption	The ability of a material to absorb sound energy by conversion to thermal energy.
Sound Insulation	Sound insulation refers to the ability of a construction or building element to limit noise transmission through the building element. The sound insulation of a material can be described by the Rw and the sound insulation between two rooms can be described by the DnT,w.
Sound level meter	An instrument consisting of a microphone, amplifier and indicating device, having a declared performance and designed to measure sound pressure levels.
Sound power level	Ten times the logarithm to the base 10 of the ratio of the sound power of the source to the reference sound power of 1 pico watt.
Sound pressure level	The level of noise, usually expressed in decibels, as measured by a standard sound level meter with a microphone referenced to 20 mico Pascal.
STC	Sound Transmission Class
	A measure of the sound insulation performance of a building element. It is measured in controlled conditions in a laboratory.
	The term has been superseded by Rw.
Structure-borne Noise	Audible noise generated by vibration induced in the ground and/or a structure. Vibration can be generated by impact or by solid contact with a vibrating machine.
	Structure-borne noise cannot be attenuated by barriers or walls but requires the isolation of the vibration source itself. This can be achieved using a resilient element placed between the vibration source and its support such as rubber, neoprene or springs or by physical separation (using an air gap for example).
	Examples of structure-borne noise include the noise of trains in underground tunnels heard to a listener above the ground, the sound of footsteps on the floor above a listener and the sound of a lift car passing in a shaft. See also 'Impact Noise'.
Tonal Noise	Sound containing a prominent frequency and characterised by a definite pitch.

Transmission Loss	The sound level difference between one room or area and another, usually of sound transmitted through an intervening partition or wall. Also the vibration level difference between one point and another.
	For example, if the sound level on one side of a wall is 100dB and 65dB on the other side, it is said that the transmission loss of the wall is 35dB. If the transmission loss is normalised or standardised, it then becomes the Rw or R'w or DnT,w.
Vibration	A mechanical phenomenon whereby oscillations occur about an equilibrium point; a periodic back-and-forth motion of an elastic body or medium, commonly resulting when almost any physical system is displaced from its equilibrium condition.

APPENDIX B Predicted noise contour maps



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RENZO TONIN ASSOCIATES

Acoustics, Vibration & Structural Dynamics Sydney Melbourne Brisbane Gold Coast Kuwait 1/418A Elizabeth Street, SURRY HILLS NSW 2010 P: 02 8218 0500 F: 02 8218 0501

WestConnex New M5







MOC1 Kingsgrove

Noise levels are approximate due to interpolation of contours and should be used for reference only.

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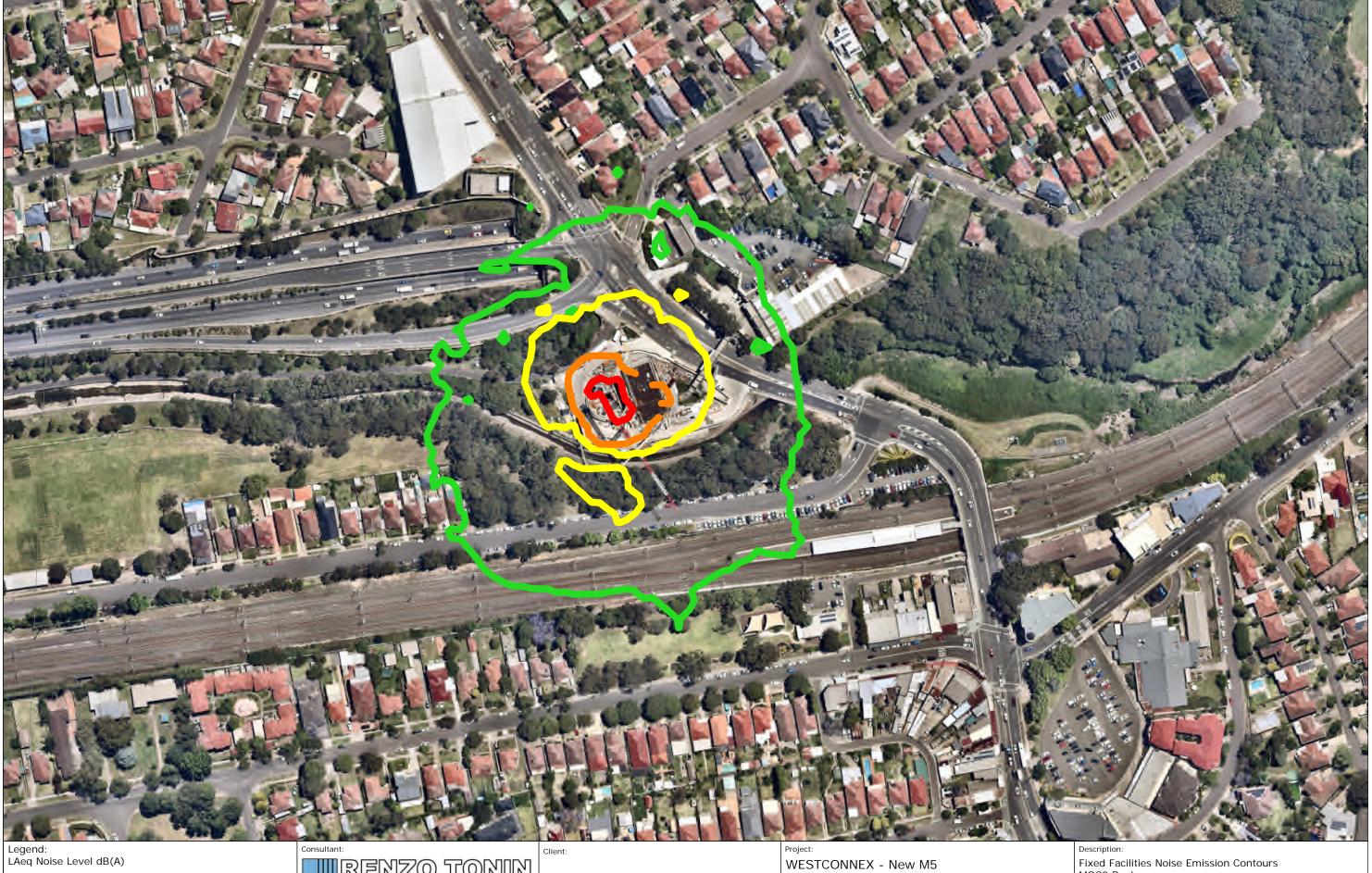
Project No.: TH014-04

Fig Ref: TH014-04.3

Date: 2018.11.16

MOC1 Kingsgrove

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MOC2 Bexley

MOC2 Bexley

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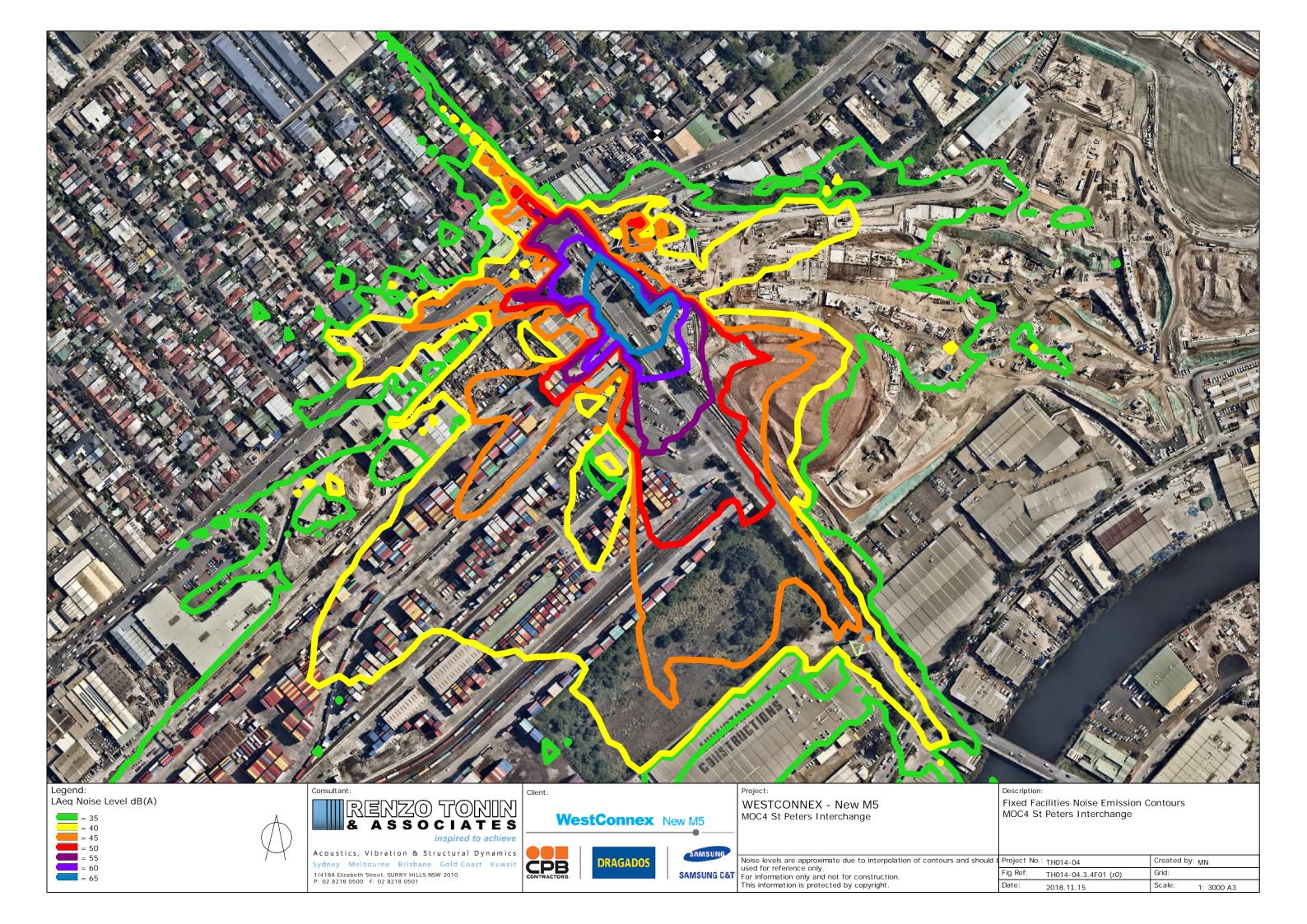




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Annexure L Operational Water Management Plan

Revision Date 26 February 2020

WestConnex New M5

Operation Water Management Plan

Project:	New M5 – Design and Construct
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WestConnex New M5

Operation Water Management Plan

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Glossary of terms

Term / acronym	Definition
ANZECC	Australian and New Zealand Environment and Conservation Council
ANZECC guidelines	Australian and New Zealand Guidelines for Fresh and Marine Water Quality: Volume 1 – The Guidelines
ARI	Average Recurrence Interval
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
Blue Book	Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2006)
CoA	Minister's Conditions of Approval
D&C	Design and Construct
DGMS	Dangerous Goods Management Strategy
DI-Water	Department of Industry – Water (formerly NSW Department of Primary Industries – Water, NSW Office of Water); now known as NRAR
DPIE	NSW Department of Planning, Industry and Environment
EIS	New M5 Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979
EPA	NSW Environment Protection Authority
EPL	Environment protection licence
EWMA	Exponentially weighted moving average
FRNSW	Fire & Rescue New South Wales
GDE	Groundwater Dependent Ecosystem
GPT	Gross pollutant traps
LGA	Local Government Authority
MoC	Motorway Operation Complex
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NRAR	Natural Resource Access Regulator (formerly known as Department of Primary Industries – Water)
O&M	Operation & Maintenance
O&M Contractor	Fulton Hogan Egis O&M Pty Ltd – the contractor engaged to deliver the operations and maintenance contract for the New M5 project
OEH	NSW Office of Environment and Heritage

Term / acronym	Definition		
OEMP	Operation Environmental Management Plan		
OWMP	Operational Water Management Plan		
POEO Act	Protection of the Environment Operations Act 1997		
PPE	Personal protective equipment		
Project	WestConnex New M5 Project, SSI-6788		
Project Company	WCXM5 PT Pty Ltd in its capacity as trustee of the WCXM5 Project Trust or its successor in title or assigns		
REMM	Revised environmental management measure (from the New M5 Submissions Report)		
Roads and Maritime, RMS	Roads and Maritime Services, the Proponent for the New M5 project		
	Roads and Maritime has engaged the Project Company to deliver the New M5 project.		
Roads and Maritime Specification D&C G36	Roads and Maritime Services Specification Design & Construct G36 – Environmental Protection		
SDS	Safety Data Sheets		
SMC	Sydney Motorway Corporation Pty Limited (SMC) (ABN 601 507 591) is a special purpose entity that has been created by the NSW Government to manage the delivery of WestConnex. For the purposes this New M5 Motorway Operation Environmental Management Plan (OEMP), WCX M5 PT Pty Ltd will act on behalf of Sydney Motorway Corporation Pty Limited (SMC).		
SOP	Standard Operating Procedure		
SSI	State significant infrastructure		
SSTV	Site-specific trigger values		
TN	Total nitrogen		
TP	Total phosphorus		
TSS	Total suspended solids		
WCX	WestConnex		
WELS	Water Efficiency Labelling and Standards		
WQMP	Water Quality Monitoring Program		
WQO	Water quality objectives		
WTP	Water Treatment Plant		

1 Introduction

1.1 Purpose and application

This Operation Water Management Plan (OWMP) forms part of the Asset Operation Environment Management Plan (OEMP). The plan applies to all activities associated with the operation and maintenance of the Asset. The management of groundwater level, inflows, treatment and discharge, soil and subsidence, surface water quality and hydrology and stormwater management are identified within this plan.

This plan will be reviewed and updated in accordance with the OEMP. Environmental auditing of the Asset will be in accordance with the OEMP, except where specifically identified in this OWMP.

1.2 Objectives

The OWMP's objectives are:

- · Manage all activities to ensure they do not harm or impact surface or groundwater quality
- To prevent and monitor for groundwater contamination and ground settlement within the Asset area
- Maintain the Asset so as not to cause a flood risk
- Ensure the quality of water discharged to the receiving environment meets statutory requirements and relevant objectives
- Ensure that the Asset's water quality and management systems and its pollution prevention infrastructure (e.g. water treatment plant and basins) is maintained and effective
- To train operation and maintenance (O&M) personnel in:
 - Erosion and sediment control
 - Spill management
 - Stockpile management
 - Acid sulfate soil management
 - Incident response
 - Water Treatment Plant
 - Dewatering
 - Pesticide use and application
 - Heavy rainfall events
 - Work over, and the installation of temporary and permanent structures in or over, Wolli Creek, Bardwell Creek, Cooks River, Eastern Chanel or Alexandria Canal (formally Shea's Creek), if required.
- Promote sustainable water use, reuse of water from the Water Treatment Plant, and the use of recycled and grey water where feasible and reasonable.

1.3 Operation and maintenance activities

Operation and maintenance activities of the Asset that are relevant to water management are identified in Table 1-1.

Operation Water Management Plan

Table 1-1: Activities relevant to water

Activity

Routine operation:

- · Traffic operations and monitoring
- Operation and monitoring of tunnel water treatment plant and stormwater treatment devices

Routine maintenance / repair work:

- Vegetation clearing and landscape management
- Road infrastructure maintenance and repair
- Pavement renewal and resurfacing
- General maintenance and repair work

Routine equipment maintenance:

- Tolling equipment
- Intelligent Transport Systems
- Sediment Basins
- Gross Pollution Traps (e.g. stormceptors)
- Water treatment plant

Non-routine operation:

- Tunnel washing
- · Road traffic accidents and incidents
- Vehicle washing
- Road maintenance plant and machinery
- O&M vehicles

Non-routine maintenance and repair:

- Asset damage (e.g. vehicle strike)
- Major spill including clean-up
- · Equipment failure leading to damage, spill or an uncontrolled outcome

1.4 Potential impacts

Potential risks to water quality associated with the operation of the Asset are managed in Section 4. Impacts may include the following:

- Exposure and erosion of soils causing pollution of receiving waters and sedimentation of drains
- Contamination of waterways associated with mobilisation of pollutants in stormwater runoff (e.g. fuel and chemical spills, seepage spills, washings contaminated water release, water discharge, firefighting activities)
- Reduction of water quality and degradation of natural habitats in sensitive receiving environments from discharge of tunnel drainage water
- Potential to result in the contamination of soils and groundwater as a result of accidents and spills of fuels, oils, chemicals and other potential contaminants (drainage infrastructure to be installed as part of the project would include spill containment facilities where direct discharge of stormwater from surface areas to receiving watercourses would occur. This infrastructure would have the capacity to prevent soil or groundwater contamination resulting from spills, by collecting, treating or removing spill materials from site.)
- In addition to runoff, spills of fuels, wastes and/or chemicals associated with traffic accidents, transport of hazardous materials, collection and surface discharge of fire suppressant, and tunnel washing could mobilise fine particulates and pollutants, which may be transported into the receiving environment

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- Spills of fuels, wastes and/or chemicals associated with traffic accidents or transport of hazardous materials could blow or wash into the receiving environment or into groundwater if they occurred in the tunnels
- Groundwater settlement and/or groundwater impact or drawdown damaging aquifer, groundwater dependent ecosystems and vegetation, and structures, roads and services
- Groundwater drawdown exposing acid sulphate soils, polluting receiving waters and vegetation/plant loss
- Groundwater inflows
- Degradation of groundwater dependent ecosystems
- Groundwater impact from 'diving' plume of petroleum hydrocarbons and chlorinated solvents that move
 vertically into the aquifer as a result of water table drawdown associated with operational dewatering
 processes smearing of contaminants due to water table fluctuation activities, and movement of water
 through preferential flow paths in the heterogeneous environments
- Deposits formed by precipitation of iron flocculent and deposits associated with iron precipitating bacteria known as ochre
- Asset may flood, including leading to tunnel closure as result submerged roadway (and localised flooding)
- Asset has the potential to exacerbate flooding and drainage conditions.

Operation Water Management Plan

2 Environmental obligations

2.1 Legislation

Legislation relevant to water quality and hydrology management for the operation and maintenance of the Asset is included in Table 2-1.

Table 2-1: Legislation relevant to water quality and hydrology management

Legislation	Relevance
General	
Protection of the Environment Operations Act 1997	Water and pollution management
Water quality and hydrology	
Soil Conservation Act 1938	Erosion and sediment control
Contaminated Land Management Act 1997 National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013), NEPC 2013, Canberra.	Contaminated land management Stockpile management Spill management
Water Management Act 2000 Water Management Amendment Act 2014	A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the <i>Water Management Act 2000</i> is not required for State significant infrastructure in accordance with the EP&A Act Section 5.23.
Sydney Water Act 1994	Requirement to obtain consent to discharge waste water to sewer
Pesticides Act 1999	Safe use and application of pesticides Public notification requirements before applying pesticides
Road and Rail (Transport) Dangerous Goods Act 1997	Safe and licensed transportation of dangerous goods
Work Health and Safety Act 2011	Storage, handling and use of hazardous materials

2.2 Guidelines and relevant documents

The environmental policies, guidelines and principles relevant to the management of water quality and hydrology during the operation and maintenance of the Asset is identified in Table 2-2.

Table 2-2: Environmental guidelines and principles

Ро	licies, guidelines and principles	Relevance
•	G36: Environmental Protection (Roads and Maritime, 2017) NSW Aquifer Interference Policy (NSW DPI – Water, 2012)	Environmental protection
•	G38: Soil and Water Management (Roads and Maritime, 2015) Stockpile Site Management Guidelines (Roads and Maritime, 2008) Guidelines for Bunding and Spill Management (NSW EPA, 2011) Code of Practice for Water Management: Road Development and Management (Roads and Maritime, 1999) Australian Standard AS 1940B:1993: The Storage and Handling of Flammables and Combustibles (Standards Australia, 1993) Australian Standard AS 4452B:1997: The Storage and Handling of Toxic	Soil and water quality management

Ро	licies, guidelines and principles	Relevance
•	Substances (Standards Australia, 1997)	
•	Storage and Handling Liquids: Environmental Protection: Participants Manual (NSW EPA, 2007)	
•	Guidelines for Controlled Activities on Waterfront land (DPI, 2012)	
•	Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Agriculture and Resource Management Council of Australia and New Zealand and the Australian and New Zealand Environment and Conservation Council, 2000)	
•	Australian National Water Quality Management Strategy	
•	Bunding and Spill Management Guidelines (NSW EPA, 2017)	Working with chemical substances
•	Australian Standard: AS1940 The Storage and Handling of Flammables and Combustibles (Standards Australia, 1994)	near watercourses
•	Australian Standard: AS4452 The Storage and Handling of Toxic Substances (Standards Australia, 1997)	
•	Storage and Handling Liquids: Environmental Protection: Participant's Manual (DECC, 2007)	
•	Code of Practice for Water Management: Road Development and Management (Roads and Maritime, 1999)	Stormwater runoff management
•	Guidelines for Treatment of Stormwater Runoff from the Road Infrastructure (AP- R232, Austroads, 2003)	
•	Technical Guideline: Temporary Stormwater Drainage for Road Construction (Roads and Maritime, 2011)	
•	Managing Urban Stormwater Soils and Construction: Volume 2D Main Road Construction (DECC, 2008)	
•	The Blue Book: Managing Urban Stormwater: Soils and Construction, Volume 1 and 2 (Landcom, 2004)	
•	NSW Floodplain Development Manual: the Management of Flood Liable Land (NSW DIPNR, 2005)	
•	Urban Stormwater Drainage Design Guidelines in Australia: Rainfall and Runoff (the ARR Guidelines, Australian Government, Geoscience Australia, 2016).	
•	Floodplain Risk Management Guideline: Practical Consideration of Climate Change (NSW DECC, 2007)	Working in flood plains and over/close to watercourses
•	Guidelines for watercourse crossing on waterfront land (NSW DPI – Water, 2012)	
•	Australian/New Zealand Standard: AS/NZS5667.1 Water Quality – Sampling Guidelines on the Design of Sampling Programs, Sampling Techniques and the Preservation and Handling of Samples (Standards Australia, 1998)	Water quality sampling
•	Australian and New Zealand Guidelines for Fresh and Marine Water Quality: Volume 1 –The Guidelines ('the ANZECC guidelines', ANZECC, 2018)	
•	Guidelines for Construction Water Quality Monitoring (Roads and Maritime, 2003)	
•	The Blue Book: Managing Urban Stormwater: Soils and Construction, Volume 1 and Volume 2 (Landcom, 2004)	
•	Guidelines for Assessment and Management of Contaminated Groundwater (DEC, 2007)	Contaminated waters and leachate management
•	Environmental Direction: Management of Tannins from Vegetation Mulch (Roads and Maritime, 2012)	
•	Guideline for the Management of Contamination (Roads and Maritime, 2013)	
•	Environmental Incident Classification and Reporting Procedure (Road and Maritime, 2017)	

Ро	licies, guidelines and principles	Relevance
•	Best Practice Guidelines for Contaminated Water Retention and Treatment Systems (NSW Government, 1994)	Storage and treatment of firefighting water
•	Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW DPI - Fisheries, 2005)	Safe fish passage
•	Acid Sulfate Soils Assessment Guidelines (Acid Sulfate Soil Management Advisory Committee, 1998)	Acid sulfate soils
•	Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998)	
•	Guidelines for the Management of Acid Sulphate materials: Acid Sulphate Soils, Acid Sulphate Rock and Monosulphidic Black Ooze (Roads and Maritime, 2005)	
•	Waste Classification Guidelines Part 4: Acid Sulfate Soils (EPA. 2014)	
•	Environmental Compliance Report: Liquid Chemical Storage, Handling and Spill Management - Part B Review of Best Practice and Regulation (NSW DEC, 2005)	Materials handling and storage, and waste management
•	Storing and Handling Liquids, Environmental Protection: Participants Manual (NSW DECC, 2007)	
•	Stormwater Exemption 2014 (NSW EPA, 2014)	
•	Australian Dangerous Goods Code	Dangerous goods storage and
•	Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (EPA, 1997)	handling
•	Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW 2005)	
•	Relevant Australian Standards	

2.3 Conditions of Approval

Conditions of Approval (CoA) that are relevant to water management during operation and maintenance activities are provided in Table 2-3. A cross-reference is included to indicate where each condition is addressed in this OWMP or other project management documents.

Table 2-3: Conditions of Approval

CoA	Relevant requirement	Reference
B20	B20 Except as may be provided by an EPL, the SSI must be constructed and operated to comply with section 120 of the <i>Protection of the Environment Operations Act 1997</i> , which prohibits the pollution of waters.	The Asset will be operated and maintained to avoid the pollution of waters as identified in Section 3.1 using the controls and monitoring requirements identified in this OWMP.
		Discharges to waterways, including those from the water treatment plant will meet the nominated limits identified in Section 6.3 and the Water Quality Monitoring Program.
		Notification to EPA and other agencies in the event of an incident will be undertaken in accordance with the OEMP Section 8.2.4 and Annexure E.

CoA	Relevant requirement	Reference
B25	Unless otherwise agreed by the Secretary, a Flood Review Report(s) must be prepared after the first defined flood event for any of the following flood magnitudes – the 5 year ARI event, 20 year ARI event, 100 year ARI event and probable maximum flood - to assess the actual flood impact against those predicted in Appendix Q of the document referred to in condition A2(b). The Flood Review Report(s) must be prepared by an appropriately qualified person(s) and include:	A Flood Review Report(s) will be prepared after the first defined flood event for any of the following flood magnitudes: 5, 20 and 100 year ARI event and probable maximum flood, as described in Section 7.2.2.
	Flood mitigation measures must be developed in consultation with the affected property/structure/infrastructure owners, OEH and the relevant council.	Any required updates to this plan resulting from the Flood Review Report will be incorporated in accordance with Section 1.4 of the OEMP.
	A copy of the Flood Mitigation Report(s) must be submitted to the Secretary and relevant council(s) within one month of finalising the report(s).	The Flood Mitigation Report(s) will be distributed as required, as described in Section 7.2.2 of this OWMP.
B26	The Proponent must take all feasible and reasonable measures to limit operational groundwater inflows into each tunnel to no greater than one litre per second across any given kilometre.	The project mainline tunnel was designed and constructed to satisfy this condition. The groundwater inflow criteria is identified in Section 3.6 and tunnel design features are identified in Section 4.1.
B27	The Proponent must undertake further modelling of groundwater drawdown, tunnel inflows and saline water migration prior to finalising the design of the tunnel. The scope of modelling must be developed in consultation with DPI (Water) and include the results of all groundwater monitoring, including additional baseline data collected post exhibition of the EIS. The results of the modelling must be documented in a Groundwater Modelling Report . The Groundwater Modelling Report must be finalised in accordance with the <i>Australian Groundwater Modelling Guidelines</i> (National Water Commission, 2012) and prepared in consultation with DPI (Water). The Groundwater Modelling Report must include, but not be limited to:	The Groundwater Modelling Report has been prepared to satisfy this condition.
B28	A Water Quality Plan and Monitoring Program must be prepared and implemented to monitor and avoid or mitigate impacts on surface and groundwater quality and resources, during construction and operation. The Water Quality Plan and Monitoring Program must be developed in consultation with the EPA, DPI (Water), Sydney Water and relevant councils, and must include, but not be limited to:	A Construction phase Water Quality Monitoring Program (WQMP) has been prepared to satisfy this condition. The WQMP was approved by DPIE on 3 August 2016. An Operation phase WQMP has also been prepared to satisfy this condition. The strategy was submitted to DPIE for approval on the 6 November 2019. Surface, groundwater and water treatment plant discharge monitoring will be undertaken in accordance with the WQMP. In the event that nominated trigger values are exceeded, follow-up management responses may be required. A response action process is nominated in the Water Quality Monitoring Program.

CoA	Relevant requirement	Reference
		A summary of water monitoring data will be reported to DPIE and relevant Councils annually.
B30	The Proponent must prepare a Water Reuse Strategy which sets out feasible and reasonable options for the reuse of collected stormwater and groundwater during construction and operation of the SSI. The Water Reuse Strategy must include, but not be limited to:	A Construction phase Water Reuse Strategy has been prepared to satisfy this condition. The strategy was approved by DPIE in December 2016. An Operation phase Water Reuse Strategy has also been prepared to satisfy this condition. The strategy was submitted to DPIE for approval in July 2019 The following water reuse opportunities will be implemented during the operation and maintenance of the Asset: • harvesting and reuse of rainwater for tunnel washing (MOC1) • water efficient fixtures in Motorway Operation Complexes (MOC1 and MOC5) • reuse of treated groundwater (MOC3) for landscaping. • supply non-potable water to Council for use at nearby sporting fields and parks (at the discretion of the Operator) Refer also to Section 4.5 for water conservation management measures.
D5	The Proponent must immediately notify DPI (Water) of any groundwater bores removed or damaged during construction and operation of the SSI. In the event that a groundwater bore is removed or damaged, the Proponent must repair or replace the bore, as applicable within a timeframe agreed to by DPI (Water).	Impacts to third party infrastructure will be avoided during operation and maintenance of the Asset. Any damaged or removed property (including groundwater bores) will be replaced or repaired or the landowner compensated within a reasonable timeframe. Department of Industries (Water) will be notified if any groundwater bores are removed or damaged during operation of the Asset as described in Section 7.1.
D55	Dangerous goods, as defined by the Australian Dangerous Goods Code, must be stored and handled strictly in accordance with: (a) all relevant Australian Standards; (b) for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume, within the bund; and (c) the Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (EPA, 1997). In the event of an inconsistency between the requirements listed from (a) to (c) above, the most stringent requirement must prevail to the extent of the inconsistency.	Dangerous goods will be stored and handled in accordance with the nominated standards. Refer Section 4.5 for management controls and also Annexure A – Dangerous Goods Management Strategy.
E31	Prior to the commencement of operation, or as otherwise agreed by the Secretary, the Proponent must prepare and implement an Operation Environmental Management Plan (OEMP) for the SSI. The OEMP must outline the environmental management practices and procedures that are to be followed during operation, and must be prepared in consultation with relevant agencies and in accordance with the Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004). The OEMP must include, but not be limited to:	The OEMP has been prepared to satisfy this condition.

CoA	Relevant requirement	Reference
	(h) details of how environmental performance would be managed and monitored to meet acceptable outcomes, including what actions will be taken to address identified potential adverse environmental impacts, including those safeguards and mitigation measures detailed in Section 8 the document referred to in condition A2(c) (and any impacts arising from the staging of the construction of the SSI). In particular, the following environmental performance issues must be addressed in the OEMP:	
	vi. groundwater level/pressure, inflows, treatment and discharge, soil, and subsidence; and	Potential adverse impacts associated with groundwater, inflows, treatment and discharge, soil and subsidence are identified in Section 1.4.
		Actions to be taken to address the adverse impacts, including relevant REMMs are identified in Section 4.
		Impacts associated with operation and maintenance of the Asset would be managed and monitored in accordance with Section 5 and Section 6.
		No additional impacts are expected to arise from staging the construction of the Project.
	vii. Groundwater dependent ecosystems	Potential adverse impacts associated with groundwater dependent ecosystems identified in Section 1.4.
		Actions to be taken to address the adverse impacts, including relevant REMMs are identified in Section 4.
		Impacts associated with operation and maintenance of the Asset would be managed and monitored in accordance with Section 5 and Section 6.
		No additional impacts are expected to arise from staging the construction of the Project.
	viii. surface water quality and hydrology, including stormwater management.	Potential adverse impacts associated with surface water quality and hydrology, including stormwater management are identified in in Section 1.4.
		Actions to be taken to address the adverse impacts, including relevant REMMs are identified in Section 4.
		Impacts associated with operation and maintenance of the Asset would be managed and monitored in accordance with Sections 5 and Section 6.
		No additional impacts are expected to arise from staging the construction of the Project.
	The OEMP must be submitted for the approval of the Secretary no later than one month prior to the commencement of operation, or as otherwise agreed by the Secretary. Operation must not commence until written approval of the OEMP has been received from the Secretary.	The OEMP, which includes this OWMP, will be submitted to the Secretary at least one month prior to the commencement of operation as described in Section 1.4 of the OEMP.
	Note: The approval of an OEMP does not relieve the Proponent of any requirement associated with this SSI approval. If there is an inconsistency with an approved OEMP and the conditions of this SSI approval, the requirements of this SSI approval prevail.	Noted.

CoA	Relevant requirement	Reference
E44 F	Prior to operation, the Proponent must prepare an Emergency Response Plan, in consultation with FRNSW and NSW Police Force. The Emergency Response Plan must include, but not be limited to:	An Emergency Response Plan has been prepared to satisfy this condition. The Emergency Response Plan consists of a number of O&M Contractor documents including an Incident Response Plan, safety plans, and emergency and evacuation plans. Refer to the plan for relevant management measures to address the potential environmental impacts of an emergency situation.
	(c) design and management measures to address the potential environmental impacts of an emergency situation, including measures for containment of contaminated fire-fighting water, fuel spills and gaseous combustion products;	

2.4 Revised environmental management measures

The revised environmental management measures (REMMs) included in the New M5 Submissions Report that are relevant to the management of water during the operations and maintenance of the Asset are included in Table 2-4.

Table 2-4: Revised environmental management measures relevant to the management of water

REMM	Relevant requirement	Reference
OpSW1	Suitable stormwater treatment devices would be identified during detailed design, including an operational water treatment plant, with the aim of meeting the targets of the Botany Bay and Catchment Water Quality Improvement Plan (SMCMA, 2011). Where space is available, water quality basins would be installed. In the case where space is unavailable, treatment would include the use of proprietary stormwater treatment devices. The design of treatment trains would be informed by an assessment of the sensitivity of the receiving environments and supported by MUSIC modelling.	This REMM is being addressed in the Drainage Design Reports, which have been progressively prepared, prior to commencement of the relevant works.
OpSW0 2	The treatment capacity lost in decommissioning pond WQP – 2 WQP – 3 would be provided by new or upgraded stormwater treatment devices. Rep lacement water quality devices would be inst alled and operational prior to decommissioning of the existing water quality pond (WQP-2) in Wolli Creek catchment.	Prior to receiving operational stormwater discharge, an additional water treatment device will be installed to offset the additional stormwater discharge associated with operation of the project.
OpSW0	Operational water quality monitoring would be conducted for 12 months post-construction or as otherwise required by the conditions of approval. This would include upstream (control) and downstream monitoring locations. The details of this monitoring program would be contained in the Soil and Water Management Plan, and would include the following:	Operational water quality monitoring will be conducted for a minimum 3 year period or until the affected waterways and/or groundwater resources are certified by a suitably qualified and experienced independent expert as being rehabilitated post-construction in accordance with CoA B28.

REMM	Relevant requirement	Reference
	 Sampling locations to include upstream (control) and downstream measurement locations 	
	 Samples taken twice a month, once in dry conditions and once in wet conditions where possible 	
	In-situ monitoring of:	
	• pH	
	 Reduction Oxidation Potential 	
	 Dissolved Oxygen 	
	 Temperature 	
	 Conductivity 	
	 Turbidity 	
	 Odour 	
	 Analytical sampling of the following potential constituents of concern: 	
	 Total Recoverable Hydrocarbons 	
	 Benzene, Toluene, Ethylbenzene, Xylene and Naphthalene 	
	 Nutrients including: Total Nitrogen, Total Kjeldahl Nitrogen, Nitrogen Oxide, Nitrite, Nitrate, Total Phosphorous and Reactive Phosphorous 	
	 Heavy metals (Arsenic, Cadmium, Copper, Chromium, Lead, Mercury, Nickel, Zinc) 	
	 Manganese 	
	 Ferrous Iron and Total Iron. 	
OpSW0 7	The operational water treatment plant would be designed to meet the Water Quality Reference Criteria outlined in Appendix A of the Technical working paper: Surface water (Appendix N). Monitoring of the Cooks River	The operational water treatment plant has been designed as part of the MOC3 - Arncliffe Motorway Operations Complex - Water Treatment and Discharge report and references the technical working paper in determining the plant specifications.
	would be undertaken during initial operation of the project to ensure discharge meets these criteria.	Monitoring of operational discharge is detailed in the operation-phase WQMP (M5N-ES-PLN-PWD-0049).
SW08	Opportunities for reuse of treated water generated at the Arncliffe motorway operations complex would be considered during detailed design.	This REMM is addressed in the operation-phase Water Reuse Strategy (M5N-ES-PLN-PWD-0050).
GW15	In the event that the drawdown in a licensed water supply bore or irrigation bore exceeds two metres (in accordance with the Aquifer Interference Policy) or that impacts to groundwater quality alter the beneficial use of the water, measures would be taken to 'make good' the impact by restoring the water supply to pre-development levels. The measures taken would be dependent upon the location of the impacted bore and would be determined in consultation with the affected licence holder but could include, deepening the bore, providing a new bore or providing an alternative water supply.	This REMM is addressed in the WQMP (M5N-ES-PLN-PWD-0025).
OpGW0	An OEMP would be prepared and implemented to outline management measures for groundwater inflows, treatment	This REMM is addressed in the operation-phase WQMP which has been prepared to comply with CoA B28.

REMM	Relevant requirement	Reference
	and discharge and protocols for spillages or incidents. Monitoring parameters may include groundwater levels, groundwater quality including field parameters, laboratory analytes and sample frequency.	
OpGW0 2	The drainage system would be regularly maintained in accordance with the Operational Environmental Management Plan.	The drainage system will be maintained in accordance with the management measures outlined in Table 4-3 of this plan.
OpGW0 3	A groundwater monitoring program would be prepared and implemented to monitor groundwater impacts during tunnel operations. This would include the monitoring of groundwater inflow into the tunnels. The program would be developed in consultation with the EPA, DPI (Fisheries), NSW DPI Water and relevant councils. The groundwater monitoring program would continue (where appropriate) the construction groundwater monitoring program (GW13) and would continue for three years, after which, the requirement for further monitoring would be assessed. The following analytes would be added to the groundwater baseline monitoring program for the project in order to inform the discharge water quality criteria Ammonium Phenols Organophosphorus pesticides Polychlorinated biphenyls (PCBs). Discharge water quality criteria would be developed in consultation with the EPA.	This REMM is addressed in the operational phase WQMP which has been prepared to comply with CoA B28. Discharge water quality criteria has been developed in consultation with the EPA.
OpCM2	Procedures to address spills, leaks and tunnel washing would be developed and implemented during operation of the project	Mechanisms to address spills, leaks and tunnel washing are identified in Section 4, particularly Section 4.5.
OpWM 02	Opportunities for reuse of wastewater would be considered in preference to discharge to the local stormwater system.	O&M Contractor to monitor, or estimate, and record annual quantities of water use (including recycled / reuse water) during the O&M phase.
		Initiatives to be considered include:
		implement a program to wash tunnels and bridges on an 'as needed' basis rather than on a fixed cycle basis
		investigate the installation of additional rainwater tanks to collect water from the Motorway Operation Complex and maintenance facility buildings and use this water to wash vehicles and equipment
		consider water requirements when purchasing weed- control products due to the potential for water contamination
		use water from tunnel water treatment facility for landscape irrigation
		use water from tunnel water treatment facility for wall- washing
		facilitate third party access to and usage of water from the tunnel water treatment facility
		investigate reciprocal arrangements with sources of industrial waste-water where on-site water is insufficient to meet tunnel operational needs (e.g. wall washing)
		purchase products and appliances that have a minimum 4-star rating under the Water Efficiency Labelling and

REMM	Relevant requirement	Reference
		Standards (WELS), where products and appliances are available and fit for purpose.
OpWM 03	In order to reduce demand on local water supplies, options would be investigated for providing water required for operation of the deluge system from wastewater produced through the tunnel drainage system where it meets appropriate quality parameters.	It is not considered feasible or reasonable to utilise the treated tunnel groundwater for the deluge system. The deluge tanks and system will not withstand the elevated salinity of the groundwater. The additional cost in treatment, energy and maintenance to remove the salinity is not reasonable. The distance between the water treatment facility and the deluge tanks creates a significant engineering and financial barrier to reusing the treated groundwater for this purpose.
OpsHR 02	Storage of dangerous goods and hazardous materials would occur in accordance with supplier's instructions and relevant Australian standards and may include bulk storage tanks, chemical storage cabinets / containers or impervious bunds.	Dangerous goods and hazardous materials will be stored in accordance with the relevant standards and legislation, as identified in Appendix A – Dangerous Goods Management Strategy. Relevant legislation for the operation of the Asset is included in the OEMP – Section 4.1.3 and relevant policies, guidelines and principles are identified in Section 4.2.
OpsHR 03	Storage, handling and use of dangerous goods and hazardous substances would be in accordance with the Work Health and Safety Act 2011 and the Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005).	Dangerous goods and hazardous materials will be stored in accordance with the relevant standards and legislation, as identified in Appendix A – Dangerous Goods Management Strategy. Relevant legislation for the operation of the Asset is included in the OEMP – Section 4.1.3 and relevant policies, guidelines and principles are identified in Section 4.2.
OpsHR 04	Secure, bunded areas would be provided around storage areas for oils, fuels and other hazardous liquids. Impervious bunds would be of sufficient capacity to contain at least 110 per cent of the volume of the largest stored container.	Dangerous goods and hazardous materials will be stored in secure and bunded areas in accordance with the relevant standards and legislation, as identified in Appendix A – Dangerous Goods Management Strategy. Relevant legislation for the operation of the Asset is included in the OEMP – Section 4.1.3 and relevant policies, guidelines and principles are identified in 4.2
OpsHR 05	Bunds would be provided around activities such as vehicle refuelling, servicing, maintenance or wash- down, where there is a potential for spills and contamination.	Bunds shall be provided around activities such as vehicle refuelling, servicing, maintenance or wash-down, where there is a potential for spills and contamination. Where refuelling occurs outside bunded areas, specific refuelling procedures would be in place and operators would be trained in these procedures. Spill kits would be readily available to manage re-fuelling outside bunded areas. Relevant legislation for the operation of the Asset is included in the OEMP — Section 4.1.3 and relevant policies, guidelines and principles are identified in Section 4.2.
OpsHR 06	Material Safety Data Sheets would be obtained for dangerous goods and hazardous substances stored onsite prior to their arrival.	Safety Data Sheets (SDS) will be obtained for all dangerous goods and hazardous materials and will be stored in accordance with the relevant standards and legislation, as identified in Appendix A – Dangerous Goods Management Strategy. Relevant legislation for the operation of the Asset is included in the OEMP – Section 4.1.3 and relevant policies, guidelines and principles are identified in Section 4.2.
OpsHR 07	The transport of dangerous goods and hazardous substances would be prohibited through the main alignment tunnels and on and off-ramp tunnels.	Dangerous goods and hazardous materials will be transported in accordance with the relevant standards and legislation, as identified in Appendix A – Dangerous Goods Management Strategy. Relevant legislation for the operation of the Asset is included in the OEMP – Section 4.1.3 and relevant policies, guidelines and principles are identified in Section 4.2.

REMM	Relevant requirement	Reference
OpWM 02	Opportunities for reuse of wastewater would be considered in preference to discharge to the local stormwater system.	This is addressed in the operation-phase Water Reuse Strategy (M5N-ES-PLN-PWD-0050).
OpWM 03	In order to reduce demand on local water supplies, options would be investigated for providing water required for operation of the deluge system from wastewater produced through the tunnel drainage system where it meets appropriate quality parameters.	The operation-phase Water Reuse Strategy, prepared in accordance with CoA B30, identified that it was not considered feasible or reasonable to utilise the treated tunnel groundwater for the deluge system. The deluge tanks and system will not withstand the elevated salinity of the groundwater. The additional cost in treatment, energy and maintenance for a more complex water treatment plant, and the distance between the treatment plant and deluge tanks creates a significant engineering and financial barrier to reusing treated groundwater for this purpose.

3 Goals and limits

3.1 Protection of the Environment Operations Act 1997

The Protection of the Environment Operations Act 1997 (POEO Act) defines waters as the whole or any part of:

- Any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea); or
- Any water stored in artificial works, any water in water mains, water pipes or water channels, or any underground or artesian water.

Section 120 of the POEO Act states that it is illegal to pollute waters. Under the POEO Act, 'water pollution' includes introducing litter, sediment, oil, grease, wash water, debris, and flammable liquids such as paint etc. into waters or placing such material where it is likely to be washed or blown into waters or the stormwater system or percolate into groundwater. All practicable steps should be taken to minimise the risk of pollution of waters.

3.2 ANZECC (2000) objectives

The Australian and New Zealand Environment and Conservation Council and the Agriculture and Resource Management Council of Australia and New Zealand have developed the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC 2000) (ANZECC guidelines). The ANZECC (2000) guidelines for marine water quality and fresh water quality specific to south-east Australian lowland rivers and NSW coastal rivers are applicable to this Project, as described in more detail in the Water Quality Monitoring Program.

For each catchment in NSW, the State Government has endorsed the community's environmental values for water, known as 'Water Quality Objectives' (WQOs). The NSW WQOs are the environmental values and long term goals for consideration when assessing and managing the likely impact of activities on waterways (ANZECC 2000).

Both local waterways and the upper estuary waters could be affected by the project. The water quality objectives for both these are:

Protection of:

- Aquatic ecosystems;
- Visual amenity;
- Secondary contact recreation (e.g. boating);
- Primary contact recreation (e.g. swimming) in the longer term (10-year); and
- For the upper tributary waters only, protection of aquatic foods (cooked).

A range of water quality indicators are used to help assess whether the current condition of a waterway supports these values. Each indicator has an associated "trigger" value which, if exceeded, could mean one or more of the water quality objectives might not be met. These key indicators are derived from ANZECC (2000). Note that some of the indicators associated with contact recreation are biological indicators such as faecal coliforms and viruses and, given the project would not result in an increase in these, they have not been included.

Much of the project's catchment is urbanised, therefore waterways are affected by poor water quality and a changed flow regime. The waterways have been greatly modified, with creek systems being extensively channelised or hard-edged with concrete. Wetlands have been destroyed or degraded and, where natural remnants of vegetation exist, they are often affected by weeds and rubbish.

Baseline water quality results show that the ambient water quality of the receiving waters is poor, with concentrations of a number of indicators exceeding the default values given in ANZECC (2000) (AECOM, 2015) for *slightly to moderately disturbed* ecosystems.

3.3 Site-specific trigger values

The ANZECC (2000) guidelines consider a wide range of species in Australia and New Zealand, however they are not site-specific and do not consider the local natural environment, i.e. the influence of local geology on water quality. The exceedance of an ANZECC (2000) guideline value is very common and is often a product of local natural environmental factors including water-rock hydrogeochemical interactions. The ANZECC (2000) guidelines (Section 7.4.4.2) recognise this, stating:

Some surface waters will contain concentrations of toxicants that may naturally exceed the default guideline trigger values ... Where this is the case ..., new trigger values should be based on background (or baseline) data. (Note that 'background' in this case, refers to natural toxicant concentrations that are unrelated to human disturbance.) As a matter of course, gathering of background data is always recommended, at least in the initial stages of a water quality management program, to establish whether or not concentrations of toxicants are naturally high.

Therefore, site specific trigger values (SSTV) derived using site-specific baseline data are a much more rigorous and accurate approach to assess potential project related impacts. The ANZECC (2000) guidelines provide guidance on the development of SSTV. SSTV were developed during the construction phase, as described in the WQMP.

Surface water quality data have been divided into two categories when calculating the SSTV based on the receiving watercourses:

- Freshwater: comprising Wolli Creek, Sheas Creek and Eastern Stormwater Drain; and
- Estuarine: comprising Cooks River, Alexandra Canal, and tributary to Muddy Creek.

Table 3-1: Site Specific Trigger Values

Analyte	Unit	Limit of Reporting	Freshwater	Estuary
pH (field)	pH units	0.01	6.5 - 8.5	6.5 - 8.5
Total suspended solids	mg/L	5	50	21
Arsenic	mg/L	0.001	0.360	0.0024
Cadmium	mg/L	0.0001	0.0008	0.0005
Chromium (VI)	mg/L	0.001	0.040	0.0004
Copper	mg/L	0.001	0.012	0.0003
Lead	mg/L	0.001	0.0094	0.0004
Nickel	mg/L	0.001	0.017	0.007
Zinc	mg/L	0.005	0.059	0.0056
Ferrous Iron	mg/L	0.05	0.3	0.3
Ammonia	mg/L	0.01	2.3	0.091
Total nitrogen as N	mg/L	0.1	2.89	1.2
Total phosphorus as P	mg/L	0.01	0.12	0.17

3.4 Bayside Council

The target criteria for Bayside Council have been adopted for the operation of the main carriageway, as a large part of the Asset lies within this local government authority (LGA) and the criteria of other LGA's are consistent with this.

Operational water quality objectives for developments are specified in the Botany Bay and Catchment Water Quality Improvement Plan (SMCMA, 2011). The adopted water quality pollutant reduction targets for the main carriageway are:

- 90 per cent reduction in the post development mean annual load of gross pollutants;
- 85 per cent reduction in the post development mean annual load of Total Suspended Solids (TSS);
- 60 per cent reduction in the post development mean annual load of Total Phosphorus (TP); and
- 45 per cent reduction in the post development mean annual load of Total Nitrogen (TN).

3.5 Groundwater quality

The potential changes in groundwater quality due to operation of the Asset are not likely to result in immediate exceedances of trigger values but will rather likely occur over time. Trend analysis of a range of selected analytes was considered to be a more appropriate method to detect any Asset related changes in groundwater quality.

The exponentially weighted moving average (EWMA) is calculated for each time series of the selected analytes. The EWMA is a moving average that is weighted in favour of the most recent sample; the weighting decreases exponentially for progressively older samples. The parameter alpha (α) controls the distribution of weighting (a value of 0.2 is used in the analysis). A warning is triggered when a potential trend is identified, requiring further comment.

In addition to trend analysis on selected analytes, any result detected at concentrations 20% above the baseline 80th percentile (Table 3-2) for two consecutive rounds of monitoring are investigated.

Table 3-2: Groundwater baseline 80th percentile + 20% threshold

Analyte	Unit	Allu	vium	Botany S	and Beds	Ashfiel	d Shale		esbury stone
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
pH (field)	pH unit	NT	NT	NT	NT	11.4	11.4	5.8	11.9
Electrical Conductivity	μS/cm	NT	NT	NT	NT	1550	10700	797	16000
Total Dissolved Solids (180°C) (Filtered)	mg/L	250	12000	610	790	4600	17000	330	37000
Arsenic (dissolved)	μg/L	<1	120	1	7	<1	<1	<1	8
Cadmium (dissolved)	mg/L	<0.1	0.2	<0.1	<0.1	<0.1	<1	<0.1	<1
Copper	μg/L	<1	6	<1	15	<1	5	<1	24
Lead	μg/L	<1	2	<1	2	<1	<1	<1	1
Nickel	μg/L	<1	6	<1	7	<1	3	<1	140
Zinc	μg/L	<5	52	<5	16	<5	42	<5	360
Iron	mg/L	NT	NT	0.067	0.067	0.007	0.014	0.041	160

Analyte	Unit	Alluvium		Botany Sand Beds		Ashfield Shale		Hawkesbury Sandstone	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Ammonia (as N)	mg/L	0.66	1.7	4.7	7.2	0.18	2.3	<0.01	41
Nitrate (as N)	mg/L	<0.005	0.02	<0.005	0.008	<0.005	0.095	<0.005	0.18
Total nitrogen (as N)	mg/L	NT	NT	16	16	2.5	5.9	1	49
Total Kjeldahl nitrogen	mg/L	NT	NT	16	16	2.1	5.9	0.84	49
Total phosphorus as P	mg/L	0.15	3.5	1.2	2.9	0.06	12	<0.01	8.4

NT - Not Tested

3.6 Groundwater inflow

All feasible and reasonable measures must be undertaken to limit operational groundwater inflows into each tunnel to no greater than 1 litre per second across any given kilometre (1 L/sec/km) in accordance with CoA B26.

3.7 Settlement

Settlement criteria is identified in CoA D8 and reproduced in Table 3-3.

Table 3-3: Settlement criteria (CoA D8)

Beneath structure / facility	Maximum settlement	Maximum angular distortion	Limiting Tensile Strain
Buildings - Low or non-sensitive properties (i.e. < 2 levels and carparks)	30 mm	1 in 350	0.1
Buildings - High or sensitive properties (i.e. > 3 levels and heritage items)	20 mm	1 in 500	0.1
Roads and Parking areas	40 mm	1 in 250	n/a
Parks	50 mm	1 in 250	n/a

3.8 Water treatment plant

The water treatment plant has been designed to discharge water which does not deleteriously impact the water quality objectives and values of the receiving environment, as per the ANZECC (2000) Guidelines.

Water within the water treatment plant will be continuously monitored for pH, oxidation reduction potential and dissolved oxygen to inform the treatment process. Once treated, water will also be continuously monitored for pH, conductivity and turbidity before being discharged to the tidal storage basin (refer to section 4.3).

Treated water from the water treatment plant and adjacent receiving waters will also be monitored in accordance with the Environmental Protection Licence, which is appended to the WQMP.

4 Control mechanisms

4.1 Tunnel design

The project mainline tunnel was designed and constructed to meet the groundwater inflow criteria identified in Section 3 (and CoA B26) using water-resisting treatment along the mainline tunnel. Five lining types were installed, depending on the ground conditions and the level of water ingress observed:

- Type A: shotcrete and rock bolts
- Type B: Type A + strip drains
- Type C: Type A + strip drains + shotcrete dosed with Xypex, creating a crystalline structure within the
 pores and capillary tracs of the concrete mass to prevent the penetration of water
- Type D: Type B/C + spray-on membrane between the primary and secondary layers of shotcrete
- Type E: Type B/C + a sheet membrane between primary and secondary layers of shotcrete and contact grouting.

The remaining ongoing inflow of groundwater into the tunnels will be managed through the tunnel drainage system, which has been designed to accommodate the capture, removal, treatment and discharge of groundwater.

4.2 Tunnel sump and pump

A sump with two separate chambers to capture groundwater, hydrocarbons and stormwater/deluge water is located at the tunnel low point. The storage capacity of the sump includes:

- 50,000L (minimum) of liquid tanker spill
- 17,500L (minimum) of fire-fighting foam in spill containment
- 459,000L (minimum) of deluge water generated from twenty minutes operation and 3 hydrants
- 75,600L for up to one hour of groundwater ingress.

The sump is located at the low point adjacent the cross passage and westbound tunnel under Kogarah Golf Course and is shown in Figure 4-1.

The low point sump captures and transfers all liquids from within the tunnels (groundwater, washdown waste water, deluge water, and hydrant water) as well as any stormwater ingress from the small section of pavement that cannot be captured by the road drainage and/or portal sumps. The two chambers consist of the Minor Flows Sump and the Deluge Water Storage Sump.

The Minor Flows Sump allows the pumping of low inflows (predominately groundwater) to a water treatment plant on the surface at Arncliffe (MOC3). As the inflow to the Minor Flows Sump increases (either during normal operation, deluge, or a critical event), the water level in the sump will rise and spill into the Deluge Water Storage Sump. Under normal operating conditions, this water is also pumped to the surface for discharge to the water treatment plant.

In the event of a deluge or critical event where high volumes of water is used, water is captured in the Deluge Water Storage Sump and stored. Once tested for contamination, the water is pumped to the surface for discharge to the Cooks River (if within discharge water quality targets), treatment through the Water Treatment Plant, or to tankers if contaminated from a critical event in the tunnel i.e. hydrocarbons.

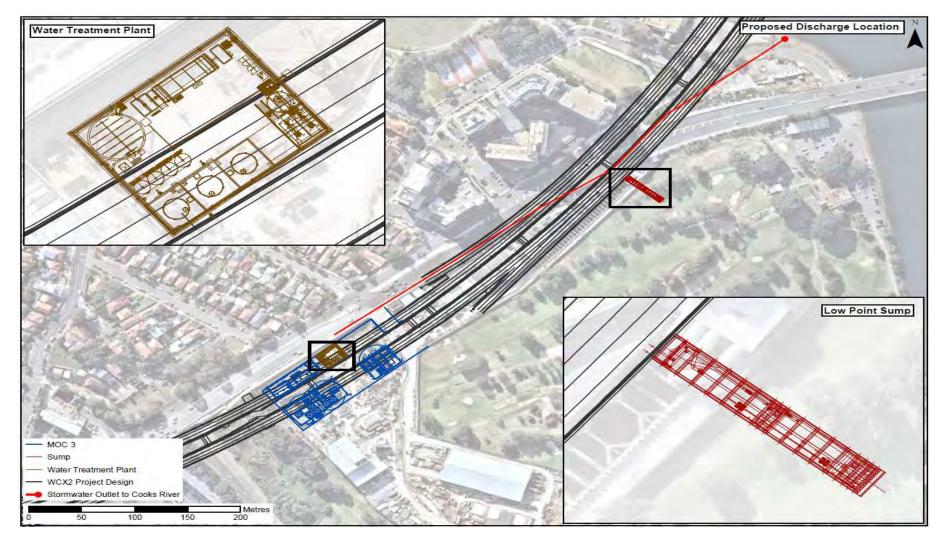


Figure 4-1: Sump located at tunnel low-point and operational water treatment plant discharge location

4.3 Water treatment plant

During operation of the Asset, there will be an ongoing inflow of groundwater into the tunnels. The tunnel drainage system has been designed to accommodate the capture, removal, treatment, storage and discharge of groundwater. Groundwater inflows would flow to the low point sump. During normal operation, the water treatment plant will treat and discharge approximately 2ML of groundwater per day.

The water treatment plant will consist of the following steps:

4.3.1 Pre-treatment

Water from the low point sump is pumped to the surface. Screening removes large solids, plastics and debris which may have collected in the sump and protects the downstream processing equipment.

After the initial screening, water is pumped into the surface balance tank which provides constant flow to the Dissolved Air Floatation (DAF) from the tunnel drainage system to buffer the on/off nature of pump operations. The water is agitated via aeration and mixing systems, which keeps solids suspended but also provides oxidation of heavy metals. Before being mixed with chemicals, pH and turbidity are measured.

4.3.2 Pre-conditioning

The water is conditioned through chemical dosing. Poly Aluminium Chloride is used to aid coagulation, to remove solids collected from the wash-down activities and surface run-off from the portals. As the groundwater is acidic, Sodium Hydroxide is used to correct the pH so it meets discharge criteria. It also assists in precipitating dissolved heavy metals from the groundwater. A polymer will also be used to aid flocculation in the sludge dewatering process. Before entering the DAF, pH and turbidity are measured.

4.3.3 Solids Removal

Chemically conditioned flows will continue into a solids removal unit. The DAF unit will remove solids from the conditioned waste water through floatation. The conditioned waste water enters via an inlet manifold and is mixed with an air stream, which allows the flocculated solids to rise to the surface. The sludge produced from this process is collected in a sludge holding tank, which provides a buffer storage before the sludge is dewatered.

The thickened sludge from the holding tanks is dosed with Polyelectrolyte before being dewatered through a Rotary Screw Press. The solids will be discharged directly from the outlet of the screw press into a skip bin which can then be removed offsite to waste facility. The water from this process is then directed back into the Balance Tank.

Treated water from the DAF is then treated through Media Filters, where traces of polymer and fine sediments are captured. The filters are back flushed periodically with water which has been treated through the media filters. The backflush water is directed back into the Balance Tank for treatment.

4.3.4 Discharge to the Cooks River

Before the treated water is discharged into the tidal basin, turbidity, pH, temperature and flow are measured. Once within the tidal basin, water is released during the outgoing (ebb) tide into the stormwater drain before entering the Cooks River.

The water treatment plant is controlled and monitored via an external control room with full control functionality. At the control room the operator is able to monitor the quality of water at various stages in the treatment process, along with the status of all water treatment plant system alarms and plant.

The discharge location was selected as the nearest saline environment. The discharge location is identified in Figure 4-1. The use of existing infrastructure also minimises the potential impacts due to excavation and laying new pipes.

Additional information regarding the operational water treatment plant, including treatment criteria and monitoring is found in Section 5 and 6 of the operation-phase Water Quality Monitoring Program.

4.4 Stormwater treatment devices

The New M5 drainage design involves a combination of surface drainage structures and underground drainage systems to divert storm water into existing drainage systems which ultimately discharge to the receiving environment. The Project EIS states that water quality treatment will be implemented for the New M5 main carriageways. The targets, outlined in the EIS, for pollutant reductions for Total Suspended Solids, Total Phosphorus, Total Nitrogen and are identified in Table 4-1

Table 4-1: Stormwater criteria

Stormwater pollutant	Annual average pollutant load reductions
Gross pollutants	90%
Total suspended solids	85%
Total Phosphors	60%
Total Nitrogen	45%

4.4.1 Water Quality Control Basins

A Water Quality Control Basin (WQCB), is a basin with a permanent water storage component. This category of device have an average depth greater than 1.5m to minimise the growth of emergent plant species and are primarily incorporated into a development configuration for aesthetics.

All WQCB are sized using the first flush and 1-year ARI design criteria, where practical. WestConnex New M5 WQCBs are identified in in Table 4-2 and shown in Figure 4-2 and Figure 4-3.

4.4.2 Biofiltration systems

Biofiltration systems include biofiltration swales and biofiltration basins. These systems contain bio-filter materials and are vegetated with effective nutrient removal plants. These basins and swales are normally dry with a vegetated surface. Biofiltration systems are identified in Table 4-2 and shown in Figure 4-2 and Figure 4-3.

4.4.3 Alternative propriety type water quality controls

The existing M5 East, Gardeners Road, Campbell Road, Campbell Street, Princes Highway and Euston Road are located within a highly urbanised and disturbed catchment. Within existing arterial roads, there is limited space to construct water quality treatment measures, such as water quality basins. Therefore, spill containment basins, Gross Pollutant Traps (GPTs) and Hydrodynamic separators have been installed in various locations to reduce the pollutant loads discharged to the receiving environment.

Gross Pollutant Traps have typically been provided for this Project before the portal pump to reduce litter and in particular organic matter, from entering and possibly creating anoxic conditions in the wet well and rising mains. The GPTs also reduce the potential anoxic conditions in the rising main from the portal pump.

A Hydrodynamic separator is a water quality control device to remove hydrocarbons and suspended solids from stormwater runoff, preventing oil spills and minimizing non-point source pollution entering downstream system. Hydrodynamic separators are typically provided for the local roads and Western Interchange.

Table 4-2: Water quality controls for the Asset

Area	Name	Location	Receiving environment	Treatment	Containment area / volume (relevant storm event for nominated area/volume)
Western Interchange and Portal	Biofiltration swale 2.WQCS.01	Adjacent to New M5 Eastbound portal and shared user path	Wolli Creek	0.7m filter media (sandy loam) 0.1m transition layer (course sand) 0.2m drainage layer (gravel)	Base width 3m 130m in length Incorporated with drainage and the adjacent shared user path design
	Biofiltration basin 2.WQCB.01	Adjacent to New M5 Eastbound portal, Garema Circuit	Eastbound tal, Garema		1600m ² Flow rate: 2.10m ³ /sec at 1 year ARI
St Peters Interchange	Alexandra Canal		0.7m filter media (sandy loam) 0.1m transition layer (course sand) 0.15 fine drainage layer 0.2m drainage layer (gravel)	4100m² (at surface level)/sec 1.25m³/sec 1-year ARI	
	Water quality basin 9.SWB.02	Adjacent to Stage 3 to Euston Road Ramp (Campbell Road)		Retention time based on 1-year ARI	2650m ³ 1.67m ³ /sec 1-year ARI
St Peters Local Roads, Campbell Street	Camdenville Basin Strategy Storage Tanks 1 - 5	Campbell Street (west of Princes Hwy to Bedwin Road)	Camdenville Basin, Eastern Chanel	HumeCeptor, treatment on TSS, TP, TN and hydrocarbon spill containment	Total tank capacity 4000m ³ 5-year ARI
St Peters Local Roads, Burrows Road	Biofiltration swale 7B.SW6	Adjacent to Euston Road and Campbell Street (next to MOC5)	Alexandra Canal (formally Shae's Creek)	0.54m filter media (sandy loam) 0.1m transition layer (course sand) 0.2m drainage layer (gravel)	0.054m³/sec at 1-year ARI



Figure 4-2: Water quality basins (western portion of the Asset)

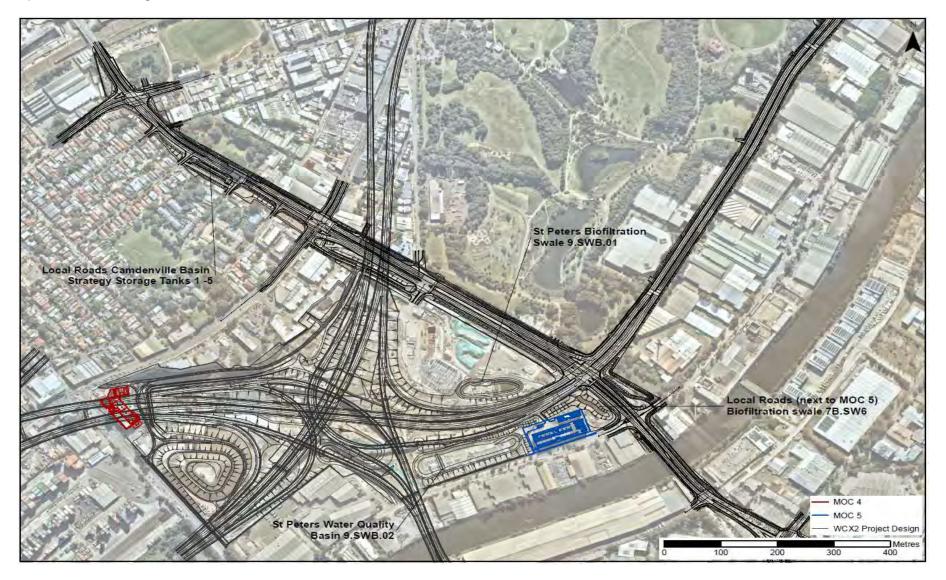


Figure 4-3: Water quality controls (eastern portion of the Asset)

4.5 Management measures

Steps that will be implemented to plan, manage, monitor and/or review environmental impacts are identified in Table 4-3.

Table 4-3: Environmental controls

S	oil and water management controls	Responsibility
	cid sulfate soils	
	Manage acid sulfate soils in accordance with:	O&M Contractor
	Guidelines for the Management of Acid Sulphate materials: Acid Sulphate Soils, Acid Sulphate Rock and Monosulphidic Black Ooze (Roads and Maritime, 2005)	
	 Acid Sulfate Soils Assessment Guidelines (Acid Sulfate Soil Management Advisory Committee, 1998) 	
	 Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998) 	
	Waste Classification Guidelines Part 4: Acid Sulfate Soils (EPA. 2014).	
	Develop a standard operating procedure (SOP) for acid sulfate soil management that will:	O&M Contractor
	Describe the acid sulfate material aspects and impacts	
	Map all acid sulfate soil risk areas	
	Define activities that are deemed of high risk in terms of acid sulfate soils	
	Describe the acid sulfate material handling and management controls	
	 Describe the acid sulfate material treatment methods controls and management strategies that will be employed as per section 7.4 of the Guidelines for the Management of Acid Sulfate Soils (Roads and Maritime, 2011) 	
	• Describe the contingency measures that will be implemented in the event of a failure or non-conformance	
	 Describe the sampling and testing regime to validate acid sulfate material before (and if required) during the work activity. 	
	Ensure the SOP includes procedures to manage the unexpected discovery of potential or actual acid sulfate soils. This contingency plan will be prepared in accordance with the Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998).	
Ε	ncountering and handling contaminants	
G	eneral provisions	
	Prepare and implement an SOP for managing and handling contaminated materials that accords with the Guideline for The Management of Contamination (Roads and Maritime, 2013), RMS Quality Assurance Specification G36: Environmental Protection, and National Environment Protection Measure (NEPM) guidelines on contaminated land management.	O&M Contractor
	The SOP will provide detail on:	
	areas of known contamination;	
	the management of unexpected contamination finds;	
	actions to be taken for any land contamination caused by the O&M Contractor.	
E	ncountering unexpected contamination finds	
	Prepare and implement an SOP for dealing with unexpected contaminated materials (or include in a combined contaminated materials SOP, referenced above). This will include a stop-work procedure and the need to notify the Project Company Representative within 24-hours of encountering any suspected or potential contamination.	O&M Contractor

oil and water management controls	Responsibility
roundwater quality monitoring and auditing	
After a major spill or accident, implement the Emergency Response Plan (or associated documents – refer Section 8.2.3 of the OEMP).	O&M Contractor / Project Company
Ensure that all monitoring is undertaken in accordance with the Water Quality Monitoring Program.	O&M Contractor
Record any exceedances of the water quality parameters as a non-conformance and report this directly to the Project Company Representative. Implement the response action process nominated in the Water Quality Monitoring Program.	O&M Contractor
ncident and emergency response: road traffic incidents	
Follow the Emergency Response Plan (CoA E44) (or relevant associated documents as described in Section 8.2.3 of the OEMP) during emergency situations associated with the operation of the Asset (including fires, explosions and vehicle collisions).	O&M Contractor
The Emergency Response Plan includes management measures to address the potential environmental impacts of an emergency situation, including measures for containment of contaminated fire-fighting water, fuel spills and gaseous combustion products.	
Shut down the stormwater system and stormwater / deluge pump in the sump at the tunnel low-point and stop discharging offsite as soon as it is safe and feasible to do so.	O&M Contractor
O&M personnel will work with emergency authorities (when authorities have attended the incident) to clean-up spills and prevent them migrating to the stormwater drainage or reaching surface or groundwater.	O&M Contractor
The key steps will include:	
The use of spill kit material once the area is made safe	
 Contain the spill within the pavement area if possible Install containment measures comprising sandbags and booms to prevent migration to the stormwater drainage 	
 Contain spill in spill containment chamber of tunnel sump and/or cap outfall points to prevent offsite discharge of polluted water if required and feasible 	
Remove any polluted water using a licensed company	
 Skim oil sheens from the surface of collected water or water quality basins if required. 	
Notify NSW EPA and relevant authorities in accordance with OEMP Section 8.2.4 and Annexure E (RMS Environmental Incident Classification and Reporting Procedure).	O&M Contractor
In the event that post-event water quality monitoring identified any exceedances, implement the response action process in the Water Quality Monitoring Program.	O&M Contractor
pill prevention: general provisions	
Ensure all O&M personnel are trained in spill management, including the use of materials and their deployment.	O&M Contractor
Retain all necessary personal protective equipment (PPE) onsite.	O&M Contractor
Stocktake and check the use-by date of all spill containment kit and PPE once every quarter.	O&M Contractor
pill prevention: material and chemical storage	
The use of any chemicals or fuels that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds.	O&M Contractor
Retain safety data sheets (SDS) onsite. Also ensure they are available via a 24-hour contact number.	
Maintain access to spill kits onsite ensuring they are included at each storage area and at areas of the worksite where handling and use of dangerous goods occur, and in all O&M Contractor site vehicles and within the maintenance depot and water treatment plant.	O&M Contractor
Protect all stormwater and surface drains before starting any site activities requiring the use of chemicals or fuels, or involving ground clearance or excavation work.	O&M Contractor

oil and water management controls	Responsibility
Ensure that all chemicals, fuels, dangerous goods and other potentially polluting materials are stored within nominated storage areas. This extends to storing all such materials on hardstand within an area that is bunded to 110 per cent of the volume of the largest single stored materials.	O&M Contractor
Dangerous goods, as defined by the Australian Dangerous Good Code, must also be stored and handled in accordance with relevant Australian Standards and the <i>Environment Protection Manual for Authorised Officers: Bunding and Spill Management</i> , technical bulletin (EPA, 1997).	
Ensure that all drainage within chemical and fuel storage areas is self-contained to prevent any offsite migration.	
pill prevention: refuelling	
Ensure that as much as possible chemical and fuel transfer activities take place within a bunded and contained area.	O&M Contractor
Ensure that a person will be in attendance when vehicle refuelling takes place and that spill kit provisions are available at designated locations or within response vehicle. A maximum of 5L of petrol is provided for out of fuel vehicles.	O&M Contractor
pill prevention: vehicle and equipment servicing	
Use spill containment controls when vehicles are serviced.	O&M Contractor
Inspect vehicles, plant and equipment on a fortnightly basis for leaks.	O&M Contractor
pill prevention: vehicle washing	
Ensure that no vehicles will be washed to allow runoff to the stormwater system.	O&M Contractor
·	Cam Contractor
pill management	00110
Following a minor or major spill:	O&M Contractor
Identify the type and volumes of spilled material where possible Perform CDC for DDE as with respect to the control of t	
Refer to SDS for PPE requirements	
Assess containment needs	
If containment is required use earth mounds and/or absorbent socks/spill kit	
Use the relevant clean-up procedure in SDS	
Dispose of material using a licensed contractor, and keep records of disposal onsite	
Complete an incident reporting form and forward it to the Project Company Representative.	
Remove the absorbent materials for disposal (as hazardous waste, if required).	O&M Contractor
Alternatively, classify the waste and dispose of it accordingly to a licensed facility.	
 Manage major fuel or chemical spills through the incident response procedure (refer to Section 8 and Annexure E of the OEMP). 	O&M Contractor
 Clean up all spillages immediately, providing there is no risk to human health so as to prevent its spread offsite or into the stormwater system, surface waters or groundwater sources. 	
Contract qualified and licensed personnel to manage and classify hazardous or special wastes in accordance with the requirements of the NSW Environmentally Hazardous Chemicals Act 1985 and the EPA Waste Classification Guidelines (NSW EPA, 2014).	O&M Contractor
rosion and sedimentation control, including post-construction monitoring of vegeta	ation
eneral provisions: all relevant activities	
Erect and maintain effective sediment control barriers down gradient of all areas where soil disturbance will be undertaken.	O&M Contractor
Construct diversion banks upslope of activities where sediment loss may occur to manage surface water runoff away from the exposed areas, where appropriate.	O&M Contractor
Test and classify generated spoil and sediment in accordance with the NSW Assessment Classification and Management of Liquid and Non-Liquid Waste Guidelines (NSW DEC, 2004) and/or the NSW Waste Classification Guidelines (NSW EPA, 2014) before its disposal offsite.	O&M Contractor

l and water management controls	Responsibility
Excavate and transport soil offsite for disposal at a licensed facility that is (suspected to be) contaminated as a result of fuel, oil, or chemical spills.	O&M Contractor
Sweep road surfaces as required to prevent the build-up of sediment	O&M Contractor
Transfer the collected sediment offsite for disposal in accordance with the NSW Assessment, Classification and Management of Liquid and Non-Liquid Waste Guidelines (NSW DEC, 2004) and/or the NSW Waste Classification Guidelines (NSW EPA, 2014) before its disposal offsite.	
Stabilise exposed areas and earthworks during the maintenance period.	O&M Contractor
Where necessary, protect stormwater drainage to prevent the discharge o sediment by using gravel bags, sand filters or other geotextile fabrics.	f O&M Contractor
 Routinely replace sediment control devices and remove the old devices offsite for storage, waste classification and disposal. 	
Undertake weekly observations of the water quality /detention basins for visible signs of fine sediments during routine site activities. Only discharge from the water quality (detention basin once the water is tested (where required) and/or the sediment is settled.	<i>,</i>
ter slopes and embankment management	
Undertake visual inspections of the batter slopes and embankments and implement an actions if there is evidence of loose or unstable rock.	O&M Contractor
nd clearance	
mplement soil protection controls to prevent erosion including but not limited to:	O&M Contractor
Staged clearance and progressive rehabilitation of exposed areas	
Retain vegetation within drainage lines and medians	
 Minimise exposed areas to the required amount needed for the operation of maintenance activity. 	г
sion and sediment control devices maintenance and management	
Remove sediment from control devices following a major rainfall event and/or when required.	O&M Contractor
Ensure that the collected water contained in control devices and excavations is only discharged after testing. Where required, contain, test and subsequently treat the water confirm its suitability for discharge in accordance with the triggers identified in the Water Quality Monitoring Program.	-
ad sweeping and cleaning	
Sweep road surfaces as required to prevent the build-up of sediment and kept clear o debris including; vehicle waste, solid waste, sediment, sand, soil, clay or stones.	f O&M Contractor
Monitor and clean all sediment traps and pits when they are 60 per cent full.	O&M Contractor
ckpile management	·
nstall erosion and sediment control measures at stockpile areas based on the provisions included the Management of Urban Stormwater: Soils and Construction (Landcom, 2004). Install and manage all stockpiles in accordance with RMS Quality Assurance Specification G38: Soil and Water Management.	1

Soil and water management controls	Responsibility
Vegetation establishment	
 Inspect the areas of landscaping and vegetation cover, introduced in upgrading the M5 Motorway to prevent soil erosion, once every month for the first year of operation. 	O&M Contractor
If there is evidence of erosion, consider additional remedial actions.	
Continue inspections after one-year in locations where there is evidence of erosion in the first year until a point in time where the area is established.	
Groundwater Dependent Ecosystems	
Undertake visual inspections of the Groundwater Dependent Ecosystems and monitor for evidence of vegetation degradation.	O&M Contractor
If there is evidence of vegetation degradation, investigate and implement corrective/preventative actions.	
Stormwater drainage system maintenance and repair, including water quality infrasti design measures and outfall points	ructure, water sensitive urbar
General provisions: all relevant activities	
Keep and maintain an Asset drawing of the stormwater system, its respective catchments, collection points, and discharge points.	O&M Contractor
Prepare, maintain, update and review a schedule of all operation and maintenance activities that involve work that could impact on stormwater drainage. This will principally include sediment-generating activities and activities involving the use of chemicals, fuels and other potentially polluting materials.	O&M Contractor
Routine and regular maintenance of the stormwater system including water quality urban design	features and water sensitive
Visually inspect drainage basins at least once a week for signs of debris, poor maintenance, weeds and plant replacement, chemical and oil sheens, notable odours, or other signs of pollution. Monitor, treat and discharge retained water as required. Herbicide and pesticide use should be avoided for weed and plant removal to reduce water pollution.	O&M Contractor
Ensure that an inspection takes place immediately following an incident, spill or adverse heavy rainfall.	O&M Contractor
Remove sediment from control devices following a major rainfall event and/or when the device is 60 per cent full. Collect, test, classify and dispose of the sediment in accordance with the NSW Waste Classification Guidelines (NSW EPA, 2014).	O&M Contractor
If required, obtain consent from Sydney Water to discharge the collected water to the trunk sewer main.	O&M Contractor
Flood immunity protection	
Ensure the road drainage infrastructure is inspected quarterly, or more frequently if there is a period of prolonged heavy rainfall or accidental discharge, to ensure it operates within its design specifications to achieve the required flood immunity protection.	O&M Contractor
Water consumption	
Develop and implement water efficient practices including water reuse, and recycling for roadside irrigation and site work.	O&M Contractor
Adopt the following conservation management hierarchy for water:	O&M Contractor
Avoid water consumption, prevent and fix leaks	
Reduce water consumption by using water efficient equipment and processes	
Re-use stormwater without treatment where fit for purpose	
Treat / recycle dirty and grey water, where fit for purpose	

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5 Monitoring and measurement

5.1 Groundwater

Groundwater is present within the alluvium around Cooks River, Botany Sands, Ashfield Shale and Hawkesbury Sandstone. The water table is generally a subdued expression of the topography, depth varies from near-surface within fill material, residual fill and alluvium in low-lying areas to more than 7 m in the Ashfield Shale to over 40 m in the Hawkesbury Sandstone. Regionally groundwater flow is eastward discharging into Botany Bay and Alexandria Canal.

Monitoring equipment, including settlement survey pins, optical survey targets, tilt meters, piezometers, inclinometers and multiple point borehole extensometers, were installed prior to construction to monitor ground settlement and associated movement of existing infrastructure during the construction period.

Generally, monitoring continued until readings stabilised and all works which could induce ground movement within the coverage zone of influence (ZOI) had been completed. Stabilisation of readings was determined on a case by case basis as stated in the relevant monitoring trigger actions response plans (TARP), but typically comprised multiple consecutive readings that were consistent with one another, within the tolerance of the instrument.

Ground settlement monitoring points

Ground settlement monitoring points were installed in close proximity of the Project prior to tunnelling to measure ground settlement. Post tunnel excavation settlement monitoring has been carried out as per the post construction monitoring frequency stated in relevant TARP drawings.

Ground settlement monitoring points in alluvial soils have been retained beyond the construction phase (refer Figure 5-1). Monitoring at these locations will be undertaken quarterly during the O&M phase.

A suitably qualified and experienced specialist would be engaged to undertake the monitoring and analysis. Some variation in monitoring results are expected due to seasonal changes, survey monitoring equipment, rainfall, etc. However, the following triggers would be used to guide necessary action by the Project Company and/or O&M Contractor:

- Monitoring results outside of the normal, previous range of monitoring results; or
- Monitoring results nearing or exceeding settlement criteria identified in CoA D8.

In the event that the above triggers are reached, the following steps will be undertaken:

- The O&M Project Manager and Project Company Representative will be contacted immediately
- Monitoring results will be repeated
- Monitoring equipment may be inspected for damage or fault
- If the repeated monitoring shows similar results, a hydro-geotechnical specialist (or equivalent) will be engaged to participate in the investigation into potential causes and recommended actions.
- Inform DPIE if repeated monitoring shows exceedances of trigger levels.

Any necessary actions would be determined in consultation with the monitoring specialist, the Project Company and any other parties deemed necessary to be engaged.

It is noted that the retained ground settlement monitoring point are located outside of the Asset footprint, and therefore may be affected by external parties or access may be restricted at any point. In addition, the monitoring equipment was selected and installed to meet the needs of the Construction Contractor and therefore the service life of the instruments or monitoring points is not guaranteed.

Operation Water Management Plan

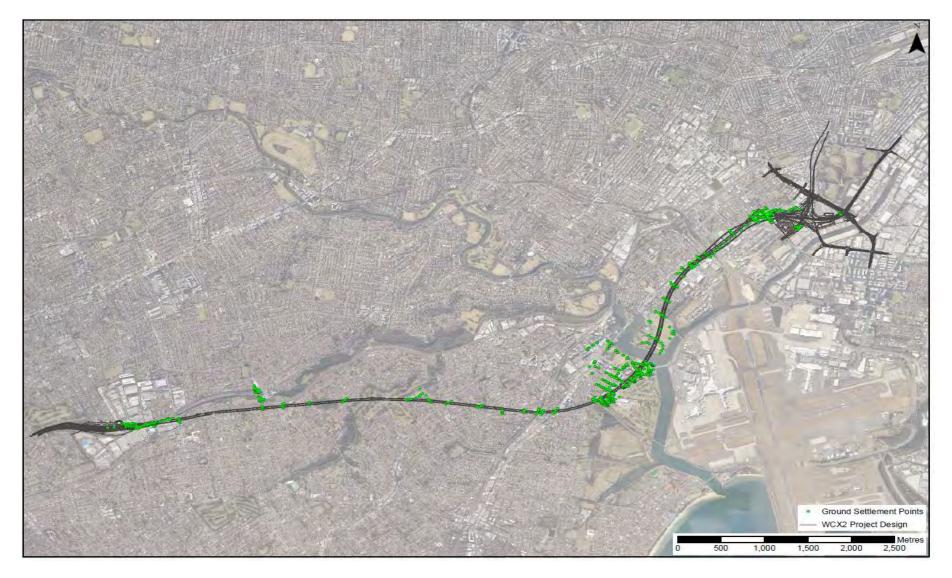


Figure 5-1: Ground settlement monitoring points

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In-tunnel convergence monitoring

In-tunnel convergence monitoring will be undertaken at various locations within the tunnel. Monitoring will be undertaken in accordance with the Operation and Maintenance Plan.

Groundwater quality and level monitoring

Groundwater monitoring events (including water quality and groundwater level) will be undertaken at various locations in the close and extended proximity of the Asset. Groundwater monitoring events and reporting will be undertaken in accordance with the Operational Water Quality Monitoring Program, prepared in accordance with CoA B28. The WQMP describes water quality triggers for groundwater and gives appropriate management responses should one or more of those triggers be activated.

5.2 Groundwater dependent ecosystems

Groundwater Dependent Ecosystems (GDEs) are defined as ecosystems whose current species composition, structure and function are reliant on a supply of groundwater as opposed to surface water supplies from overland flow paths. The frequency of groundwater influence may range from daily to inter-annually, however it becomes clearly apparent when either the supply of groundwater or its quality (or both) is altered for a sufficient length of time to cause changes in plant function.

GDEs within the potential extent influence of groundwater drawdown are shown in sensitive area maps (Appendix B) and include the following:

Table 5-1: Groundwater dependent ecosystems

Location of potential GDE	GDE description	Significance	Monitoring
Western interchange	1.80 hectares of Cooks River Castlereagh Ironbark Forest along northern edge of the M5 East Motorway and south of Canterbury Golf Course. Melaleuca and Casuarina		Ecological assessment of ecological health every 6 months (if required/ triggered).
	in forest suggest possible groundwater link.		Monitoring bore: WCX-BH006
Bardwell Valley Parkland and Broadford Street Reserve	17 hectares of hinterland sandstone gully forest with moderate to high potential to be dependent on groundwater.	Low	Ecological assessment of ecological health every 6 months (if required/triggered).
			Monitoring bores: LDS-BH-1033B and LDS-BH-1066
Stotts Reserve, Bexley North	3.5 hectares of coastal sandstone ridgetop woodland with moderate potential for groundwater dependence	Low	Ecological assessment of ecological health every 6 months (if required/triggered).
			Monitoring bore: LDS-BH-1032
Forest between the southern bank of Wolli Creek and the rail line behind Wolli Creek Station 3.4 hectares of estuarine fringe forest and mangrove forest with low to moderate potential for groundwater dependence	Low	Ecological assessment of ecological health every 6 months (if required/ triggered).	
			Monitoring bore: WCX-BH039

Operation Water Management Plan

The monitoring bore (LDS-BH-1032) used to monitor groundwater levels at Stotts Reserve was destroyed during the construction phase. In lieu of the monitoring bore, ecological monitoring by a suitably quality ecologist was undertaken at Stott's Reserve during construction every three months over a 18 month period from August 2018 through to February 2020 following preliminary assessments in December 2017 and February 2018. Seasonal canopy growth was recorded with no significant changes in shrub condition. As of November 2019, ecological monitoring has indicated that construction activities related to the New M5 tunnel have not impacted the Stott's Reserve GDE.

Due to the stable nature of the groundwater level monitoring results as well as no significant changes in vegetation no further monitoring requirements for GDE are proposed for the operational phase. In the event that monitoring is triggered (uncharacteristic changes in groundwater level), ecological monitoring by a suitably qualified ecologist is to be undertaken at Stott's reserved in a six-monthly basis. The type of monitoring employed will be determined by the expert ecologist.

An assessment of the potential impacts on GDEs and aquatic habitats during the EIS stage concluded there would be no significant impact as a result of the operation of the project (AECOM 2015).

5.3 Surface water

Surface water quality monitoring

Surface water quality monitoring will be undertaken at various locations in the proximity of the Asset, to monitor potential impacts to downstream receiving waters.

The WQMP describes water quality triggers for surface water and gives appropriate management responses should one or more of those triggers be activated.

Water treatment plant sampling and monitoring

Water quality sampling and monitoring for the WTP will be undertaken in accordance with the WQMP. Additional detail is found within that document.

Water quality testing will be undertaken before discharge to nearby receiving waters (via the water quality basin at Arncliffe MOC3). Discharge volumes will be continuously monitored at the treatment plant via a flow meter. In addition, a full suite of parameters will be analysed prior to WTP discharge.

Specific analysis will also be undertaken as a required management response action including when elevated levels of a parameter are identified during the monthly groundwater sampling program.

6 Auditing and review

Environmental auditing and review of the Asset will be undertaken in accordance with Section 9 of the OEMP. Audit / review that is specific to this OWMP is identified below.

Ground settlement monitoring points

Annual review of the ground settlement monitoring will be undertaken by the Project Company, including monitoring frequency, accessibility and service life of monitoring points. Consultation with DPIE will be undertaken if monitoring frequency is to be reduced, terminated at specific points or terminated in total.

In-tunnel convergence monitoring

Review of the in-tunnel convergence monitoring will be undertaken in accordance with the Operation and Maintenance Plan.

Groundwater quality and level monitoring, surface water quality and WTP sampling and monitoring

Review of groundwater (water quality and groundwater level) monitoring, surface water quality monitoring and WTP sampling and monitoring will be undertaken in accordance with the Operational Water Quality Monitoring Program, prepared in accordance with CoA B28. Refer to that document for details regarding auditing and review.

7 Notification and reporting

Notification and reporting for operation and maintenance activities of the Asset will be undertaken in accordance with Section 8 and Section 9 of the OEMP. Specific notification / reporting that is relevant to this OWMP is identified below.

7.1 Notification

Project Company will immediately notify and consult with National Resource Access Regulator, formerly Department of Primary Industries (Water), of any groundwater bores (for monitoring or otherwise) removed or damaged as a result of operation and maintenance activities.

7.2 Reporting

Reporting is required as part of this OWMP to ensure project management is responsive and that the response is appropriate.

7.2.1 Water Quality Monitoring Program

Table 7-1 details the proposed reporting schedule as identified in the WQMP. Refer to the WQMP for more details.

Table 7-1: WQMP reporting schedule

Project phase	Report timing	Report requirements
Operation of the Asset	Six-monthly (for a minimum of three	Raw surface and groundwater data to be collected and tabulated. Trigger exceedances to be highlighted.
	years)	Report to confirm implementation and compliance of required operational water control measures, including sedimentation basins, swales and operational water treatment plant.
		Extracted groundwater volumes to be reported to DI (Water) for a minimum of three years (in accordance with CoA B28(r)).
	Annual	Summary report of water monitoring data required under the WQMP, including any relevant findings, to be provided to DPIE and relevant councils (in accordance with CoA B28(s)).
	As required	Report of justification for continuation or cessation of the Water Quality Monitoring Program, as required (generally in line with CoA B18(m)).

7.2.2 Flood Review Report

A Flood Review Report will be prepared after the first defined flood event for any of the following flood magnitudes: 5 year ARI event, 20 year ARI event, 100 year ARI event and probable maximum flood in accordance with CoA B25.

The report(s) will include:

- identification of the properties and infrastructure affected by flooding during the reportable event
- a comparison of the actual extent, level, velocity and duration of the flooding event against the impacts
 predicted in the New M5 EIS Appendix P, or as otherwise altered by the Flood Mitigation Strategy
- where the actual extent and level of flooding exceeds the predicted level with the consequent effect of
 adversely impacting of property(ies), structures and infrastructure, identification of the measures to be
 implemented to reduce future impacts of flooding related to the SSI works including the timing and
 responsibilities for implementation.

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Any required flood mitigation measures must be developed in consultation with the affected property / structure / infrastructure owners, OEH and the relevant council.

Any applicable flood mitigation measures identified during the preparation of the Flood Review Report will be incorporated into this OWMP as appropriate.

A copy of the Flood Mitigation Report(s) will be submitted to the Secretary and relevant councils within one month of finalising the report(s).

7.2.3 Water treatment plant reporting

A compliance report for the water treatment plant performance and discharge criteria will be prepared by the O&M Contractor and provided to Project Company and EPA on a monthly basis.

As of September 2019, consultation with the EPA is ongoing to determine appropriate trigger values and discharge limits for the operation water treatment plant based at MOC3 – Arncliffe.

This section will be updated once consultation has been finalised and an Environmental Protection Licence has been obtained for the Project.

Annexure A Dangerous Goods Management Strategy

Dangerous goods management strategy

Purpose / Objectives

Operation and maintenance of the Asset has the potential to cause:

- inappropriate storage or handling of dangerous goods and hazardous materials resulting in spillage and potential for pollution or contamination of water, air or soil
- inadequate pre-works survey resulting in exposure to hazards (e.g. petrol stations or live services).

The objectives of this Dangerous Goods Management Strategy are:

- safe storage handling and disposal of dangerous goods and hazardous materials
- compliance with relevant regulations and legislation and minimise the risk of spill and occupational health and safety (OH&S) incident.

This Dangerous Goods Strategy has been developed to support the Operational Water Management Plan (OWMP) to satisfy **CoA E31h(vi)** and **(viii)**. For further information regarding the environmental obligations relevant to the management of water and soil, refer to Section 1.2 of the OWMP.

Management measures	Responsibility
General maintenance and repair work	
The project must obtain a licence where storage of dangerous goods for operations and maintenance is in licensable quantities.	O&M Contractor
During site induction, advise all O&M personnel of the following:	O&M Contractor
 The location of bunded storage areas, liquid absorbent materials and other spill containment materials and kits. 	
The response actions to take in the event of a spill.	
 Storage of large quantities of fuel for O&M vehicles and plant is not permitted. Licensed fuel trucks carrying emergency fuel spill kits must be used to service plant and equipment. 	
 All drums and decanted containers must be labelled and stored within bunded areas whenever they are not in use. Whenever practical, all unattended drums/containers must be returned to the bunded storage area. 	
O&M personnel to receive training, relevant to their responsibilities, via toolbox talks or awareness training, regarding the requirements (OH&S and environmental) related to handling, storage and disposal of dangerous goods and spill training.	O&M Contractor
Where possible and practicable, give priority to non-hazardous products when ordering materials.	O&M Contractor
Safety Data Sheets (SDS) for dangerous and hazardous substances will be obtained before materials arrive on site.	O&M Contractor
An SDS and Hazardous Products Register will be maintained and copies of all SDS documents will be retained in designated location(s) within the Asset.	O&M Contractor
Dangerous goods, as defined by the Australian Dangerous Goods Code, must be stored and handled strictly in accordance with:	O&M Contractor
all relevant Australian Standards	
 for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume, within the bund 	
 the Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (EPA, 1997). 	
In the event of an inconsistency between the requirements listed above, the most stringent requirement must prevail to the extent of the inconsistency.	
Storage of goods must also consider:	O&M Contractor
Work Health and Safety Act 2011 (NSW)	
Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW 2005)Supplier's instructions	

Dangerous goods management strategy	
 Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (Environment Protection Authority 1997). 	
Clearly label, use and handle liquid and dry chemicals (including pesticides, oils and fuels) in accordance with the instructions provided in its SDS document.	O&M Contractor
Liquid chemicals (including pesticides) and fuels will be stored in bunded storage areas or sheds that have the capacity to contain 110% of the volume of the largest single stored volume.	O&M Contractor
Signage indicating emergency contact numbers and fire extinguishers are to be provided at all fuel storage areas.	O&M Contractor
Spill kits will be provided at each storage area and at areas of the worksite where handling and use of dangerous goods occur. O&M personnel will be provided with appropriate training in spill response.	O&M Contractor
Hazardous waste will be managed by the appropriately qualified and licensed contractors, in accordance with the requirements of the <i>Environmentally Hazardous Chemicals Act 1985</i> and the EPA waste disposal guidelines.	O&M Contractor
Any fuel, lubricant or hydraulic fluid spills will be cleaned-up immediately using absorbent material and the contaminated material disposed of at a licensed waste facility.	O&M Contractor
Liquid and chemical wastes shall be handled and transported for disposal at an appropriate EPA licensed treatment or waste facility.	O&M Contractor
Transport of dangerous goods and hazardous substances will be conducted in accordance with relevant legislation and codes, including the <i>Dangerous Goods (Road and Rail Transport) Act 2008</i> (NSW), <i>Dangerous Goods (Road and Rail Transport) Regulation 2014</i> (NSW) and the Australian Code for the Transport of Dangerous Goods by Road and Rail (National Transport Commission 2008).	O&M Contractor
Water Treatment Plant	
In the event of an emergency at the water treatment plant, implement the management measures in the O&M Worksite Emergency Management Plan.	O&M Contractor
Water treatment plant chemicals to be stored in an appropriate bunded area at the water treatment plant.	O&M Contractor
Pesticides	
Use of pesticides (including herbicides) must be in accordance with the <i>Pesticides Act 1999</i> and RMS Specification G36 Environmental Protection.	O&M Contractor
Notify the public prior to and while applying pesticides.	O&M Contractor
Check licencing controls governing pesticide management to ensure that pesticides are not used without licencing authorisation.	O&M Contractor
Clearly label, use and handle pesticides in accordance with the instructions provided in its SDS document.	O&M Contractor
Only pesticides registered for use near water may be used near water.	O&M Contractor
Pesticide management training will form part of the induction, toolbox talks and/or environmental awareness training, as appropriate.	O&M Contractor
Monitoring	
Periodic site inspections, as described in Chapter 9 of the OEMP, will also be used to review environmental performance as will periodic inspections in the event that there is a concern about implementation or performance.	O&M Contractor
Auditing and review	
All environmental auditing of the Asset will be undertaken in accordance with Section 9.3 of the OEMP.	O&M Contractor / Project Company

Dangerous goods management strategy	
Notification and reporting	
Incidents and emergencies to be managed in accordance with OEMP Section 8.2.	O&M Contractor / Project Company
Reporting to DPIE to be managed in accordance with OEMP Section 9.6	Project Company