

# Ancillary Facilities Management Plan

Project Name: WestConnex New M5

<b>Project number:</b>	15.7020.2597
<b>Document number:</b>	M5N-ES-PLN-PWD-0026
<b>Revision date:</b>	9/01/2017
<b>Revision:</b>	06

## Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
00	11/02/16	CDS-JV				
01	16/03/16	CDS-JV				
02	31/03/16	CDS-JV				
03	03/05/16	CDS-JV				
04	20/05/16	CDS-JV				
05	10/06/16	CDS-JV				
06	9/01/17	CDS-JV				
Signature:						



## Details of Revision Amendments

### Document Control

The Project Director is responsible for ensuring that this Plan is reviewed and approved. The Support Services Director is responsible for updating this Plan to reflect changes to the Project, legal and other requirements, as required.

### Amendments

Any revisions or amendments must be approved by the Project Director before being distributed or implemented.

### Revision Details

Revision	Details
00	Initial Draft for Information / Informal Review
01	Draft for DP&E review and comment
02	Draft for agency consultation
03	For Approval
04	Update to address DP&E comments
05	Update to address DP&E comments
06	Update to include additional approved facilities



## Contents

<b>1. Introduction</b>	<b>5</b>
1.1 Context	5
1.2 Purpose & Scope	5
1.3 Objectives	6
1.4 Interface with Other Plans	6
1.5 Roles and responsibilities	6
1.6 Training	8
<b>2. Environmental Planning Requirements</b>	<b>10</b>
2.1 Relevant Legislation	10
2.2 Minister's Conditions of Approval	10
2.3 Additional Approvals, Licences, Permits and Requirements	24
2.4 Revised Environmental Management Measures	25
2.5 Guidelines	32
<b>3. Consult and Communicate</b>	<b>33</b>
3.1 Stakeholder Consultation	33
3.2 Community Consultation	33
<b>4. Ancillary Facilities Approval Strategy</b>	<b>36</b>
4.1 Approved Facilities Identified in the EIS and Submissions Report	37
4.2 New or Amended Ancillary Facilities	37
4.3 New or Amended Ancillary Facilities Assessment	38
<b>5. Identify and Assess – Approved Facilities</b>	<b>39</b>
5.1 Hours of Operation	41
5.2 Detailed Description of Approved Facilities	42
5.3 Site Establishment	46
5.4 Construction activities at ancillary facilities	60
5.5 Services / Utilities	79
5.6 Site Access	79
5.7 Parking	80
5.8 Construction Workforce and Vehicle Movements	81
5.9 Plant, Equipment and Materials	82
<b>6. Implement Controls</b>	<b>89</b>
6.1 Environmental Management System Overview	89
6.2 Construction Environmental Management Plan	89
6.3 Sensitive Area Plans	89
6.4 Site Environment Plans	89
6.5 Environmental Work Method Statements	89
6.6 Progressive Erosion and Sediment Control Plan	90
6.7 Internal Hold Points	90
6.8 Roads and Maritime Hold Points	91
6.9 Construction Noise and Vibration	92
6.10 Flood Mitigation Strategy	93
6.11 Traffic and Access	93
6.12 Visual Screening and Light Spill	93
6.13 Boundary Screening	94
6.14 Land Condition Assessments	94
6.15 Flora and fauna	95
6.16 Trees	95
6.17 Heritage	95
6.18 Contamination	95
6.19 Rehabilitation	96
<b>7. Incident Management</b>	<b>97</b>
<b>8. Review and Improvement</b>	<b>99</b>



8.1	Monitoring, Inspection and Reporting .....	99
8.2	Revision of this Plan .....	103
8.3	Non-Conformance Management, Corrective and Preventative Actions .....	103
<b>Appendix A: Site-specific Management Measures .....</b>		<b>105</b>
<b>Appendix B: Project-wide Management Measures.....</b>		<b>118</b>
<b>Appendix C: Arncliffe Construction Compound Sub-plan .....</b>		<b>146</b>
<b>Appendix D: Ancillary Facility Application .....</b>		<b>178</b>
<b>Appendix E: Ancillary Facility Flow Chart .....</b>		<b>180</b>
<b>Appendix F: Site Establishment Layouts .....</b>		<b>181</b>
<b>Appendix G: Construction Compound Layouts .....</b>		<b>186</b>
<b>Appendix H: Construction Noise Barrier Specifications for Ancillary Facilities .....</b>		<b>193</b>
<b>Appendix I: Environmental Obligations Register (extract).....</b>		<b>205</b>
<b>Appendix J: HV Power Addendum .....</b>		<b>208</b>
<b>Appendix K: Complaints Management System .....</b>		<b>236</b>
<b>Appendix L: Minor ancillary facilities approvals .....</b>		<b>240</b>
<b>Appendix M: Site-specific Ancillary Facility Management Plans .....</b>		<b>261</b>
<b>Appendix N: Glossary of Terms.....</b>		<b>304</b>

## 1. Introduction

### 1.1 Context

The New M5 Project is the Stage 2 component of the WestConnex scheme, a NSW Government initiative to connect Sydney's west and south-west with the Sydney Airport and the Port Botany precinct. It is being delivered by the Sydney Motorway Corporation (SMC), formerly the WestConnex Delivery Authority (WDA).

The CPB Contractors Dragados Samsung Joint Venture (CDS-JV) will deliver the design and construction of WestConnex Stage 2 referred to as the New M5 (the Project). The Project will run from the existing M5 East corridor at Beverly Hills via tunnel to St Peters, providing improved access to the airport, south Sydney and Port Botany precincts. The Project will substantially improve the east - west corridor access between the Sydney CBD, Port Botany and Sydney Airport precincts and the South West growth areas.

The Project will deliver approximately nine kilometres of two-lane twin tunnels with capacity to operate up to three lanes (between Kingsgrove and Arncliffe) and up to five lanes (between Arncliffe and St Peters) in the future, motorway to motorway connections to the King Georges Road Interchange Upgrade at Beverly Hills, and a new interchange at St Peters. Infrastructure Approval was granted for the project on 20 April 2016. Major works are expected to commence in mid-2016 and the New M5 tunnel is scheduled to open to traffic in late 2019.

Section 2 of the Construction Environmental Management Plan provides further background and detailed description of the Project.

This Ancillary Facilities Management Plan (AFMP) is a standalone Plan to the Construction Environmental Management Plan (CEMP) however has been prepared in alignment with the CEMP for the establishment of compounds. In order to facilitate construction of the Project, it is necessary to establish site compounds, laydown areas and other ancillary facilities. A total of 14 construction compounds and a further four temporary sites for installation of HV power are currently proposed, however additional sites may be identified throughout detailed design and construction phase. Should additional sites be identified as required throughout detailed design and the construction phase, analysis as per the Minister's Conditions of Approval (CoA) would be undertaken as necessary to satisfy the Infrastructure Approval requirements.

The AFMP describes how CDS-JV will manage and minimise impacts during the establishment of the construction compounds and ancillary facilities. Operation of the construction compound and ancillary facilities will be in accordance with the CEMP, but the operational management regime for these facilities is provided in this AFMP to guide details presented in the CEMP.

### 1.2 Purpose & Scope

This AFMP is based on the CoA and the revised environmental management measures (REMMs) proposed in the Project's Submissions Report.

In the definitions included in the Instrument of Approval, an ancillary facility is a:

*“temporary facility for construction, including for example, an office and amenities compound, construction compound, batch plant (concrete or bitumen), material crushing and screening, materials storage compound, maintenance workshop, testing laboratory or material stockpile area.*

*Note:*

*Where a stockpile management protocol has been approved by the Secretary for the SSI, material stockpile areas are not considered to be ancillary facilities.”*

A total of 14 ancillary facilities (14 of which comprise construction compounds) have been identified and assessed in the EIS as being required to deliver the Project. A further four sites (temporary ancillary sites) were identified in the Submissions Report for the installation of HV power. These sites are essential to deliver the Project and will support activities such as machinery launch, earthworks, laydown and workforce amenities.



In accordance with CoA D57, prior to the establishment of the ancillary facilities described in the EIS, an AFMP must be prepared and implemented to outline the environmental management practices and procedures that are to be followed during establishment and operation of the ancillary facilities.

In accordance with CoA D57 no construction works will be undertaken on the ancillary facility sites prior to approval of the CEMP. Operation of each ancillary facility will be undertaken in accordance with the CEMP and this AFMP.

Additional ancillary facilities not previously assessed in the EIS may be required throughout the construction period. This Plan describes the anticipated approvals pathway for additional ancillary facilities. Where additional facilities are approved for the project, they will be incorporated into future revisions of this plan as required.

## 1.3 Objectives

The objectives of this AFMP are to:

- Identify and describe the types of ancillary facilities required for the delivery of the Project and the timing associated with the establishment, operation and decommissioning of facilities
- Describe the proposed activities, hours of operation, staging and types plant, equipment and materials to be stored on site
- Describe the existing environment and potential environmental impacts associated with construction and operation of the facility
- Identify mitigation, monitoring and management procedures specific to the ancillary facilities, and the implementation of these procedures
- Ensure appropriate measures are implemented to address the relevant CoA and REMMs
- Provide a framework for the assessment and approval of additional ancillary facilities taking into account amenity of neighbouring properties, surrounding existing environment and potential environmental impacts.

## 1.4 Interface with Other Plans

This AFMP is a standalone plan for the establishment of ancillary facilities. Environmental management during operation of the ancillary facilities and construction compounds, will be conducted in accordance with the CEMP and AFMP. The CEMP and sub-plans provide environmental management measures and practices to be implemented across the project during construction. The AFMP will continue to provide site-specific environmental management measures for the construction compounds.

## 1.5 Roles and responsibilities

The Project Team’s organisational structure and overall roles and responsibilities for ancillary facilities and compound management are as follows.

Table 1: Roles and Responsibilities

Title	Roles, Responsibilities and Authorities relevant to this Plan
<b>Project Director</b>	<ul style="list-style-type: none"> <li>• Provide environmental leadership and ensure adequate resources are provided to effectively implement this AFMP.</li> </ul>
<b>Environmental and Sustainability Manager</b>	<ul style="list-style-type: none"> <li>• Provide environmental oversight, direction and leadership regarding the environmental management of the Project.</li> <li>• Ensure this AFMP satisfies legal and Project requirements.</li> <li>• Ensure this AFMP is implemented and that appropriate training is provided regarding the requirements of this Plan.</li> <li>• Obtain all necessary environmental approvals prior to commencing ancillary facilities establishment.</li> <li>• Inspections, observations, monitoring and audits are performed to ensure compliance is maintained.</li> </ul>



Title	Roles, Responsibilities and Authorities relevant to this Plan
	<ul style="list-style-type: none"> <li>• All non-compliances are reported.</li> <li>• Environmental risks and controls are regularly reviewed.</li> <li>• Act as the main point of contact for the Environmental Representative (ER), Roads and Maritime and SMC environmental representative.</li> <li>• Notify Roads and Maritime and SMC, Project ER and agencies as required in response to environmental incidents.</li> <li>• Corrective and preventative actions are taken after incidents and lessons are shared with other Projects or parent companies.</li> </ul>
<b>Environmental Advisors</b>	<ul style="list-style-type: none"> <li>• Assist the Environmental and Sustainability Manager in ensuring this AFMP is implemented.</li> <li>• Assist in the development and delivery of environmental training and awareness related to the establishment of ancillary facilities.</li> <li>• Undertake inspections, observations, monitoring and audits as required.</li> </ul>
<b>Construction Directors</b>	<ul style="list-style-type: none"> <li>• Manage the delivery of the construction process including establishment of ancillary facilities.</li> <li>• Ensure work is Planned and executed to maintain compliance with environmental requirements.</li> </ul>
<b>Construction Project Managers</b>	<ul style="list-style-type: none"> <li>• Ensure work is Planned and executed to maintain compliance with environmental requirements.</li> </ul>
<b>Project / Site Engineers</b>	<ul style="list-style-type: none"> <li>• Ensure appropriate mitigation and management measures are implemented and maintained on site.</li> <li>• Implement corrective or preventative actions as required to fulfil the requirements of this Plan.</li> </ul>
<b>Foremen</b>	<ul style="list-style-type: none"> <li>• Ensure appropriate mitigation and management measures are implemented and maintained on site.</li> <li>• Ensure regular inspections and monitoring requirements are undertaken to check effectiveness of environmental controls.</li> <li>• Report environmental incidents and complaints immediately.</li> </ul>
<b>Construction Personnel</b>	<ul style="list-style-type: none"> <li>• Attend Project inductions and environmental awareness training relevant to the ancillary facility.</li> <li>• Understand and comply with environmental responsibilities.</li> <li>• Be aware of surrounding sensitive environmental and social constraints and act in a manner that minimises impacts to those sensitive areas.</li> <li>• Notify their supervisor immediately of any environmental incidents, near misses and hazards.</li> </ul>
<b>Community Relations Manager</b>	<ul style="list-style-type: none"> <li>• Ensure environmental complaints and enquiries regarding the establishment of ancillary facilities are recorded and responded to appropriately.</li> <li>• Identify residential and/or commercial stakeholders who are adjacent to or adjoin the ancillary facilities and consult them prior to ancillary facilities establishment.</li> </ul>
<b>SMC Representative</b>	<p>The environmental responsibilities of the Project Company's Representative include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Receive a copy of this AFMP;</li> <li>• Review documentation provided by CDS-JV, where required;</li> <li>• Review and determine Consistency Assessments and Review of Environmental Factors, as required.</li> </ul>

Title	Roles, Responsibilities and Authorities relevant to this Plan
<b>Environmental Representative</b>	<ul style="list-style-type: none"> <li>● Monitor the implementation of the AFMP and advise the Proponent upon the achievement of the plan;</li> <li>● Consider and advise the Proponent in regards to project approvals and licences, and be the principal point of advice for the Project in relation to the environmental performance of the ancillary facilities.</li> <li>● Ensure that environmental auditing is undertaken in accordance with the Proponent’s environmental management system;</li> <li>● Recommend additional or site-specific environmental controls for proposed ancillary facilities or existing ones in response to observations, inspections and/or complaints.</li> <li>● Approve / reject additional ancillary facilities and minor amendments to this AFMP.</li> <li>● Be given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts.</li> <li>● Conduct inspections and audits to monitor the implementation of this AFMP.</li> <li>● Be consulted in responding to the community concerning the environmental performance of the ancillary facilities where the resolution of points of conflict between the Proponent and the community is required.</li> <li>● Sign off on Roads and Maritime hold points.</li> </ul>
<b>Excavation Director</b>	<ul style="list-style-type: none"> <li>● Oversee and advise on matters associated with historic archaeology.</li> <li>● Prepare the Archaeological Research Design and Excavation Methodology for the project.</li> <li>● Oversee excavation works in the vicinity of potential archaeological sites and direct the duration and extent of oversight required during excavation.</li> </ul>
<b>Roads and Maritime Representative</b>	<ul style="list-style-type: none"> <li>● Review documentation provided by CDS-JV, where required.</li> <li>● Review and determine Consistency Assessments.</li> </ul>

## 1.6 Training

All personnel, including employees, contractors and sub-contractors, are required to complete a Project induction containing relevant environmental information before they are authorised to work on the Project.

Specific training on elements such as (but not limited to) contamination, flora and fauna, erosion and sediment control, Aboriginal and non-Aboriginal heritage, sensitive noise and vibration/air quality receivers may be required relating to ancillary facility locations. This training will include:

- Obligations and specific responsibilities under the Infrastructure Approval including:
  - relevant environment impact mitigation measures and controls specific to establishment of compounds and construction work sites
  - vegetation clearing practices to minimise impacts on species, including threatened species or endangered ecological communities identified as likely to occur on site
  - responsibilities pertaining to the protection of flora and fauna under the *Threatened Species Conservation Act 1997*, the *Environmental Protection and Biodiversity Conservation Act 1999* (Commonwealth) and the *National Parks and Wildlife Act 1974* and other relevant legislation outlined in Section 2.1 of the Construction Flora and Fauna Sub-Plan
  - procedures dealing with existing known and unexpected contamination
  - understanding the location and treatment of identified heritage sites and items that may be directly and indirectly affected by the Project to minimise construction impacts where feasible

- responsibilities pertaining to the protection of heritage under the *National Parks and Wildlife Act 1974* and *Heritage Act 1977* and other relevant legislation outlined in Section 2.1 of the Construction Heritage Sub Plan including heritage management and any specific protection measures for heritage items;
- Recognition of specific threatened species, such as the Green and Golden Bell Frog likely to be affected by the construction works;
- Awareness and management of biodiversity across the project, in particular unexpected threatened species finds, vegetation survey and clearance procedures, fauna rescue and handling, weed and pathogen and Green and Golden Bell Frog (GGBF) management measures.
- Response procedures in the event of an unexpected threatened species find, fauna rescue and handling of fauna and location of nest boxes;
- The location and management measures for mulch stockpiles;
- Response procedures for avoidance of weeds and pathogens and appropriate control;
- Awareness and procedures for handling potential asbestos containing materials and/or contaminated spoil and procedures for the discovery of unexpected contaminated lands
- Potential and procedures for unexpected heritage finds
- Response procedures in the event of discovery of human remains during construction work;
- Specific training will be provided to personnel likely to work within or in proximity (<50 m) to flora and fauna areas. These will be identified on Site Environment Plans. CDS-JV will ensure that Project personnel can competently perform their duties and meet environmental obligations. Toolbox /pre-start talks are to include limits of clearing, clearing procedures, weed identification and control measures and fauna handling protocols where relevant.
- Specific training will be provided to personnel likely to work within or in proximity (<50 m) to rock overhang sites which will be detailed on Site Environment Plans. CDS-JV will ensure that Project personnel can competently perform their duties and meet environmental obligations. Toolbox /pre-start talks are to include limits of blasting and vibration work protocols where relevant. Specific training may be provided relating to particular sensitive receivers in close proximity to the construction compound and ancillary facilities.

An assessment will be conducted upon completion of the induction. Records of all training activities, including inductions, will be maintained. Records will include the name and role of the attendee, the name of the course and, where applicable, reference to the document controlled version of the material presented, and a copy of the assessment completed.

Key staff will undertake more comprehensive training relevant to their position and/or responsibility. Ongoing training and awareness will enable Project personnel to competently perform their duties and meet environmental obligations. Training and awareness activities include:

- general inductions
- daily pre-start or activity specific pre-start briefings
- regular toolbox talks
- targeted environmental training, appropriate to personnel role and/or responsibility
- meetings or forums either dedicated to training and awareness activities or included as an agenda item
- emergency drills.

For all other relevant construction specific induction and training, refer to the training requirements for the Project in the CEMP, Part B Element 7.



## 2. Environmental Planning Requirements

### 2.1 Relevant Legislation

Key environmental legislation relevant to the establishment of ancillary facilities under this approval includes:

- *Protection of the Environment Operations Act 1997* (POEO Act)
- *Environmental Planning and Assessment Act 1979* (EP&A Act)
- *Contaminated Lands Management Act 1997* (CLM Act)
- *Threatened Species Conservation Act 1995* and amendments (TSC Act)
- *Heritage Act 1977*
- *Native Vegetation Act 2003*
- *Noxious Weeds Act 1993*
- *National Parks and Wildlife Act 1974* (NPW Act)
- *Water Management Act 2000*
- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

Relevant provisions of the above legislation are explained in the extract of the Project’s environmental obligations register contained in Appendix I.

### 2.2 Minister’s Conditions of Approval

The Minister’s Conditions of Approval (CoA) relevant to this Plan are listed in Table 2. A cross reference is also included to indicate where the condition is addressed in this Plan or other Project management documents.

Table 2: Conditions of Approval Relevant to the Plan

Reference	Relevant condition	Where addressed
A9	This approval does not apply to the operation of off-site spoil receiving locations and facilities. The receipt of spoil at these location and facilities must be undertaken in accordance with approvals or licences applying to those locations or facilities.	Manage Waste Procedure  Site-Specific Ancillary Facilities Management Plan
A15	The Proponent must notify the EPA in relation to any pollution incident in carrying out the SSI as required by the <i>Protection of the Environment Operations Act 1997</i> . The Proponent must provide the Secretary with a record of any such notification.	Section 7  Incident Response Plan (includes Roads and Maritime Environmental Incident Classification and Reporting Procedure )
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 <i>Protection of the Environment Operations Act 1997</i> ) 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.	Section 7  Incident Response Plan (includes Roads and Maritime Environmental Incident Classification and Reporting Procedure )



Reference	Relevant condition	Where addressed
A17	The Proponent must 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.	Section 7 Incident Response Plan (includes Roads and Maritime Environmental Incident Classification and Reporting Procedure )
B12	The Proponent must prepare a report which details the progress made towards securing the offsets described in the Biodiversity Offset Strategy presented in the document referred to in condition A2(b) and required by conditions B10 and B11. The report must be submitted to the Secretary for approval prior to the commencement of any works that may impact on the vegetation communities and Green and Golden Bell Frog and its habitat.	Section 6.15
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.	Section 2.3.1
B23	<p>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:</p> <ul style="list-style-type: none"> <li>(a) the identification of flood risks to the SSI and adjoining areas, including further modelling and the consideration of local drainage catchment assessments, and climate change implications on rainfall and drainage characteristics. This must consider blockages of waterway structures from floating debris in its flood level modelling;</li> <li>(b) a floor level survey to verify whether inundation would be above the floor levels of residential, commercial and/or industrial buildings;</li> <li>(c) the identification of design and mitigation measures that would be implemented to protect proposed operations;</li> <li>(d) not worsen existing flooding characteristics within and in the vicinity of the SSI boundary during construction and operation, including soil erosion and scouring;</li> <li>(e) consideration of limiting flooding characteristics to the following levels -                             <ul style="list-style-type: none"> <li>(i) a maximum increase in inundation time of one hour in a 1 in 100 year ARI rainfall event,</li> <li>(ii) a maximum increase of 10 mm in inundation at properties where floor levels are currently exceeded in a 1 in 100 year ARI rainfall event,</li> <li>(iii) a maximum increase of 50 mm in inundation at properties where floor levels would not be exceeded in a 1 in 100 year ARI rainfall event, and</li> <li>(iv) no inundation of floor levels which are currently not inundated in a 1 in 100 year ARI rainfall event,</li> </ul>                             or else provide alternative flood mitigation solutions consistent with the intent of these limits;</li> <li>(f) the processes and actions committed to in the mitigation measures referred to in conditions A2(b) and A2(c);</li> <li>(g) the identification of measures to be implemented to minimise scour and dissipate energy at locations where flood velocities are predicted to increase as a result of the SSI and cause localised soil erosion or scour;</li> <li>(h) reconsideration of the proposed flood storage along Marsh Street with the intent of incorporating the flood storage requirements of the SSI into the proposed flood storage for the Cooks Cove development;</li> <li>(i) identification of drainage system upgrades including those upgrades considered as mitigation measures and identified during the processes outlined in condition B29;</li> </ul>	Section 6.10 Appendix B - A176



Reference	Relevant condition	Where addressed
	<p>and</p> <p>(j) identification of the timing and maintenance responsibility of any necessary works.</p> <p>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.</p> <p>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.</p> <p>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 the documents listed in condition A2(b) and A2(c) as potentially increasing flood levels, or as otherwise agreed by the Secretary.</p>	
B24	All relevant flooding information must be provided to the relevant council(s) and/or NSW State Emergency Service, to assist in the preparation of any new or necessary update(s) to the relevant plans and documents in relation to flooding, to reflect changes in flooding levels, flows and characteristics as a result of the SSI.	Section 6.10
B31	<p>Prior to the commencement of any activities that would result in the disturbance of land and/or soil, or as otherwise agreed by the Secretary, in areas identified as having a moderate to high risk of contamination, a <b>Soil Contamination Report</b> must be prepared by a suitably qualified person(s) in accordance with the requirements of the <i>Contaminated Land Management Act 1997</i> and associated guidelines, detailing the outcomes of Phase 2 contamination investigations within these areas. The Soil Contamination Report must detail, where relevant, whether the land is suitable (for the intended land use) or can be made suitable through remediation and/or outline the potential contamination risks from the SSI to human health and receiving waterways.</p> <p>For land to be disturbed by the SSI, where the investigations identify that the site is suitable for the intended operations and that there is no need for a specific remediation strategy, measures to identify, handle and manage potential contaminated soils, materials and groundwater must be identified in the Soil Contamination Report and incorporated into the Construction Environmental Management Plan, unless otherwise agreed by the Secretary. Should a remediation strategy be required, the Soil Contamination Report must include a <b>Remediation Action Plan</b> for addressing the disturbed area, and how the environmental and human health risks will be managed during the disturbance, remediation and/or removal of contaminated soil or groundwater.</p> <p>If remediation is required, the Soil Contamination Report must be accompanied by a <b>Site Audit Statement(s)</b>, prepared by an accredited Site Auditor under the <i>Contaminated Land Management Act 1997</i>, verifying that the disturbed area has been or can be remediated to a standard consistent with the intended land use. Where land is remediated, a final Site Audit Statement(s) must be prepared by an accredited Site Auditor, certifying that the contaminated disturbed areas have been remediated to a standard consistent with the intended land use. The final Site Audit Statement must be submitted to the Secretary and relevant councils prior to operation of the SSI, unless otherwise agreed to by the Secretary.</p>	<p>Section 6.14</p> <p>Appendix B - A167</p> <p>Manage Contaminated Land Procedure</p>
B33	The Proponent must not destroy, modify or otherwise physically affect any heritage items, including human 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.	Appendix B - A181
B45	<p>Where bus stops are required to be temporarily closed during construction, such closure must not occur until:</p> <p>(a) for bus stops identified for relocation in the documents referred to in condition A2(b), relocated bus stops are functioning, have similar capacity and are relocated within a 400 metre walking distance of the existing bus stop (where feasible and reasonable); or</p> <p>(b) for bus stops identified for temporary removal in the documents referred to in condition A2(b), bus stops are identified that are within a 400 metre walking distance of the removed bus stop (where feasible and reasonable), have comparable capacity, and are on the same route and in the same direction of the closed bus stop.</p> <p>Where temporary closures of bus stops are required (including relocation or removal),</p>	Appendix A - A44

Reference	Relevant condition	Where addressed
	adequate wayfinding signage shall be provided directing commuters to adjacent or relocated bus stops. Any closures or alterations to bus stops during construction are to be undertaken in consultation with Transport for NSW.	
<b>B48</b>	In relation to new or modified local road, parking, pedestrian and cycle infrastructure, the SSI (including ancillary facilities) must be designed to meet relevant design, engineering and safety guidelines, including Austroads Guide to Traffic Engineering Practice.	Section 6.11
<b>B49</b>	An independent Road Safety Audit(s) is to be undertaken by an appropriately qualified and experienced person during detailed design to assess the safety performance of any new or modified local road, parking, pedestrian and cycle infrastructure provided as part of the SSI (including ancillary facilities) to ensure that they meet the requirements of relevant design, engineering and safety guidelines, including Austroads Guide to Traffic Engineering Practice. Audit findings and recommendations must be actioned prior to construction of the relevant infrastructure and must be made available to the Secretary on request.	Section 6.11.1 Appendix B - A109
<b>B52</b>	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 Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	Appendix B - A213
<b>B53</b>	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.	Appendix B - A215
<b>B54</b>	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.	Appendix B - A216
<b>B55</b>	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.	Appendix B - A217
<b>B58</b>	<p>The Proponent must undertake dilapidation surveys and prepare dilapidation reports on the current condition of buildings, services and utilities identified as at risk from settlement or vibration. The dilapidation surveys and reports must be prepared by a suitably qualified and experienced person(s) and must be provided to the owners of the buildings, services and utilities for review prior to the commencement of potentially impacting construction activities.</p> <p>Subsequent dilapidation surveys must be undertaken to assess damage to the building, services and utilities that may have resulted from the construction of the SSI within three months of the completion of construction in an affected area, unless otherwise approved by the Secretary. The Proponent must carry out rectification at its expense and to the reasonable requirements of the property, services and utility owner(s) within three months of completion of the post-dilapidation surveys unless otherwise agreed by the owner of the affected building, service or utility.</p>	Section 8.1, Table 31 Appendix B - A74
<b>B59</b>	<p>Upon determining the access route(s) for heavy and oversized vehicles associated with the construction of the SSI and site establishment works, a suitably qualified and experienced independent expert must prepare a Local Road Dilapidation Report for those local roads within the control of the relevant councils that would be utilised. The Local Road Dilapidation Report must assess the current condition of the road and describe mechanisms to restore any damage that may result due to its use by traffic and transport related to the construction of the SSI, including site establishment works. The Local Road Dilapidation Report must be submitted to the relevant council(s) for review at least two weeks prior to the use of the local roads by heavy and/or over-sized vehicles associated with the construction of the SSI and site establishment works.</p> <p>A subsequent Local Road Dilapidation Report must be prepared within four weeks of the completion of construction to assess any damage to the road that may have occurred as a result of the use of the roads by heavy and/or over-sized vehicles associated with the construction of the SSI and site establishment works.</p> <p>Measures undertaken to restore or reinstate roads affected by the SSI must be undertaken in accordance with the reasonable requirements of the relevant council(s),</p>	Section 8.1, Table 31 Appendix B - A74, A108



Reference	Relevant condition	Where addressed
	<p>including agreed timing, and at the full expense of the Proponent.</p> <p><i>Note:</i></p> <p><i>Nothing in these conditions restricts the Proponent commencing adjustments and minor upgrades to the existing road network to cater for construction traffic and installation of temporary project signage prior to the commencement of construction.</i></p>	
B63	<p>The SSI must be designed to retain as many trees as possible and provide a net increase in the number of replacement trees. The Proponent must commission an independent experienced and suitably qualified arborist, to prepare a comprehensive Tree Report(s) prior to removing any trees on the periphery and/or outside the construction footprint as identified in the figures in Section 6 of the document referred to in condition A2(b). The Tree Report may be prepared for the entire SSI or separate reports may be prepared for individual areas where trees are required to be removed. The report(s) must identify the impacts of the SSI on trees and vegetation within and adjacent to the construction footprint. The report(s) must include:</p> <ul style="list-style-type: none"> <li>(a) a visual tree assessment with inputs from the design, landscape architect, construction team;</li> <li>(b) consideration of all options to amend the SSI where a tree has been identified for removal, including realignment, relocation of services, redesign of or relocation of ancillary components (such as substations, fencing etc.) and reduction of standard offsets to underground services; and</li> <li>(c) measures to avoid the removal of trees or minimise damage to existing trees and is to ensure the health and stability of those trees to be protected. This includes details of any proposed canopy or root pruning, excavation works, site controls on waste disposal, vehicular access, storage of materials and protection of public utilities.</li> </ul> <p>In the event that trees are to be removed, then replacement trees are to be planted within, or in close proximity to, the SSI boundary. The location of the trees must be determined in consultation with the relevant council(s). The replacement trees are to have a minimum pot size of 75 litres. A copy of the report(s) must be submitted to the Secretary for approval prior to the removal, damage and/or pruning of any trees, including those affected by site establishment works. All recommendations of the report must be implemented by the Proponent, unless otherwise agreed by the Secretary.</p>	<p>Section 6.16</p> <p>Appendix B - A127</p>
B72	<p>The Proponent must design and construct the SSI with the objective of minimising impacts to, and interference with, third party property and infrastructure and that such infrastructure and property is protected during construction and operation. Any damage caused to property as a result of the SSI must be rectified or the landowner compensated, within a timeframe defined in the Construction Environmental Management Plan.</p>	<p>Appendix B - A76</p>
B73	<p>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.</p>	<p>Section 6.12</p> <p>Appendix B - A123, A124</p>
C1	<p>Prior to the commencement of construction, or as otherwise agreed by the Secretary, the Proponent must prepare and implement a <b>Community Communication Strategy</b>. The Community Communication Strategy must be submitted to the Secretary for approval. The Community Communication Strategy must provide mechanisms to facilitate communication between the Proponent (and its contractor(s)), the Environmental Representative (refer condition D1), the relevant council(s) and community stakeholders (particularly adjoining landowners) on the design and construction environmental management of the SSI. The Community Communication Strategy must include, but not be limited to:</p> <ul style="list-style-type: none"> <li>(a) identification of stakeholders to be consulted as part of the Community Communication Strategy, including affected and adjoining landowners, key community and business groups, and community and social service organisations;</li> <li>(b) procedures and mechanisms for the regular distribution of accessible information to community stakeholders on construction progress and matters associated with environmental management, including provision of information in appropriate</li> </ul>	<p>Section 3.2</p> <p>Appendix B- A103-A106</p>



Reference	Relevant condition	Where addressed
	<p>community languages;</p> <p>(c) the formation of community-based forums that focus on key environmental management issues for the SSI. The Community Communication Strategy must provide detail on the structure, scope, objectives and frequency of the community-based forums;</p> <p>(d) procedures and mechanisms through which the community stakeholders can discuss or provide feedback to the Proponent and/or Environmental Representative in relation to the environmental management and delivery of the SSI;</p> <p>(e) procedures and mechanisms through which the Proponent can respond to enquiries or feedback from the community stakeholders in relation to the environmental management and delivery of the SSI;</p> <p>(f) procedures and mechanisms that would be implemented to resolve issues/disputes that may arise between parties on the matters relating to environmental management and the delivery of the SSI. This may include the use of a suitably qualified and experienced independent mediator; and</p> <p>(g) procedures and mechanisms to manage the ongoing provision of services for the WestConnex Acquisition Assistance Line, as required by condition C2, and procedures for the notification of the contact details for this assistance line to relocated persons.</p> <p>Issues that must be addressed through the <b>Community Communication Strategy</b> include (but are not limited to):</p> <p>(a) traffic management (including property access, pedestrian access);</p> <p>(b) air quality;</p> <p>(c) heritage matters;</p> <p>(d) landscaping and urban design matters;</p> <p>(e) construction staging, hours and activities;</p> <p>(f) noise and vibration mitigation and management; and</p> <p>(g) water quality, hydrology and flooding matters.</p> <p>The Proponent must maintain and implement the Community Communication Strategy throughout construction of the SSI.</p>	
C2	<p>The Proponent must maintain and operate a toll-free WestConnex Acquisition Assistance Line for a period of up to six months following completion of the final acquisition required for the SSI, unless otherwise agreed by the Secretary. The WestConnex Acquisition Assistance Line must provide an ongoing dispute resolution, counselling program and contact information to relevant services for all relocated persons. The WestConnex Acquisition Assistance Line must also provide first language support for households with English as a second language.</p>	Section 3.2
C3	<p>Prior to the commencement of site establishment works, or as otherwise agreed by the Secretary, the Proponent must ensure that the following are available for community enquiries and complaints for the duration of construction:</p> <p>(a) a toll-free 24 hour telephone number(s) on which complaints and enquiries about the SSI may be registered;</p> <p>(b) a postal address to which written complaints and enquires may be sent;</p> <p>(c) an email address to which electronic complaints and enquiries may be transmitted;</p> <p>(d) a mediation system for complaints unable to be resolved; and</p> <p>(e) a mechanism for community members to make enquiries in common community languages of the area.</p> <p>The telephone number, the postal address and the email address must be published in newspaper(s) circulating in the local area including in newspapers of culturally and linguistically diverse communities affected by the SSI prior to the commencement of construction and prior to the commencement of operation. This information must also be provided on the website (or dedicated pages) required by this approval and available in common community languages.</p>	Section 3.2 Appendix B - A105

Reference	Relevant condition	Where addressed
C4	<p>Prior to the commencement of site establishment works, 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.</p> <p>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.</p>	<p>Section 3.2</p> <p>Appendix B - A105</p>
C5	<p>Prior to the commencement of site establishment works, 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 commencement of operation 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:</p> <ul style="list-style-type: none"> <li>(a) information on the current implementation status of the SSI;</li> <li>(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;</li> <li>(c) a copy of this approval and any future modification to this approval;</li> <li>(d) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the SSI;</li> <li>(e) a copy of each current report, plan, or other document required under this approval;</li> <li>(f) the outcomes of compliance tracking in accordance with condition A14 of this approval;</li> <li>(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</li> <li>(h) information on how to receive important information in the common community languages of the area.</li> </ul>	<p>Section 3.2</p>
D3	<p>Soil and water management measures consistent with Managing Urban Stormwater - Soils and Construction Vols 1 and 2, 4th Edition (Landcom, 2004) must be employed during the construction of the SSI to minimise soil erosion and the discharge of sediment and other pollutants to land and/or waters.</p> <p>Where available and practicable, and of appropriate chemical and biological quality, stormwater, recycled water or other water sources must be used in preference to potable water for construction activities, including dust control.</p>	<p>Section 6.6</p> <p>Appendix B - A155 – A166</p>
D5	<p>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 (unless otherwise advised by DPI (Water)), as applicable within a timeframe agreed to by DPI (Water).</p>	<p>Appendix B - A166</p>
D10	<p>A detailed land use survey must be undertaken to confirm sensitive receivers (including critical working areas such as operating theatres and precision laboratories) potentially exposed to construction noise and vibration, construction ground-borne noise and operational noise. The survey may be undertaken on a progressive basis but must be undertaken in any one area prior to the commencement of construction works which generate construction or operational noise, vibration or ground-borne noise in that area. The results of the survey must be included in the (or an updated) Construction Noise and Vibration Management Plan as required by condition D68(b)</p>	<p>Results of the land use survey are incorporated into the CNVIS prepared for establishment works</p> <p>Section 6.9.1</p>
D11	<p>Prior to construction, properties that are at risk from construction vibration must be notified and incorporated into the Construction Noise and Vibration Management Plan as required by condition D68(b).</p>	<p>Appendix B - A98</p>
D12	<p>Construction activities associated with the SSI must be undertaken during the following standard construction hours:</p> <ul style="list-style-type: none"> <li>(a) 7:00 am to 6:00 pm Mondays to Fridays, inclusive; and</li> </ul>	<p>Section 5.1</p> <p>Appendix B - A87</p>



Reference	Relevant condition	Where addressed
	(b) 8:00 am to 1:00 pm Saturdays; (c) at no time on Sundays or public holidays.	
D14	<p>Except as permitted by an EPL, activities resulting in impulsive or tonal noise emissions must only be undertaken:</p> <p>(a) between the hours of 8:00 am to 6:00 pm Monday to Friday; (b) between the hours of 8:00 am to 1:00 pm Saturday; and (c) 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.</p> <p>For the purposes of this condition, 'continuous' includes any period during which there is less than a one hour respite between ceasing and recommencing any of the work the subject of this condition.</p>	Appendix B - A88
D16	<p>The Proponent must implement all reasonable and feasible noise mitigation measures with the aim of achieving the following construction noise management levels and vibration criteria:</p> <p>(a) construction noise management levels established using the Interim Construction Noise Guideline (DECC, 2009); (b) vibration criteria established using the Assessing vibration: a technical guideline (DEC, 2006) (for human exposure); (c) Australian Standard AS 2187.2 - 2006 Explosives - Storage and Use - Use of Explosives; (d) BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2" as applicable to Australian conditions; and (e) the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration-effects of vibration on structures (for structural damage).</p> <p>Any construction activities identified as exceeding the construction noise management levels and/or vibration criteria must be managed in accordance with the Construction Noise and Vibration Management Plan required by condition D68(b).</p> <p><i>Note:</i> <i>The Interim Construction Noise Guideline identifies 'particularly annoying' activities that require the addition of 5 dB(A) to the predicted level before comparing to the construction NML.</i></p>	Appendix B - A82
D17	<p>Feasible and reasonable noise mitigation measures should be applied to construction activities when the following residential ground-borne noise levels are exceeded:</p> <p>(a) evening (6:00 pm to 10:00 pm) — internal LAeq(15 minute): 40 dB(A); and (b) night (10:00 pm to 7:00 am) — internal LAeq(15 minute): 35 dB(A).</p> <p>The mitigation measures should be outlined in the Construction Noise and Vibration Management Plan, including the Out-of-Hours Work Protocol, required by condition D68(b).</p>	<p>Appendix B - A85</p> <p>Out of Hours Work Protocol</p> <p>CNVIS</p>
D18	Wherever practical, piling activities that affect sensitive receivers must be undertaken using quieter alternative methods than impact or percussion piling, such as bored piles or vibrated piles.	Appendix B - A96
D20	<p>The Proponent must develop and implement a Temporary Noise Barrier Strategy which includes:</p> <p>(a) identification and confirmation of all temporary noise barriers including - (i) the provision of a temporary noise barrier on the northern side of the Kingsgrove North construction compound to provide noise mitigation to highly affected residents at a level greater than that identified in the documents referred to in condition A2(b), (ii) consideration of the installation of temporary noise barriers on the southern and northern side of the M5 East Motorway during the relocation of the existing permanent noise barriers (or detail on why these noise barriers are not considered feasible and reasonable), (iii) consideration of the installation of temporary noise barriers along Campbell Road, Campbell Street and Euston Road (or detail on why these noise barriers are not considered feasible and reasonable), (iv) temporary noise barriers around construction compounds;</p> <p>(b) the consultation and decision-making process for all temporary noise barriers; and (c) an acoustic report detailing the final barrier heights, material analysis and predicted</p>	<p>Section 6.9.2</p> <p>Appendix B - A86</p>

Reference	Relevant condition	Where addressed
	<p>benefits.</p> <p>The temporary barrier options must be developed in consultation with the landowners adjacent to the barrier locations prior to the adoption of a final design.</p> <p>The Temporary Noise Barrier Strategy must be approved by the Secretary prior to site establishment works or construction works at the Kingsgrove North construction compound, the permanent noise barriers on the northern and southern side of the M5 East Motorway are removed, and/or road widening works are undertaken along Campbell Road, Campbell Street or Euston Road.</p>	
D22	<p>The Proponent must conduct vibration testing prior to commencing vibration generating activities that have the potential to impact on heritage items and vibration monitoring during initial vibration generating activities to identify minimum working distances to retained heritage items to prevent cosmetic damage to these items. In the event that the vibration testing and monitoring shows that the preferred values for vibration are likely to be exceeded, the Proponent must review the construction methodology and, if necessary, implement additional feasible and reasonable mitigation measures, unless otherwise agreed to by the Secretary. Vibration monitoring must be undertaken where structures are identified to be within safe working distances of vibration generating equipment/activities.</p>	Appendix B - A83, A84
D23	<p>The Proponent must undertake noise monitoring during initial high noise generating activities (such as piling, rock hammering, jack hammering) to accurately establish the LAeq to LA1(1 minute) differential and confirm the number of sensitive receivers which may experience sleep disturbance as a result of construction of the SSI during the evening and night-time periods. Management measures must be employed to minimise sleep disturbance impacts in accordance with the Construction Noise and Vibration Management Plan required by condition D68(b).</p>	Appendix B - A83
D24	<p>The Proponent must consult with potentially-affected community, religious, educational institutions and vibration-sensitive business and critical working areas (such as theatres, laboratories and operating theatres) to ensure that, where feasible and reasonable, noise generating construction works in the vicinity of the affected receivers are not timetabled during sensitive periods, unless other reasonable arrangements to the affected institutions are made at no cost to the affected institution. Consultation must be undertaken at least five days prior to undertaking noise generating construction works that would impact on the potentially affected vibration-sensitive receivers.</p>	Appendix B - A89
D25	<p>During construction, proponents of other construction works in the vicinity of the SSI must be consulted and reasonable steps taken to coordinate works to minimise impacts on, and maximise respite for, affected sensitive receivers.</p>	Appendix B - A90
D26	<p>The Proponent is to ensure that construction vehicle contractors operate so as to minimise any sleep disturbance impacts. Measures that could be used include toolbox talks, contracts that include provisions to deal with unsatisfactory noise performance for the vehicle and/or the operator, and specifying non-tonal movement alarms in place of reversing beepers or alternatives such as reversing cameras and proximity alarms, or a combination of these, where tonal alarms are not mandated by legislation.</p>	Appendix B - A102, A113
D27	<p>Use of compression brakes must not be permitted for construction vehicles associated with the SSI during construction, unless in an emergency situation.</p>	Appendix B - A102
D40	<p>In the event that archaeological relics are discovered during construction, all work must cease in the affected area and the Excavation Director must be notified and attend the site to assess the finds, identify their significance level and provide mitigation advice according to the significance level and the impact proposed. In the event that the relics are identified as being of State or local significance, the Heritage Council of NSW must be notified in writing in accordance with section 146 of the Heritage Act 1977. An Archaeological Relics Management Plan specific to the relics or site encountered is to be prepared in consultation with the Heritage Council of NSW which is to outline all feasible and reasonable measures to be implemented to avoid and/or minimise harm to the State or locally significant heritage items. Works within the vicinity of the find must not recommence without the approval of a suitably qualified and experienced archaeologist in consultation with the Heritage Council of NSW. The Proponent must notify the Secretary in writing of any such encounter of an archaeological relic triggering this condition and must also notify the Secretary of the outcome of consultation with the Heritage Council of NSW.</p>	<p>Section 1</p> <p>Section 6.17</p> <p>Manage Cultural Heritage Procedure</p> <p>Appendix B - A178</p>
D41	<p>In the event that archaeological relics are discovered, within 12 months of completing all archaeological investigations, unless otherwise agreed by the Secretary, the Proponent</p>	Section 6.17

Reference	Relevant condition	Where addressed
	must prepare an Excavation Report containing the findings of any excavations, including artefact analysis and the identification of a final repository of any finds. The Excavation Report must be submitted to the Department, the Heritage Council of NSW, and the local library and the local Historical Society in the relevant local government area(s). A copy of the Excavation Report must be retained with the relics at all times.	
D43	The Proponent must take all reasonable steps so as not to harm, modify or otherwise impact any Aboriginal heritage item associated with the SSI.	Appendix B - A177-A178, A183-A186  Manage Cultural Heritage Procedure
D44	Where previously unidentified Aboriginal objects are discovered during construction of the SSI, all work should stop in the affected area and a suitably qualified and experienced Aboriginal heritage expert should be contacted to provide specialist heritage advice. The measures to consider and manage this process must be specified in the Construction Heritage Management Plan required by condition D68(c) and, where relevant, include registration in the OEH's Aboriginal Heritage Information Management System (AHIMS) register.	Appendix B - A185, A186
D46	Unless otherwise approved by the Secretary, heavy vehicle movements associated with the construction of the SSI are not permitted to use Wirega Avenue and Garema Circuit at Kingsgrove, or any other local road not identified for use in the documents referred to in conditions A2(b) and A2(c), unless approved by the Secretary. When seeking the Secretary's approval for use of such local roads, justification must be provided as to why use of the local road(s) is the only feasible and reasonable route along with details on how impacts on surrounding sensitive receivers will be managed.	Section 5.6
D47	Construction vehicles (including staff vehicles) associated with the SSI must be managed so that: <ul style="list-style-type: none"> <li>(a) parking or queuing on public roads is minimised;</li> <li>(b) idling and queuing in local residential streets is minimised, where practicable;</li> <li>(c) heavy vehicles adhere to the nominated haulage routes identified in the Construction Traffic and Access Management Plan required under condition D68(a); and</li> <li>(d) access and egress from construction compounds is undertaken in a safe and lawful manner, with particular regard being given to compounds located in the vicinity of schools and the potential implementation of traffic management or signalisation, in consultation with the relevant council.</li> </ul>	Appendix B - A115, A118  Traffic and Access Management Plan
D48	Functional and safe pedestrian and cyclist access through and around worksites must be maintained during construction. This includes the consideration of 'safer by design' principles including the provision of appropriate sight lines and lighting. In circumstances where pedestrian and cyclist access is restricted due to construction activities, a satisfactory alternate route must be provided and signposted, including provision of footpaths where pedestrian access is reliant on grassed verges.	Appendix B - A110
D49	Access to all properties must be maintained during construction, where feasible and reasonable, unless otherwise agreed by the relevant property owner or occupier. Any access physically affected by the SSI must be reinstated to at least an equivalent standard, unless agreed with by the property owner.	Appendix B - A114
D54	The Proponent must prepare and implement a Construction Contamination Management Plan to manage potential contamination impacts during construction of the SSI (excluding contamination covered by the Landfill Closure Management Plan for the Alexandria Landfill site). The Construction Contamination Management Plan must be developed in consultation with the EPA and relevant councils, and include, but not be limited to: <ul style="list-style-type: none"> <li>(a) details of construction activities and their locations which have the potential to expose areas known to contain, or potentially contain, contaminated soils and/or materials;</li> <li>(b) details of management measures to minimise bed sediment mobilisation in Alexandria Canal. All measures must comply with the actions required of Remediation Order HO1833, 23004/ Area #3151 issued by the EPA on 10 May 2004;</li> <li>(c) measures for the handling, treatment and management of hazardous and</li> </ul>	Appendix B - A169



Reference	Relevant condition	Where addressed
	<p>contaminated soils, materials and groundwater including measures to manage and/or minimise public health and safety concerns with regards to exposure to contamination;</p> <p>(d) an Unexpected Finds Procedure detailing procedures and management measures to be implemented in the event that contaminated material is uncovered in any area not identified in the documents referred to in conditions A2(b) and A2(c);</p> <p>(e) a description of how the effectiveness of the actions and measures for managing contamination impacts would be monitored during the proposed works, clearly indicating how often this monitoring would be undertaken, the locations where monitoring would take place, and how the results of the monitoring would be recorded and reported; and</p> <p>(f) mechanisms for the monitoring, review and amendment of this Construction Contamination Management Plan.</p> <p>The Construction Contamination Management Plan must be submitted to the Secretary prior to undertaking any works which may result in the disturbance of contaminated soil, land or materials.</p> <p>Nothing in this condition prevents the Proponent from preparing separate Construction Contamination Management Plans for specific areas of work, rather than a plan which addresses the entire SSI.</p>	
D55	<p>Dangerous goods, as defined by the Australian Dangerous Goods Code, must be stored and handled strictly in accordance with:</p> <p>(a) all relevant Australian Standards;</p> <p>(b) for liquids, a minimum bund volume requirement of 110% of the volume of the largest single stored volume, within the bund; and</p> <p>(c) the Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (EPA, 1997).</p> <p>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.</p>	Appendix B - A209
D56	<p>The proponent must provide boundary screening within all construction sites that adjoin or are adjacent to residential and/or commercial properties, consistent with the surrounding context, in consultation with affected property owners.</p>	Section 6.13 Appendix B A119 – A124
D57	<p>Prior to the establishment of the ancillary facilities (including vegetation clearing) described in the documents referred to in conditions A2(b) and A2(c), the Proponent must prepare and implement an <b>Ancillary Facilities Management Plan</b> which outlines the environmental management practices and procedures for the establishment and operation of the ancillary facilities. The Ancillary Facilities Management Plan must be prepared in consultation with the relevant council(s) and submitted to the Secretary for approval prior to commencing site establishment works. The Ancillary Facilities Management Plan must detail the management of the ancillary facilities, and include, but not be limited to:</p>	This Plan, Section 3.1
	<p>(a) a description of the ancillary facility (including a site layout plan), its components and details of the existing environment on and in the vicinity of the site;</p>	Section 5 Appendix F & G
	<p>(b) a description of the works proposed to be undertaken during site establishment;</p>	Section 5.3
	<p>(c) details of the activities to be carried out at each facility, including the hours of operation, staging of operation and predicted date of commissioning;</p>	Table 7 to Table 10 (establishment) Table 11 to Table 23 (construction)
	<p>(d) a description of the plant, equipment and materials to be used and/or stored on each site, including dangerous and hazardous goods;</p>	Table 27 and Table 28
	<p>(e) a summary of the potential environmental impacts associated with the</p>	Table 7 to Table 10 (establishment)

Reference	Relevant condition	Where addressed
	establishment and operation of the facility;	Table 11 to Table 23 (construction)
(f)	details of the mitigation, monitoring and management procedures specific to each facility that would be implemented to minimise environmental and amenity impacts during both site establishment and operation or, where this is not possible, feasible and reasonable measures to offset these impacts;	Table 7 to Table 10 (establishment) Table 11 to Table 23 (construction) Section 8.1 Appendix A & B
(g)	management measures to minimise and manage flora and fauna impacts including: <ul style="list-style-type: none"> <li>(i) clearing procedures incorporating pre-clearing surveys and inspections and measures for minimising the extent of clearing,</li> <li>(ii) measures to protect the remaining portion of Cooks River/Castlereagh Ironbark Forest and ensure that it is not impacted by the establishment and operation of construction compounds,</li> <li>(iii) procedures for removal and relocation of fauna during clearing, and</li> <li>(iv) construction worker induction and education;</li> </ul>	Appendix A Appendix B - A125 - A154 Manage Flora and Fauna Procedure
(h)	a description of how the management and mitigation measures set out in the documents referred to in conditions A2(b) and A2(c) will be implemented on each site, and if not, justification for any departures from those management and mitigation measures;	Table 3 Appendix A & B Appendix H
(i)	details of the community consultation to be undertaken with affected and adjoining landowners and sensitive receivers	Section 3.2 Section 6 Appendix A & B
(j)	details on the height and materials of noise barriers/hoardings at each facility;	Appendix H
(k)	identification of the timing for the completion of site activities at each facility and how each site will be decommissioned (including any necessary rehabilitation); and	Table 7 to Table 10 (establishment) Table 11 to Table 23 (construction) Section 6.19
(l)	mechanisms for the monitoring, review and amendment of the Ancillary Facilities Management Plan.	Section 8
	In considering the approval of the Ancillary Facilities Management Plan, the Secretary will take into account the Proponent's response to public authority and relevant council comments on the Plan.	Refer to the Consultation Comment and Response Register
	The Proponent must update the Ancillary Facilities Management Plan to incorporate the site establishment and operation practices required for any additional ancillary facilities approved by the Secretary under condition D63.	Section 4 Appendix D & E
	No construction-related works or activities are to be undertaken on the ancillary facility sites prior to approval of the Construction Environment Management Plan required under condition D67.	Sections 1.2, 1.4



Reference	Relevant condition	Where addressed
	<p>For the purposes of this condition, site establishment works does not include:</p> <ul style="list-style-type: none"> <li>(a) piling (except for piling required for the erection of noise barriers around construction compounds); or</li> <li>(b) the erection of acoustic sheds at ancillary facilities; or</li> <li>(c) excavation activities (excluding excavation associated with trenching for services, site levelling for the erection of construction site offices and parking and storage and maintenance sheds; or excavation of sediment ponds for construction sediment and erosion control).</li> </ul> <p>Such works are considered to be construction.</p>	Table 7 to Table 10
	<p>Nothing in this condition exempts the Proponent from fulfilling the requirements of any conditions in this approval which require certain plans, programs or actions to be undertaken prior to site establishment works or operation of an ancillary facility proceeding.</p>	Note
D58	<p>The Ancillary Facilities Management Plan must include an Arncliffe Construction Compound Sub-plan, prepared in consultation with OEH, which includes the following:</p> <ul style="list-style-type: none"> <li>(a) the management measures as specified in rows 4-12 of Table 1 of the Green and Golden Bell Frog Plan of Management presented in Appendix K of Appendix S, Volume 2H of the document referred to in condition A2(b) and any additional measures included in the updated management plan required by condition B14;</li> <li>(b) procedures for decommissioning of the surface water bodies within the construction compound; and</li> <li>(c) a stop-work procedure in the event that Green and Golden Bell Frogs are identified on site.</li> </ul> <p>The management measures should specifically describe:</p> <ul style="list-style-type: none"> <li>(a) what information would be included in the site inductions, who would be inducted and the timing and responsibilities for induction;</li> <li>(b) the location and type of erosion and sediment controls to be implemented;</li> <li>(c) the methods for dust suppression;</li> <li>(d) acid sulphate soil management procedures; and</li> <li>(e) hygiene protocol to minimise the potential for the introduction and spread of Chytrid Fungus by plant, equipment, construction vehicles, construction workers and materials.</li> </ul> <p>The Proponent is not required to consult with the relevant council on the Arncliffe Construction Compound Sub-plan.</p>	Arncliffe Construction Compound Sub Plan (Appendix C)
D59	<p>Prior to establishing the Arncliffe construction compound (C7), the Proponent must implement the following management measures as specified in the first three rows of Table 1 of the Green and Golden Bell Frog Plan of Management presented in Appendix K of Appendix S, Volume 2H of the document referred to in condition A2(b):</p> <ul style="list-style-type: none"> <li>(a) define the construction clearing area;</li> <li>(b) establish a frog exclusion zone; and</li> <li>(c) undertake pre-clearance survey and salvage activities (i.e. frog collection).</li> </ul> <p>The Proponent must also establish a procedure for the collection of Green and Golden Bell Frog tadpoles from the existing surface waterbodies at the Kogarah Gold Course that will be impacted by the Arncliffe construction compound, and implement the procedure if tadpoles are present prior to decommissioning of the waterbodies.</p> <p>Any salvaged frogs and tadpoles must be either relocated to the RTA ponds or an appropriate holding facility which is staffed by appropriately trained and experienced frog specialists.</p> <p>No site establishment or construction-related activities or works are permitted at the proposed Arncliffe construction compound site until such time that the above management measures have been implemented and written notice to this effect has been provided to the Secretary by a suitably qualified and experienced frog specialist.</p> <p>The management measures specified in (a) to (c) and above and tadpole collection may be undertaken prior to the Proponent implementing any actions that are required by the conditions set out in Parts B, C, D and E of this approval.</p>	Arncliffe Construction Compound Sub Plan (Appendix C) Table 9 Appendix A - A33



Reference	Relevant condition	Where addressed
D60	<p>Site establishment works at ancillary facilities must be undertaken in accordance with the construction hours specified in conditions D12 and D14.</p> <p>Notwithstanding, the following activities can be undertaken outside of the hours specified in conditions D12 and D14:</p> <p>(a) the delivery of materials/equipment where it is required by the police or other authorities for safety reasons;</p> <p>(b) works required in an emergency to avoid the loss of lives, property and/or prevent environmental harm;</p> <p>(c) utility connections where the utility provider requires the connections be performed outside of the specified hours; or</p> <p>works which have the potential to impact on road/traffic safety and must be carried out as a result of RMS Traffic Management Centre requirements.</p>	<p>Section 5.1.1</p> <p>Appendix B - A87</p>
D61	<p>The Proponent must comply with the requirements of conditions D16, D18, D22 and D24, when establishing ancillary facilities.</p>	<p>Appendix B - A82-A102</p>
D62	<p>Other than ancillary facilities described in the documents referred in conditions A2(b) and A2(c), or those ancillary facilities approved by the Secretary under condition D63, or allowed under condition D64, the location of ancillary facilities must comply with the following locational criteria:</p> <p>(a) be located more than 50 metres from a waterway;</p> <p>(b) be located within or adjacent to land where the SSI is being carried out;</p> <p>(c) have ready access to the road network;</p> <p>(d) be located to minimise the need for heavy vehicles to travel on local streets and/ or through residential areas;</p> <p>(e) be sited on relatively level land;</p> <p>(f) be separated from nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant),</p> <p>(g) not require vegetation clearing beyond that already required by the SSI;</p> <p>(h) not impact on heritage items (including areas of archaeological sensitivity) beyond those already impacted by the SSI;</p> <p>(i) not unreasonably affect the land use of adjacent properties;</p> <p>(j) be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented; and</p> <p>(k) provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.</p>	<p>Section 4.2.1</p> <p>Table 6</p>
D63	<p>Prior to establishment of any ancillary facility not described in the documents referred to in conditions A2(b) and A2(c) and which does not meet the locational criteria in condition D62, the Proponent must prepare and implement a <b>Site-Specific Ancillary Facilities Management Plan</b>. The Site-Specific Ancillary Facilities Management Plan must be prepared for the approval of the Secretary, and include:</p> <p>(a) a detailed description of the ancillary facility, including proposed use and access arrangements;</p>	<p>Section 4.2</p> <p>Appendix M</p>

Reference	Relevant condition	Where addressed
	<p>(b) a review of the environmental and social impacts of the ancillary facility, including an analysis of compliance with the locational criteria specified in condition D62;</p> <p>(c) measures to avoid, mitigate and manage environmental and social impacts associated with the ancillary facility; and</p> <p>(d) demonstration that, with the measures proposed in accordance with (c), the impacts of the ancillary site are consistent with:</p> <p>(i) the overall project impacts described in documents listed in conditions A2(b) and A2(c), and</p> <p>(ii) all relevant conditions of this approval.</p>	
<b>D64</b>	<p>The Secretary's approval is not required for minor ancillary facilities (e.g. lunch sheds, office sheds, and portable toilet facilities, etc.) that do not comply with the criteria set out in condition D62 of this approval and which:</p> <p>(a) are located within an active construction zone within the approved SSI footprint;</p> <p>(b) have been assessed by the Environmental Representative to have:</p> <p>(i) minimal amenity impacts to surrounding residences, with consideration to matters such as noise and vibration impacts, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts, and</p> <p>(ii) minimal environmental impact in respect to waste management, and no impacts on flora and fauna, soil and water, and heritage beyond those approved for the SSI; and</p> <p>(c) have environmental and amenity impacts that can be managed through the implementation of environmental measures detailed in the Construction Environment Management Plan required under condition D67.</p>	<p>Section 4.2.3</p> <p>Appendix L</p>
<b>D65</b>	<p>All ancillary facilities and supporting infrastructure must be rehabilitated to at least their pre- construction condition or better, unless otherwise agreed by the landowner where relevant. Where the rehabilitated site is residual land then condition B67 applies.</p>	<p>Section 6.19</p>
<b>D66</b>	<p>The privacy of adjoining residential development is to be considered in the design and establishment of ancillary facilities. Where an ancillary facility overlooks residential property, privacy measures will be provided in consultation with the affected property owner.</p>	<p>Section 6.12</p> <p>Appendix B - A119</p>

## 2.3 Additional Approvals, Licences, Permits and Requirements

### 2.3.1 Environmental Protection Licence

The New M5 Project triggers Schedule 1 of the *Protection of the Environment Operations Act, 1997* (POEO Act) for road construction (clause 35) and therefore requires an environment protection licence (EPL) administered by the NSW Environment Protection Authority (EPA). Two EPLs have been obtained for the project (EPL #20772 and EPL #4672). The EPL establishes a premise boundary that includes the ancillary facilities.

### 2.3.2 Environment Protection and Biodiversity Conservation Act

Under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the project was referred to the Commonwealth Government. A determination was made on the 11 August 2015 that the project is considered to be a 'controlled action'. Approval of the project is

therefore required from the Commonwealth Minister for the Environment (2015/7520) in addition to environmental and planning approvals required under NSW legislation.

### 2.3.3 Other Approvals and Licences

No other environmental approvals or licences would be required prior to the establishment of the construction compounds and ancillary facilities.

Additional approvals maybe required later during the operation of the construction compounds and ancillary facilities.

## 2.4 Revised Environmental Management Measures

The revised environmental management measures (REMMs) included in the New M5 Submissions Report relating to the management of ancillary facilities are included in Table 3.

The site-specific consolidated environmental safeguards and management measures that relate to this Plan are provided in Appendix A. The Project-wide consolidated environmental safeguards and management measures are provided in Appendix B.

Table 3: Revised Environmental Management Measures Relevant to this Plan

REMM No.	Impact	Condition Requirements	Document Reference
TT15	Traffic and transport – Construction compound layout	The location of the car park and site office associated with the Kingsgrove North construction compound (C1) would be further refined with alternatives considered during construction planning, including the opportunity for the use of the existing Garema Circuit car park	Refer to Appendix A - A1
AQ42	Air Quality – cumulative impacts	Regular communication with other high risk construction ancillary facilities within 500 metres of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.	Refer to Appendix B - A189
NV1	Noise and vibration – general	A construction noise and vibration Management Plan(s) will be prepared and implemented consistent with the requirements of the Interim Construction Noise Guideline (DECC, 2009), and will include the following: <ul style="list-style-type: none"> <li>• Identification of nearby residences and other sensitive land uses</li> <li>• Description of approved hours of work</li> <li>• Description and identification of construction activities, including work areas, equipment and duration</li> <li>• Description of what work practices (generic and specific) will be applied to minimise noise and vibration</li> <li>• A complaints handling process</li> <li>• Noise and vibration monitoring procedures</li> <li>• Overview of community consultation required for identified high impact works.</li> </ul>	Refer to Appendix A and B for noise and vibration management measures for establishment activities

REMM No.	Impact	Condition Requirements	Document Reference
<b>NV6</b>	Noise and vibration – construction noise	Acoustic sheds will be erected at the Kingsgrove North (C1), Bexley Road North (C4) and Bexley Road South (C5) construction compounds, to mitigate noise generated by tunnelling support activities. The noise attenuation requirements for these acoustic sheds will be reviewed and confirmed during detailed design.	Acoustic sheds will not be installed during establishment activities  Refer to Appendix H for indicative locations and specifications for all temporary noise barriers
<b>NV7</b>	Noise and vibration – construction noise	Temporary acoustic hoardings will be installed at the Kingsgrove North (C1), Commercial Road (C3), Bexley Road North (C4), Bexley Road South (C5), Bexley Road East (C6), Arncliffe (C7), the Marsh Street ponds site, Canal Road (C8) and Campbell Road (C9) construction compounds. The design and location of acoustic hoarding will be confirmed during detailed design.	Refer to Appendix A & Appendix H
<b>NV18</b>	Noise and vibration – construction traffic noise	Deliveries and spoil removal will be planned to avoid queuing of trucks around construction compounds.	Refer to Appendix B - A116
<b>NV31</b>	Garema Circuit	The implementation of a left in and right out arrangement for heavy vehicles at the Garema Circuit access point to Kingsgrove North construction compound (C1) would be considered during construction planning to restrict heavy vehicles to using only the eastern side of Garema Circuit.	Appendix F
<b>V01</b>	Visual impacts and urban design - landscaping	Existing vegetation around the perimeter of the construction compounds would be retained where feasible and reasonable, particularly: <ul style="list-style-type: none"> <li>• Vegetation surrounding the Bexley Road East construction compound (C6), particularly along the boundary between residential properties and the compound along the northern and eastern boundaries</li> <li>• Mature trees along the north-west (Marsh Street) and south-west boundaries of the Arncliffe construction compound site</li> <li>• Mature trees and vegetation along the boundary of Sydney Park along Campbell Road and Barwon Park Road.</li> </ul>	Refer to Appendix B - A120
<b>V02</b>	Visual impacts and urban design - landscaping	Landscape planting would use fast growing species where reasonable and feasible. This would soften views of construction sites, particularly for compounds located within public recreational spaces.	Section 6.12 Refer to Appendix B - A121
<b>V04</b>	Visual impacts and urban design – visual amenity	Temporary noise barriers would be erected early within the site establishment phase where required to minimise noise impacts and provide visual screening.	Section 6.12 Refer to Appendix B - A122
<b>V06</b>	Visual impacts and urban design – visual amenity	Site hoardings and fencing would be regularly maintained, including the prompt removal of graffiti.	Section 6.12 Refer to Appendix B - A80



REMM No.	Impact	Condition Requirements	Document Reference
V09	Visual impacts and urban design – lighting	Cut-off or and directed lighting would be used within and outside of construction compounds with lighting location and direction considered to ensure glare and light spill are minimised.	Section 6.12 Refer to Appendix B - A123
V10	Visual impacts and urban design – lighting	The lighting design for shared paths located within the M5 Linear Park impacted by the Project or located adjacent to compounds would be designed to minimise light spill to adjoining residential properties while maintaining a safe night time environment for path users (e.g. lighting position below the height of the fence line).	Section 6.12 Refer to Appendix B - A124
V12	Visual impacts and urban design – signage	Elements within construction sites would be located to minimise visual impacts as far as feasible and reasonable, for example, locating equipment back from site boundaries.	Section 6.12 Refer to Appendix B - A119-A124
V13	Visual impacts and urban design – visual amenity	Opportunities would be investigated to maximise the separation distances as far as reasonable and feasible: <ul style="list-style-type: none"> <li>• Between the Kingsgrove North construction compound to the adjoining residential areas to reduce shading and visual impacts</li> <li>• Between the Bexley Road North and Bexley Road East construction compounds and adjoining residential areas to reduce shading and visual impacts.</li> </ul>	Section 6.12 Refer to Appendix A - A6, A22, A32
SW04	Soil and water quality – water quality	The Soil and Water Management Plan would include: <ul style="list-style-type: none"> <li>• Construction traffic restricted to delineated access tracks, and maintained until construction complete</li> <li>• Appropriate sediment and erosion controls to be implemented prior to soil disturbance</li> <li>• Stormwater management to avoid flow over exposed soils which may result in erosion and impacts to water quality</li> <li>• Stockpiles located outside the 20 year ARI flood extent where feasible. Otherwise, appropriate management control measures such as bunding would be implemented</li> <li>• Staging of surface works to minimise area of exposed surfaces, with re-vegetation and / or stabilisation of disturbed areas to occur as soon as feasible</li> <li>• Site compounds sealed or hard stand to minimise erosion where possible</li> <li>• Wheel wash or rumble grid systems installed at exit points to minimise dirt on roads</li> <li>• A soil conservation specialist would be contracted to supervise construction in high risk areas in accordance with the Erosion and Sedimentation Management Procedure (RTA, 2008c)</li> <li>• All water generated during construction would be captured, tested (and treated if required) prior to reuse or discharge under a site specific arrangement, depending on the quality of water generated. This would target compliance with the Water Quality Reference Criteria. At the St Peters interchange site this would include transfer of some water to the leachate treatment plant. Varying levels of groundwater quality would also require a variation to treatment approaches</li> <li>• Contaminated sediments and potential acid sulfate</li> </ul>	For soil and water management during establishment activities refer to Section 6.6 Section 6.10 Appendix A & B, in particular A155-A166



REMM No.	Impact	Condition Requirements	Document Reference
		<p>soils would be segregated and disposed of (with or without prior treatment as appropriate) at a licensed facility or treated onsite</p> <ul style="list-style-type: none"> <li>Stockpiles would be located outside of riparian corridors.</li> </ul>	
<b>SW12</b>	Soil and water quality – contaminated runoff and spills	<p>The following measures would be in place to manage spills of contaminated fluids:</p> <ul style="list-style-type: none"> <li>Areas would be allocated for the storage of fuels, chemicals and other hazardous materials</li> <li>Facilities would be secured and bunded to levels dictated by Environment Protection Authority guidelines</li> <li>Spills or contaminated runoff would be captured and disposed of at a licensed facility</li> <li>Re-fuelling, wash down and preparation of construction materials would be undertaken in bunded areas to mitigate risks in relation to spills or leaks of fuels / oils or other hazardous onsite construction material</li> <li>The application of good practice in the storage and handling of dangerous and hazardous goods would provide appropriate practical responses to manage impacts on occupational health and safety and minimise the risk of a spill occurring</li> <li>Potential discharges from construction sites would be managed through the installation of basins (primarily designed for sediment capture but with capacity to contain the nominated spill volume) constructed in accordance with The Blue Book</li> <li>Captured contaminants resulting from spills or leaks would be treated and disposed of at a licensed facility</li> <li>Any soil which has been contaminated with fuel, oils or other chemicals would be disposed as contaminated soil by a waste subcontractor.</li> </ul>	Refer to Appendix B - A167-A175
<b>CM12</b>	Contamination	Appropriate mitigation measures including stockpiling and management of potentially contaminated material would be undertaken at construction compounds to prevent movement of material into receiving waters.	Section 6.18 Refer to Appendix B - A167-A175
<b>FD07</b>	Flooding and drainage – flood management	Flood Management Plans would be developed as part of the CEMP prior to construction to guide the detailed design of temporary ancillary facilities, including construction compounds, to minimise the potential impacts of flooding on the Project.	Section 6.10 Refer to Appendix A & B
<b>FD14</b>	Flooding and drainage – hydrology and flooding	Tunnel dive shafts would be protected against flooding either through locating openings outside of flood prone areas or constructing temporary bunding and / or appropriate temporary drainage. Stockpiles would be located outside the 20 year ARI flood extent where possible. Where construction compounds are located in the 20 year ARI flood extent, a contingency Plan to manage flooding would be prepared and implemented.	Section 6.10 Refer to Appendix A - A171

REMM No.	Impact	Condition Requirements	Document Reference
FD15	Flooding and drainage – hydrology and flooding	<p>Further detailed assessment of flooding impacts for proposed construction compounds and relevant management measures would be undertaken during detailed design. Contingency Plans to manage flooding would be prepared and implemented for high risk temporary facilities proposed including fuel storages, water treatment plants and substations, as well as for the following construction compounds (located either wholly or partially within the 20 year ARI flood extent):</p> <ul style="list-style-type: none"> <li>• Kingsgrove South construction compound (C2)</li> <li>• Commercial Road construction compound (C3)</li> <li>• Bexley Road North construction compound (C4)</li> <li>• Bexley Road South construction compound (C5)</li> <li>• Arncliffe construction compound (C7)</li> <li>• Alexandra Canal bridge construction compound (C12)</li> <li>• Gardeners Road bridge construction compound (C13).</li> </ul> <p>For these sites, suitable procedures for flood warning, emergency management, site evacuation and Planning would be developed.</p>	<p>Section 6.6</p> <p>Section 6.10</p> <p>Refer to Appendix A &amp; B</p>
FD16	Flooding and drainage – hydrology and flooding	<p>The following measures would be implemented to manage flooding risks on construction sites:</p> <ul style="list-style-type: none"> <li>• Temporary bunding around parts of the site that would be adversely affected by floodwaters</li> <li>• Temporary drains / detention areas within the site</li> <li>• Use of car parks to provide detention</li> <li>• Elevation of site buildings where necessary to get floor levels above expected flood levels</li> <li>• Use of erosion and sediment fences around noise barriers to provide bunding to some parts of the sites while directing overland flows through less sensitive parts of sites, particularly at Kingsgrove and Arncliffe.</li> </ul>	<p>Section 6.6</p> <p>Section 6.10</p> <p>Refer to Appendix B</p>
GW6	Groundwater – Intersection of shallow contaminated groundwater during construction activities at Arncliffe	<p>The intersection of shallow groundwater at the Arncliffe construction compound (C7) would be managed under the CEMP(s) for the Project. In the event that contaminated groundwater is intersected, the approach would be to either remove the source of the contamination by excavation and remediation of shallow impacted soils or engineering a solution to prevent the migration of contaminated groundwater into the Project tunnels.</p>	<p>Refer to Appendix A &amp; B</p> <p>Construction Contaminated Land Management Plan</p>
NAH01	Non-Aboriginal – General	<p>Protocols would be developed for anticipated categories of unexpected non-Aboriginal heritage finds, such as tram infrastructure, late 19th to early 20th refuse, and brick works. In the event of an unexpected cultural heritage find outside of these specific protocols, the <i>Standard Management Procedure – Unexpected Archaeological Finds</i> (Roads and Maritime, 2015a) would be followed. This would include notification to the NSW Heritage Division of OEH (highly effective).</p>	<p>Refer to Appendix B - A177-A186</p>
NAH02	Non-Aboriginal – General	<p>Construction personnel would be made aware of non-Aboriginal heritage sites as part of site induction. These sites would be identified on sensitive area plans and in the CEMP.</p>	<p>Refer to Appendix B - A177</p>

REMM No.	Impact	Condition Requirements	Document Reference
<b>NAH07</b>	Non-Aboriginal – Removal of heritage listed structures	<p>In relation to Rudders Bond Store, the following would be undertaken:</p> <ul style="list-style-type: none"> <li>The bond store would be subject to a full archival recording following the NSW Heritage Division guidelines How to Prepare an Archival Recording (NSW Heritage Office, 2003) and Photographic recording of heritage items using film or digital capture (NSW Heritage Office, 2006). This would include a comparative analysis of the Rudders Bond Stores should be prepared against other laminated truss Symonds buildings in NSW and Australia</li> <li>Consideration would be given as to whether the selected laminated timber columns could be salvaged and re-erected and clad elsewhere within the St Peters interchange or the local area. The cladding and brick walls are not considered to be of heritage significance and are not included within the reuse proposal. The level of fabric salvage required, the appropriate methodology for salvage and identification of appropriate adaptive reuse and locations for reuse of these elements would be determined in consultation with Heritage Council, the NSW Heritage Division of OEH and the New M5 Design Panel, with advice from a suitably qualified specialist informed by the full archival recording prior to the demolition of the item</li> <li>Investigate options for documenting the history of the Ralph Symonds company and presenting it to a national audience, in partnership with stakeholders such as the City of Sydney and Powerhouse Museum. The focus would be on their development of innovative timber construction methods during and after World War II (somewhat effective).</li> </ul>	Refer to Appendix A - A50
<b>NAH08</b>	Non-Aboriginal – change of use	<p>In relation to the Service Garage at 316 Princes Highway, the following would be undertaken:</p> <ul style="list-style-type: none"> <li>An existing condition survey report and program of monitoring would be undertaken to identify early potential risks to the heritage item</li> <li>A photographic archival recording is undertaken prior to the current use ceasing. The archival recording should conform to the guidelines provided in How to prepare archival records (NSW Heritage Office, 2003) and Photographic recording of heritage items using film or digital capture (NSW Heritage Office, 2006). The archival recording should be lodged with the relevant local libraries and the State Library of NSW.</li> <li>The oral history should be prepared, which seeks to contact past and present employees as well as others with memories of the service station. The oral history should be lodged with the relevant local libraries and the State Library of NSW (somewhat effective).</li> </ul>	Refer to Appendix A - A46
<b>NAH18</b>	Non-Aboriginal – impact to geological and paleontological values	An archival recording of the St Peters brickpit geological site would be undertaken prior to and during the construction (highly effective).	Refer to Appendix A - A47

REMM No.	Impact	Condition Requirements	Document Reference
B02	Biodiversity – Vegetation clearance	The removal of established vegetation will be minimised, where possible.	Refer to Appendix B - A125-A154
B03	Biodiversity – Vegetation clearance	Pre-clearance activities will be carried out in accordance with <i>Guide 1 Pre-clearing process of Roads and Maritime's Biodiversity Guidelines</i> (RTA, 2011). Pre-clearing surveys will be undertaken by a suitably qualified ecologist to identify the presence of: <ul style="list-style-type: none"> <li>Hollow-bearing trees</li> <li>Threatened flora and fauna</li> </ul>	Refer to Appendix B - A125-A154
B04	Biodiversity – Vegetation clearance	Trees will be removed in accordance with <i>Guide 4 – Clearing of vegetation and Removal of Bushrock of Roads and Maritime's Biodiversity Guidelines</i> (RTA, 2011)	Refer to Appendix B - A125-A154
B05	Biodiversity – Vegetation clearance	Where vegetation clearance is required, exclusion zones will be established in accordance with <i>Guide 2 Exclusion Zones of Roads and Maritime's Biodiversity Guidelines</i> (RTA, 2011).	Refer to Appendix B - A125-A154
B06	Biodiversity – Vegetation clearance	Where reasonable and feasible, mature and hollow-bearing trees will be retained. Where this is not reasonable and feasible, nest boxes will be installed to mitigate the impacts of removing hollow-bearing trees in accordance with Table 8.1 of <i>Guide 8 – Nest boxes of Roads and Maritime's Biodiversity Guidelines</i> (RTA, 2011).	Refer to Appendix B - A127, A128
B08	Biodiversity – impacts to native flora and fauna	Should unexpected threatened flora or fauna be located at any time during construction, relevant works will cease in the area to prevent further harm to the individual. Should this occur, a suitably qualified ecologist will be engaged to advice on appropriate mitigation and management measures.	Refer to Appendix B - A130, A137 Manage Flora and Fauna Procedure
B09	Biodiversity – impacts to native flora and fauna	Any fauna handling would be undertaken by an appropriately licensed ecologist in accordance with Guide 9 – Fauna handling of Roads and Maritime's Biodiversity Guidelines (RTA, 2011)	Refer to Appendix B - A128, A130, A149
B10	Biodiversity – Impacts to Green and Golden Bell Frog	The Green and Golden Bell Frog Plan of Management Plan will be finalised and implemented to minimise and manage impacts to the Arncliffe key population. The Green and Golden Bell Frog Plan of Management Plan would be approved by the Commonwealth Department of the Environment and OEH, and would include: <ul style="list-style-type: none"> <li>Management measures to be implemented at the Arncliffe construction compound (C7) and RTA Ponds to minimise and manage impacts to the Green and Golden Bell Frog habitat and key population during construction.</li> <li>Management measures relating to the enhancement of existing habitat at the Marsh Street Wetland</li> <li>Supplementary management measures for consideration to mitigate and minimise impacts to the Green and Golden Bell Frog.</li> </ul>	Refer to Arncliffe Construction Compound Sub Plan (Appendix C) for management of Green and Golden Bell Frog during establishment activities  Green and Golden Bell Frog Plan of Management to be implemented prior to construction  Also refer to Appendix A - A34
B15	Biodiversity – impacts to hydrology and aquatic biodiversity	Stockpiles would be located outside riparian corridors.	Refer to Appendix B - A218

REMM No.	Impact	Condition Requirements	Document Reference
<b>B16</b>	Biodiversity – spread of weeds	Weeds within the construction footprint will be actively managed prior to the clearance of vegetation. All weed material cleared from within the construction footprint of the Project will be disposed of at a facility licensed to receive green waste.	Refer to Appendix B - A154 Refer to Weed and Pathogen Management Plan
<b>B20</b>	Biodiversity – introduction and spread of pathogens	A risk assessment process will be used for each construction compound to determine the need to clean machinery prior to entering.	Refer to Appendix B - A154 Refer to Weed and Pathogen Management Plan
<b>WM12</b>	Resource use and waste minimisation – Management of waste	Measures would be implemented to manage stockpiles such as potentially locating stockpiles outside of overland flow paths, riparian corridors and finished and contoured so as to minimise loss of material in flood or rainfall events. Stockpiles left exposed and undisturbed for longer than 28 days would be stabilised by compaction then either sprayed with suitable tackifier, covered with anchored fabrics, or seeded with sterile grass.	Refer to Appendix B - A218

## 2.5 Guidelines

The main guidelines, specifications and policy documents relevant to this AFMP include:

- Roads and Maritime Specification D&C G36 – Environmental Protection
- Roads and Maritime Specification D&C G38 – Soil and Water Management
- Roads and Maritime Specification D&C G40 – Clearing and Grubbing
- Roads and Maritime Biodiversity Guidelines (RTA 2011)
- Standard Management Procedure: Unexpected Heritage Items, Roads and Maritime (March 2015)
- Environmental Incident Classification and Reporting Procedure, Roads and Maritime (June 2015)
- Managing Urban Stormwater: Soils and Construction. Volume 2D: Main Road Construction, DECC (2008)
- Managing Urban Stormwater: Soils and Construction. Volume 1: 'Blue Book', Landcom (2004)
- Technical Guideline Environmental Management of Construction Site Dewatering (Roads and Maritime, 2011)
- Guidelines for Controlled Activities on Waterfront Land (DPI, 2012)

## 3. Consult and Communicate

### 3.1 Stakeholder Consultation

This Plan has been provided to the following stakeholders, which include those required by the Conditions of Approval and the New M5 Submissions Report:

- Bayside Council (previously Botany Bay and Rockdale Councils)
- Canterbury-Bankstown Council (previously Canterbury Council)
- City of Sydney Council
- Georges River Council (previously Hurstville Council)
- Inner West Council (previously Marrickville Council), and
- NSW EPA

Comments were received from Canterbury, City of Sydney, Marrickville and Rockdale Councils. Hurstville Council and the EPA declined to provide comments and no response was received from Botany Council.

Comments were generally concerned with ongoing community and Council consultation, traffic and access impacts including car-parking arrangements, water quality management, flood impacts, biodiversity impacts and a number of site-specific issues. Additional consultation was sought during preparation of the HV power addendum (Appendix J), however no responses were received.

Evidence of consultation, including how the relevant issues have been addressed within this Plan, is included in the Consultation Comment and Response Register, which has been submitted to DP&E with this plan.

Ongoing stakeholder consultation will continue for the establishment and operation of ancillary facilities. Key stakeholders identified that would be directly impacted by the establishment and operation of ancillary facilities include:

- Local communities, residents and sensitive stakeholders in the surrounding areas.
- Local businesses, retailers and industrial precincts and their customers.
- Local school communities, colleges, childcare, healthcare and aged care facilities, and places of worship.
- Leisure and recreation facilities and their members/users including public parks and reserves, and golf courses.
- M5 East Motorway users and local road users, particularly those near work sites.

The following key stakeholders would also be consulted throughout establishment and construction as required:

- Local interest groups including bushcare and environment, heritage, preservation and progress groups and associations
- Local and State government;
- Transport, freight, logistics and heavy haulage groups
- Emergency services; and
- Utilities.

The project will liaise directly with the transport and freight sector through the Traffic and Transport Liaison Group established for the project.

### 3.2 Community Consultation

Prior to establishment of ancillary facilities, the Community Relations team will undertake consultation with the community and relevant stakeholders identified in Section 3.1. Consultation will

continue during the construction phase in accordance with the Community Communication Strategy (CCS) as required by CoA C1, once approved. The main objectives of community consultation for the project are:

1. To increase awareness, understanding and support for the Project by proactively promoting the Project's progress, benefits and contribution to the community.
2. To make a positive contribution and build a positive Project reputation through active participation in the community, local events, community groups and business and community programme, where appropriate.
3. To effectively manage impacts and minimise disruptions to the community and business through ongoing consultation to provide opportunities for community members to openly raise and discuss their concerns and provide feedback.
4. To achieve responsive enquiries, complaints and issues management and timely resolution.
5. To achieve a no surprises community involvement programme that encourages early engagement, effective two-way communication and the provision of relevant, accurate and timely notification about construction and traffic activities and their impacts.
6. To act responsively to build positive relationships with our Project stakeholders and a reputation for doing what we said we would do.

Consultation will be undertaken with stakeholders likely to be affected by the works, including residential and commercial properties surrounding ancillary facilities. Consultation will include door knocking residents impacted by the ancillary facilities, letter box drops and community updates as applicable.

For properties directly affected by ancillary facilities, one on one briefings have commenced and will continue for consultation with impacted stakeholders prior to adoption of the final design for site boundary screening. Briefings include the provision of maps/plans, barrier materials and samples, fact sheets and other project materials to facilitate discussions. Any comments/feedback regarding boundary screening are being considered by CDS-JV. The site Design Plan will detail the type and height of the boundary screens for each location. Notifications will subsequently be provided to inform affected stakeholders of final barrier/screening design.

During establishment any comments, feedback or complaints relating to noise, air quality and other amenity issues will be addressed through the project Construction Complaints Management System (Appendix K), which will be included as a sub plan to the Community Communication Strategy during the construction phase).

In accordance with CoA C3, the following avenues are available throughout the establishment and construction phases for the public to communicate with the Project:

- A toll-free 24 hour telephone number on which complaints and enquires about the project may be registered: 1800 660 248;
- A postal address to which written complaints and enquires may be sent: GPO Box 3905, Sydney NSW 2001;
- An email address to which electronic complaints and enquires may be transmitted: [info@westconnex.com.au](mailto:info@westconnex.com.au);
- A mediation system for complaints unable to be resolved; and
- A mechanism for community members to make enquiries in common community languages of the area.

The telephone number, postal address and email address, as well as relevant project information as required by CoA C5 are included on designated pages of the WestConnex website [www.WestConnex.com.au](http://www.WestConnex.com.au).

The toll-free WestConnex Acquisition Assistance Line will be available for a period of up to six months following completion of the final property acquisition required for the project to provide ongoing dispute resolution, a counselling program and contact information to relevant services for all relocated persons.

## Consultation with impacted businesses

The focus of consultation with business owners and operators is to anticipate, understand and respond efficiently and effectively to concerns by implementing communication processes that adapt to changing needs across the life of the Project as they arise, throughout from early works (site establishment) and through to construction and operation across various Project worksites.



The Project's Community Relations Manager and each precinct Place Manager will work together with the business community to:

- Identify and meet with any business owner/operator who has, or could potentially have, concerns about the impact of Project works in their vicinity, to understand their concerns and, if possible, find mitigation or develop strategies to address these concerns.
- Provide accurate, timely and reliable information.
- Maintain an open, honest, and regular personal consultation and communication with affected businesses.
- Consult with affected business owners/operators to try and develop mutually agreeable mitigation strategies and/or solutions to specific business impacts, within the construction, safety and environmental constraints of Project works and activities.
- Regularly visit affected businesses to informally survey levels of satisfaction with current communication, mitigation activities and discuss any upcoming Project Works which may have adverse business impacts.

## 4. Ancillary Facilities Approval Strategy

An overview of the approvals required for all ancillary facilities included in the EIS and potential new/changed ancillary facilities for the Project is included in Table 4 based on the relevant conditions (CoA D57 – D64).

Table 4: Ancillary Facilities Approval Opportunities

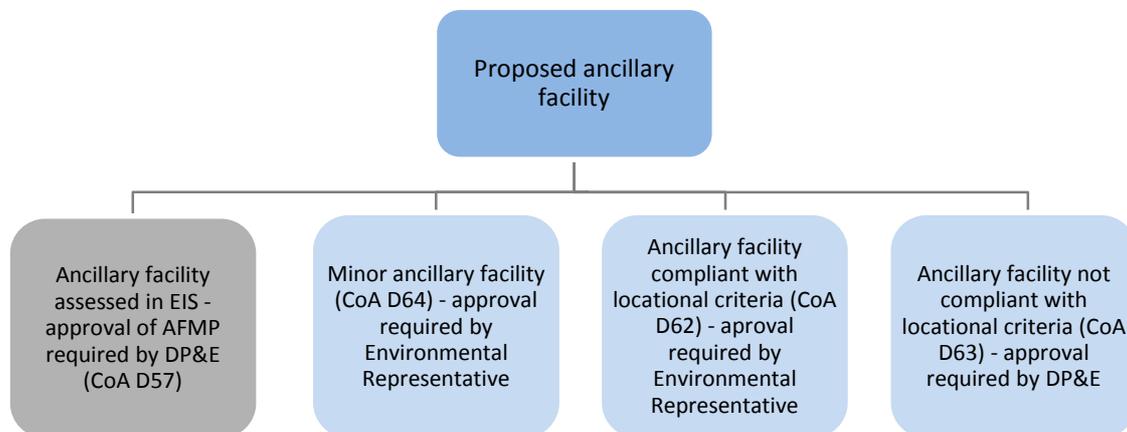
	Facility included in EIS	D62 ^ compliant	D64^ compliant	Additional actions	Actions for this AFMP
<b>Approved facilities</b>	✓	N/A	N/A	N/A	Include in AFMP for Secretary's approval
<b>Proposed facility</b>	x	✓	x	Prepare New/Amended Ancillary Facilities Application for Environmental and Sustainability Manager's review and ER's approval	Update this AFMP
	x	x	x	Prepare Site Specific AFMP for Secretary's approval	Update this AFMP and provide the Site Specific AFMP for Secretary's approval
<b>Proposed minor* facilities</b>	x	x	✓	Prepare New/Amended Ancillary Facilities Application for Environmental and Sustainability Manager's review and ER's approval	Attach application in this AFMP

^ Refer to D62 in of this Plan for criteria

\* Minor as defined by D64

The possible approvals pathways for proposed ancillary facilities are summarised in Figure 1. All 14 currently proposed ancillary facilities for the Project fall under ancillary facilities assessed in the EIS. These compounds is shown in grey. A detailed flow chart of approvals for new or amended facilities is included in Appendix E. Future ancillary facilities such as batching and pre-cast facilities would be assessed against this approvals framework in Table 4 and shown in Figure 1

Figure 1: Approvals Summary for Ancillary Facilities



## 4.1 Approved Facilities Identified in the EIS and Submissions Report

The WestConnex Stage 2 New M5 EIS (AECOM 2015) identifies and assesses 14 temporary ancillary facilities required for the Project. Detailed design has identified that 13 of the 14 facilities are required for construction and are included in this AFMP in accordance with CoA D57. The C14 compound identified in the EIS is not currently proposed to be used. The ancillary facilities approved in the EIS are described in Section 5 and Table 11 to Table 23. These tables include the potential impacts and control measures associated with the facilities.

A further four temporary ancillary facilities were identified in the Submissions Report for the installation of HV power to four of the construction compounds. These additional sites are identified and assessed in Appendix J.

## 4.2 New or Amended Ancillary Facilities

Additional ancillary facilities not previously assessed in the New M5 EIS are also included in this AFMP, once approved as per the process outlined below. These include minor and short-term ancillary facilities for purposes such as lay down areas, material storage, stockpiles and crib sheds. This section describes the assessment and approvals pathway for additional ancillary facilities. Any changes to approved ancillary facilities or any new ancillary facilities must be assessed and approved in accordance with the following sections.

### 4.2.1 Ancillary Facilities Criteria

Ancillary facilities not otherwise identified and assessed in this AFMP (CoA D57), must be located subject to the following requirements (D62, Table 2), unless otherwise approved by the Secretary:

- (a) be located more than 50 metres from a waterway
- (b) be located within or adjacent to land where the Project is being carried out
- (c) have ready access to the road network
- (d) be located to minimise the need for heavy vehicles to travel on local streets and/ or through residential areas
- (e) be sited on relatively level land
- (f) be separated from nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant),
- (g) not require vegetation clearing beyond that already required by the Project
- (h) not impact on heritage items (including areas of archaeological sensitivity) beyond those already impacted by the Project
- (i) not unreasonably affect the land use of adjacent properties
- (j) be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented; and
- (k) provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.

### 4.2.2 Minor Ancillary Facilities

CoA D64 facilitates the establishment of minor ancillary facilities (e.g. lunch sheds, office sheds, and portable toilet facilities, etc.) that do not comply with the criteria set out in CoA D62 (refer to Section 4.2.1). This condition is applicable for minor ancillary facilities that:

- (a) are located within an active construction zone within the approved SSI footprint; and
- (b) have been assessed by the Environmental Representative to have:
  - (i) minimal amenity impacts to surrounding residences, with consideration to matters such as noise and vibration impacts, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts, and
  - (ii) minimal environmental impact in respect to waste management, and no impacts on flora and fauna, soil and water, and heritage beyond those approved for the SSI, and
- (c) have environmental and amenity impacts that can be managed through the implementation of environmental measures detailed in the Construction Environment Management Plan.

## 4.2.3 Minor Changes to Approved Ancillary Facilities

As design and construction progresses, it may be necessary to make changes or adjustments to ancillary facilities. Changes will be communicated to the Environment and Sustainability Manager or environment team either through formal change processes or via informal communications. The Environment and Sustainability Manager will undertake or direct the assessment of the proposed changes for potential impacts. Changes may be approved, by either the Secretary, or by the Environmental Representative.

Minor changes may facilitate constructability; amenity or traffic staging requirements may include, but not be limited to:

- Relocation of internal access roads to facilitate heavy vehicle / light vehicle movements
- Relocation of offices / buildings to provide improved screening for nearby sensitive receivers
- Changes to the use of laydown/storage/stockpile and car parking areas
- Changes in response to community and agency consultation Adjustments to buildings or layouts to alleviate engineering constraints (e.g. flooding, geotechnical)

Any change deemed by the Environmental Representative to have minimal negative or improved environmental or social impacts may be approved by the Environmental Representative in accordance with the New / Amended Ancillary Facilities Application (M5N-ES-FRM-PWD-0002) included in Appendix D. Where substantial impacts would potentially occur as a result of proposed changes or where the Environmental Representative deems it necessary, the updated AFMP would be provided to DP&E for approval.

## 4.3 New or Amended Ancillary Facilities Assessment

For any new ancillary facilities or any minor changes to any approved ancillary facilities, Project staff must complete the New / Amended Ancillary Facilities Application and submit it to the Environment and Sustainability Manager for initial review and to determine approval pathway in accordance with Table 4. Issue-specific assessments (such as ecology or heritage) may be required for new ancillary facilities to determine the level of impact and appropriate management and mitigation measures for a site specific facility. All proposed new ancillary facilities would need to be assessed under the locational criteria as per CoA D62 (Section 4.2.1), unless deemed to be a minor facility.

The application for minor ancillary facilities or changes to approved ancillary facilities may be approved / rejected by the Environmental Representative. The Environmental Representative may require additional or specific environmental controls for the site, such as pollution control devices, temporary screening or fencing, hours of operation or 'no go' sensitive areas.

For new ancillary facilities that do not meet the locational criteria nominated in CoA D62 or if the Environmental Representative determines that significant impacts would occur due to a proposed change to an approved facility, the Secretary's approval would be required.



## 5. Identify and Assess – Approved Facilities

The WestConnex Stage 2 New M5 - EIS (AECOM 2015) identifies 14 temporary ancillary facilities required for the Project. Chapter 6 of the EIS provides an assessment of the characteristics, likely activities and potential impacts at each site. The 14 construction compounds are located in five construction areas (Kingsgrove, Bexley, Arncliffe, St Peters and Civil East (St Peters)).

Detailed design has confirmed that 13 of the 14 sites are required to support construction of the Project. Amendments to detailed design mean that the C14 site is no longer required for Stage 2 works (refer Table 5). Nine of the fourteen sites would be required for permanent operational purposes. An overview of the location of the ancillary facilities proposed for the Project is provided in Figure 2.

Additional ancillary facility sites that have been approved for the project subsequent to the SSI Approval, under the approvals pathways provided by CoA D62, D63 or D64 are identified in Table 5 below and described in detail in Appendix L (approved under CoA D62 or D64) or Appendix M (approved under CoA D63).

Five of the 14 construction compounds identified in the EIS are to become permanent facilities to assist the motorway and tunnel operation. In addition, permanent road infrastructure would be located at the closed former Alexandria Landfill as part of the St Peters Interchange with further permanent local road changes in the vicinity of a number of the temporary construction facilities associated with the St Peters Interchange.

A summary of the primary uses of the facilities during construction and operation of the Project are listed in Table 5. Refer to Appendix J for the identification and assessment of impacts regarding the temporary sites to be used for installation of HV power. Refer to Appendices L and M for identification and assessment of impacts associated with ancillary facilities approved subsequent to the SSI Approval.

Table 5: Key Uses Proposed During Construction and Operation

Construction Area	Ancillary Facility	Approval pathway	Primary use during Project construction	Primary use during Project operation
<b>Kingsgrove</b>	Kingsgrove North (C1)	EIS / CoA D57	Civil sites: cut and cover, spoil management and removal, and surface works support.  Tunnel site: shaft excavation and tunnel support site.	None
	Kingsgrove South (C2)	EIS / CoA D57	Civil sites: spoil management and removal, and surface works support.	Kingsgrove motorway operations complex (MOC1) – ventilation and maintenance facility, emergency response system, storage and offices
	Commercial Road (C3)	EIS / CoA D57	Tunnel site: shaft excavation and tunnel support site.	None
<b>Bexley</b>	Bexley Road North (C4)	EIS / CoA D57	Civil sites: declines, spoil management and removal.  Tunnel site: shaft excavation and tunnel support site.	None

Construction Area	Ancillary Facility	Approval pathway	Primary use during Project construction	Primary use during Project operation
	Bexley Road South (C5)	EIS / CoA D57	Civil sites: declines, spoil management and removal. Tunnel site: shaft excavation and tunnel support site.	Bexley Road South motorway operations complex (MOC2) - emergency smoke extraction facility
	Bexley Road East (C6)	EIS / CoA D57	Support site to Bexley Road North (C4) and Bexley Road South (C5) construction compounds.	None
<b>Arncliffe</b>	Arncliffe (C7)	EIS / CoA D57	Civil sites: declines, spoil management and removal, establish Green and Golden Frog habitat and surface works support. Tunnel site: ventilation shaft excavation and tunnel support site.	Arncliffe motorway operations complex (MOC3) – ventilation (air injection facility) and emergency smoke extraction facility, water treatment plant
	Eve Street (C15)	CoA D64	Support site for HV power installation: laydown, storage, parking and crib hut	Green and Golden Bell Frog habitat
	Burrows Street, Wollie Creek (C17)	CoA D63	Incident Response Office	None
<b>St Peters</b>	Canal Road (C8)	EIS / CoA D57	Civil sites: decline, dive structures, cut and cover, spoil management and removal, and surface works support Tunnel site: ventilation shaft excavation and tunnel support site	St Peters motorway operations complex (MOC4) – ventilation facility Eastern portals
	Campbell Road (C9)	EIS / CoA D57	Compound no longer required for construction	St Peters Interchange
	Landfill Closure (C10)	EIS / CoA D57	Civil sites: enabling and landfill closure works, support site to closure Alexandria Landfill	St Peters Interchange (open space)
	Albert Street (C16)	CoA D64	Surface works support site: minor storage, laydown, carparking and amenities	Campbell Road upgrade and proposed Stage 3 works (cut and cover gateway tunnel entry)
	Burrows Road (C11)	EIS / CoA D57	Surface works support site	Burrows Road motorway operations complex (MOC5) – motorway control centre

Construction Area	Ancillary Facility	Approval pathway	Primary use during Project construction	Primary use during Project operation
<b>Civil East (St Peters)</b>	Campbell Road bridge (C12)	EIS / CoA D57	Civil sites: bridge structures, tie-ins, and surface works support	Campbell Road Bridge
	Gardeners Road bridge (C13)	EIS / CoA D57	Civil sites: bridge structures, tie-ins, and surface works support	Gardeners Road Bridge
	Sydney Park (C14)	EIS / CoA D57	Not currently proposed. Construction activities associated with this compound have been postponed to proposed Stage 3 WestConnex works	Stage 3 WestConnex construction activities
<b>HV Power</b>	Alignments 1 - 4	Submissions Report / CoA D57	Provide HV power supply to construction compounds (C3, C4, C7, C8)	None

## 5.1 Hours of Operation

### 5.1.1 Establishment Phase Hours of Operation

Except as permitted, the Project will restrict working hours for site establishment, in accordance with CoA D12, to:

- 7am – 6pm Monday to Friday, inclusive; and
- 8am – 1pm Saturday;
- At no time on Sundays or public holidays.

Where required, the following activities may be undertaken outside of the standard hours nominated above:

- delivery of materials/equipment/plant where it is required by the police or other authorities for safety reasons;
- works required in an emergency to avoid the loss of lives, property and/or prevent environmental harm;
- utility connections where the utility provider requires the connections be performed outside of the specified hours; or
- works which have the potential to impact on road/traffic safety and must be carried out as a result of RMS Traffic Management Centre requirements.

Any works outside of standard hours will be carried out in accordance with the requirements of CoA D60, the Project Environmental Protection Licence (EPL), the Out-of-Hours Work Protocol and any relevant Road Occupancy Licences (ROLs).

### 5.1.2 Construction Phase Hours of Operation

#### Civil/Surface Works

Once establishment of the ancillary facilities is complete, the ‘operation’ of the ancillary facilities would be in accordance with the Construction Environmental Management Plan and associated sub-Plans.

Except as permitted, for sites that include civil/surface works, the project will restrict working hours for construction to:

- 7am – 6pm Monday to Friday, inclusive; and
- 8am – 1pm Saturday;
- At no time on Sundays or public holidays.

As above, some works may need to occur outside of standard construction hours for safety reasons or due to road network restrictions. These works will be carried out in accordance with the Conditions of Approval (in particular D15), the Project EPL and any applicable ROLs.

## Tunnelling works

For sites that include tunnelling activities, sites will operate 24 hours per day, 7 days per week. Spoil handling and spoil haulage will be limited and managed during peak hours and special events however would occur up to 24hrs per day, 7 days per week.

## Blasting and rock breaking

Blasting will occur as per the Blasting Management Plan. As per the Plan, blasting is likely to occur up to six days per week (Monday to Friday between 9am - 5pm and Saturday 9am – 1pm) with blasts limited to one single detonation in any one day per receiver group, unless otherwise agreed by the NSW EPA through consultation on the Construction Noise and Vibration Management Plan.

Rock breaking not associated with tunnelling (with potential for impulsive or tonal noise impact at sensitive receivers) would occur between 8am – 6pm Monday to Friday and 8am to 1pm on Saturdays with respite periods scheduled to minimise frequency and duration of extended rock breaking activities.

## 5.2 Detailed Description of Approved Facilities

Table 6 provides a summary of the locational criteria for each of the currently approved ancillary facilities for the project.

Section 5.3 describes preconstruction activities that may commence prior to the implementation of the Construction Environment Management Plan (CEMP). These site establishment activities must meet the definition of preconstruction as listed in the Infrastructure Approval for SSI 6788. All site specific management measures that relate to the establishment of ancillary facilities are provided in Appendix A. Management measures to be implemented across all sites are included in Appendix B.

Site establishment activities are anticipated to commence prior to CEMP implementation in the following areas:

- Kingsgrove (construction compounds C1, C2 & C3);
- Bexley (construction compounds C4, C5 and C6);
- Arncliffe (construction compound C7); and
- St Peters (Construction compounds C8, C9, C10 & C11)

Section 5.4 describes construction phase activities (i.e. following implementation of the CEMP) that will occur at the 14 temporary construction compounds described in the EIS. Works to establish compounds at St Peters compounds C12, C13 and C14 will occur only after CEMP approval and are also addressed in this section.

If additional ancillary facilities are required and are approved via the approvals pathway described in Section 4, this section will be updated in future revisions of the Plan.

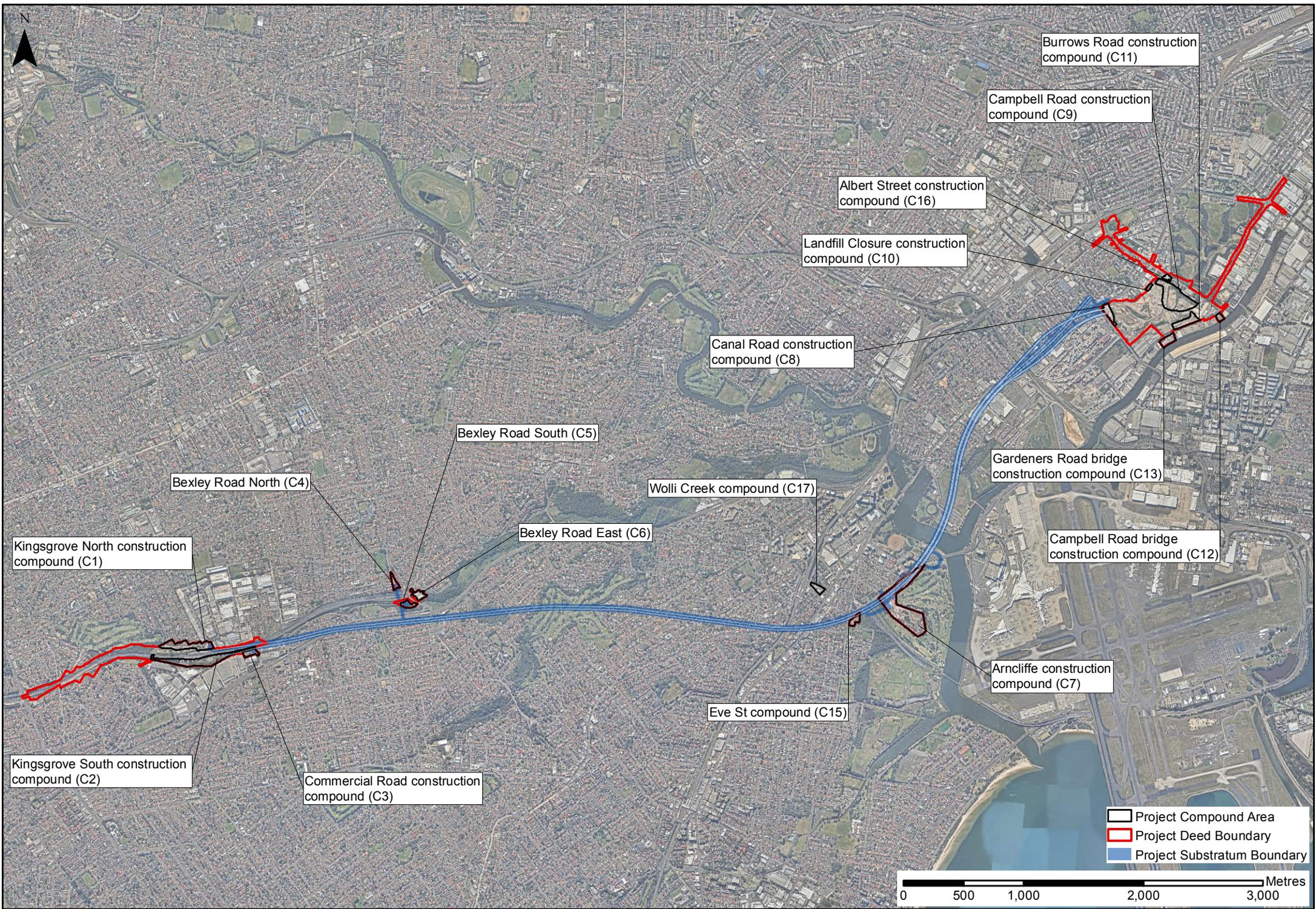


Figure 2: Project Overview Depicting Ancillary Facilities



Table 6: Locational Criteria Checklist for Ancillary Facilities

Ancillary Facility	C1	C2	C3	C4	C5	C6	C7	C8	C10	C11	C12	C13	C15	C16	C17
(a) be located more than 50 metres from a waterway	✓	✗	✗	✓	✗	✗	✓	✓	✓	✓	✗	✗	✓	✓	✓
(b) be located within or adjacent to land where the Project is being carried out	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗
(c) have ready access to the road network	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(d) be located to minimise the need for heavy vehicles to travel through residential areas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(e) be sited on relatively level land	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(f) be separated from nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant)	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓	✗	✗	✗
(g) not require vegetation clearing beyond that already required by the SSI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(h) not impact on heritage items (not including areas of archaeological sensitivity) beyond those already impacted by the SSI <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(i) not unreasonably affect the land use of adjacent properties	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(j) be above the 20 ARI flood level unless a contingency Plan to manage flooding is prepared and	✓	✗	✗	✗	✗	✓	✗	✓	✓	✓	✗	✗	✓	✓	✓

<sup>2</sup> Reference to heritage items in Tables 6 to 23 include only those that were already assessed as being impacted by the SSI.

# Ancillary Facilities Management Plan



Ancillary Facility	C1	C2	C3	C4	C5	C6	C7	C8	C10	C11	C12	C13	C15	C16	C17
implemented															
(k) provide sufficient area for storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## 5.3 Site Establishment

### 5.3.1 Kingsgrove

The work area at Kingsgrove includes land on both sides of the M5 from Karingal Street, extending west to Canterbury Golf Course (refer to Kingsgrove Establishment Plan in Appendix F). Existing land uses surrounding the site includes the M5 East Motorway corridor, the local and regional road network, industrial zonings and low density residential development. The site currently comprises open space within the M5 Linear Park, known as Beverly Grove Park. Wolli Creek is immediately adjacent to the southern boundary of site as a concrete channel and flows west to east, including through a section of site between construction compounds C2 and C3. The vegetation within the site generally consists of urban exotics and natives, however Beverly Grove bushland contains Cooks River/Castlereagh Ironbark Forest, a critically Endangered Ecological Community (EEC). To the north-west of the compound is the Canterbury Golf Course. The mapped soil type within the site is primarily of the Residual Blacktown soil landscape with the eastern extent of the site within soils mapped as Disturbed terrain. The M5 East Motorway in this location is subject to heavy traffic flows and congestion during commuter peak periods and business hours. An existing shared pedestrian and cycle path currently passes through the site on the northern site of the M5.

Following site establishment, this area will include both tunnelling and civil work sites and include three construction compounds: Kingsgrove North (C1); Kingsgrove South (C2) and Commercial Road (C3). Kingsgrove is the site of integration works to the existing M5; and will also house the Kingsgrove motorway operations complex (MOC1) and tolling infrastructure.

Table 7 details the key work activities scheduled to take place at Kingsgrove as part of site establishment activities and includes aspects, potential impacts and control measures. The key site establishment activities for Kingsgrove include:

#### 1. Traffic management

Traffic management will be implemented on the M5 to enable: site access; installation of Intelligent Traffic Systems; and installation of concrete barriers to create a safe working space. This will include a reconfiguration of the current traffic and verge lanes, with some critical on-road works for this occurring outside of standard construction hours in a scheduled night closure of the M5 (to comply with an ROL).

#### 2. Geotechnical / Contamination Investigations

Once traffic management is in place, access to the existing noise mounds will be possible via the truck bays on the existing M5. Geotechnical and contamination investigation works will commence on the noise mounds from this safe working area.

#### 3. Establishment of site access

Access to the work areas on both sides of the existing M5 is required directly off the M5 (via the existing truck bays). This is to limit the use of local roads as required under the Infrastructure Approval. Access will require adjustment to the noise mounds and installation of access tracks and associated controls.

#### 4. Stormwater Upgrade

Existing stormwater systems that are located under the M5 will be upgraded and relocated. The stormwater upgrade consists of micro-tunnelling sections underneath the M5 and the connection of existing stormwater systems to the new network.

#### 5. Noise wall and foot path

A pedestrian footpath within the future construction area to the north of the M5 will be relocated to maintain pedestrian access in the area. Noise wall installation will also commence during the site establishment period. The noise walls and footpaths are critical preconstruction activities to maintain public access and amenity.

## Ancillary Facilities Management Plan



Table 7: Site Establishment Works for Kingsgrove (construction compounds C1-C3)

<b>Site Establishment Activities</b> <b>Note: items may not occur in sequence order</b>	<b>Key Potential Environmental Impacts</b>	<b>Key Environmental Controls</b> <i>Note: Appendix A contains site specific measures for establishment. Appendix B contains project-wide measures for establishment. All operational construction mitigation measures are captured in CEMP and relevant sub Plans.</i>
Establishment (May 2016 – Jan 2017) <ul style="list-style-type: none"> <li>– Installation of environmental controls including:               <ul style="list-style-type: none"> <li>○ Site investigations</li> <li>○ Erosion and sedimentation control</li> <li>○ Delineation of sensitive areas</li> </ul> </li> <li>– Installation and construction of site fencing, a temporary noise barrier is proposed for the northern boundary, lighting, signage</li> <li>– Realign the existing shared pedestrian and bicycle path that currently passes through the site connecting back to the existing shared path on the northern side of the Kindilan underpass</li> <li>– Demolition of existing minor structures</li> <li>– Minor clearing and grubbing</li> <li>– Stockpiling of topsoil and mulch</li> <li>– Materials testing, classification and removal of unsuitable materials off site</li> <li>– Earthworks to establish site access and installation of sedimentation ponds</li> <li>– Construction of access road including earthworks, pavements, and drainage</li> <li>– Protection of existing services and utilities and relocations and connections where required</li> <li>– Relocation of RMS signage and installation of Intelligent Traffic System</li> <li>– Foundations and sealing of surfaces</li> </ul>	Traffic/access impacts on existing M5 East Motorway, Kingsgrove Road, Moorefields Avenue.  Closure of Kindilan underpass for approximately four weeks to extend the underpass to accommodate construction vehicle movement to and from Kingsgrove South construction compound (C2).	Refer to Appendix A – Controls A1, A3, A4, A7, A8, A9, A12  Refer to Appendix B – Traffic and Transport Access Mitigation Measures A107 - A118
	Noise and vibration due to demolition and site establishment works. Site C1 is immediately adjacent to a residential area. Potential worst case Noise Management Level (NML) exceedances of 24 dB(A) at residential receivers have been identified.  Out of hours noise and vibration issues from approved night works. Section 5.1.1 details hours during establishment.	Refer to Appendix A – Control A2  Refer to Appendix B – Noise and Vibration Management Measures A82 – A102
	Potential disturbance of contaminated soils related to past industrial and manufacturing land use. This contamination may include asbestos, PCBs and hydrocarbons.  Uncontrolled erosion and sediment run off.  Spills of fuel, chemicals etc	Refer to Appendix B – Contamination Management Measures A167 – A176  Refer to Appendix B – Soil and Water (including flooding) Management Measures A155 – A166
	Minor clearing of vegetation within the site (no clearing to occur with No Go Zone for the identified Cooks River/Castlereagh Ironbark Forest, a critically Endangered Ecological Community (EEC) or any trees identified to be retained by a relevant Tree Report).	Refer to Appendix A – Control A5  Refer to Appendix B – Flora and Fauna Mitigation Measures A125 – A154



<b>Site Establishment Activities</b> Note: items may not occur in sequence order	<b>Key Potential Environmental Impacts</b>	<b>Key Environmental Controls</b> Note: Appendix A contains site specific measures for establishment. Appendix B contains project-wide measures for establishment. All operational construction mitigation measures are captured in CEMP and relevant sub Plans.
<ul style="list-style-type: none"> <li>- Site offices and facilities</li> <li>- Install workshop</li> <li>- Installation of laydown and storage areas</li> <li>- Traffic control works</li> <li>- Construction of internal haul roads</li> <li>- Closure of the existing M5 inspection bays</li> <li>- Implementation of traffic control measures to the existing M5 to facilitate construction works</li> <li>- Mobilisation of major plant and equipment</li> </ul>	Waste management, including green waste, demolition waste and general construction	Refer to Appendix B – Waste and Resource Mitigation Measures A209 - A217
	Dust emissions associated with demolition, minor earthworks and storage of materials	Refer to Appendix B – Air Quality Mitigation Measures A187 - A208  Refer to Appendix B – Stockpile Management Mitigation Measures A218 - A228
	Impacts to the community through loss of open space and recreational areas.  Impacts to cycleway users from realignment of cycle path  Amenity impacts to Canterbury Golf Course users, including visual and potential noise impacts  Light spillage on surrounding residents  Visual Impact of construction site, including hoardings	Refer to Appendix A – Controls A1, A4, A6, A8, A9, A13  Refer to Appendix B – Visual Amenity Mitigation Measures A119 – A124

## 5.3.2 Bexley

The work areas at Bexley are located adjacent to the intersection for Bexley Road and the ramps for the existing M5 East (refer to Bexley Establishment Plan in Appendix F). On the eastern site of Bexley Road, the Bexley East construction compound (C6) establishment works include preparation of a carpark, amenities and offices. These will be located adjacent to, and on top of the ventilation building for the existing M5 east motorway. To the west of Bexley Road, construction compounds C4 and C5 are either side of the M5. These construction compounds will become tunnelling and tunnel support sites to facilitate construction of the new tunnel.

The Bexley sites currently contain urban exotic and native vegetation, predominantly grasses. The mapped soil type is primarily Erosional Gynea with some Colluvial Hawkesbury. The land surrounding the Bexley Road surface works area is predominantly residential (medium and low density zoning adjacent to site). The Clemton Park Urban conservation Area is located east of Bexley Road. Wolli Creek is nearby, including directly adjacent to the Bexley South site, where it is a concrete lined channel. The Bexley work site is north-east of Bexley North Railway Station and the East Hills, Airport and inner West railway line. The Bexley North urban centre is situated on the southern side of the rail corridor and includes a small commercial area with retail and eatery outlets, community facilities (public library) and areas of open space.

Table 8 details the key work activities scheduled to take place at Bexley as part of site establishment activities and includes aspects, potential impacts and control measures required to address the potential impacts. The key site establishment activities for Bexley include:

### 1. Establishment of site access

Access points to the work areas on the western side of Bexley Road (Construction Compounds C4 and C5) need to be installed. This includes installation of laybacks, driveways and associated signage. Due to the requirements of an ROL, some of this work will need to occur outside of standard construction hours. There is currently no direct access to these sites. Access to the Bexley East site will be from Wolli Avenue. This access requires enhancement but can be done during standard construction hours.

### 2. Services

The establishment of site at Bexley requires several connections and realignments of utilities and services. Two under-bores of Bexley Road are required to provide water connections to the Bexley North and Bexley South sites. A sewer line currently runs north-south through the Bexley North site. This will be relocated to the western boundary of the site, leaving a 2 metre easement on the western boundary. Several light poles for Bexley Road require repositioning as do Telstra and stormwater pits due to clashes with site access paths and proposed infrastructure. Due to the proximity of these works to Bexley Road, a lane closure is required for some works. In accordance with the ROL, some of this work will need to occur outside of construction hours.

### 3. Noise walls, hoarding and shared path

A shared path adjacent to the Bexley sites requires minor realignment to enable continued public access through the area and connecting with the Bexley Road pedestrian and bicycle overpass. Hoarding and noise wall installation will also commence during the site establishment period. The noise walls, hoardings and shared paths are critical preconstruction activities to maintain public access and amenity.

### 4. Installation of drainage and erosion and sediment controls

Bexley work areas are adjacent to Wolli Creek and are within areas affected by overland flow from a 20-year and 100-year ARI flood event. The early installation of drainage structures and erosion and sediment controls are critical to minimising potential impacts on Wolli Creek from construction activities and also inundation impacts to surrounding properties and infrastructure. Site levelling works will also be conducted to enable the installation of slabs for office/facility installations.

### 5. Construction of carpark and delivery of amenities

The Bexley work area is near the Bexley North train station and urban centre. With commuter pressures on local infrastructure, it is critical to establish car parking and facilities on site at Bexley East (Construction Compound C6) as soon as possible to minimise any impacts to the community from construction personnel. These facilities will be placed adjacent to and on top of the existing ventilation building for the M5 east motorway.



Table 8: Site Establishment Works for Bexley (construction compounds C4-C6)

<p align="center"><b>Site Establishment Activities</b> Note: items may not occur in sequence order</p>	<p align="center"><b>Key Potential Environmental Impacts</b></p>	<p align="center"><b>Key Environmental Controls</b> <i>Note: Appendix A contains site specific measures for establishment. Appendix B contains project-wide measures for establishment. All operational construction mitigation measures are captured in CEMP and relevant sub Plans.</i></p>
<p>Site Establishment (May – July 2016)</p> <ul style="list-style-type: none"> <li>– Survey to install control and pick up existing levels</li> <li>– Installation of environmental controls including:                             <ul style="list-style-type: none"> <li>○ Site investigations</li> <li>○ Erosion and sedimentation control</li> </ul> </li> <li>– Removal of existing chain link and timber fencing</li> <li>– Realign the existing shared pedestrian and bicycle path</li> <li>– Installation of site fencing, hoarding and any necessary noise walls (including piling if required) along the boundary of the sites, lighting, and signage,</li> <li>– Minor clearing and grubbing</li> <li>– Stockpiling of topsoil and mulch</li> <li>– Minor earthworks for levelling site and providing access</li> <li>– Materials testing, classification and removal of unsuitable materials off site</li> <li>– Mobilisation of plant and equipment in preparation for diaphragm walls and sheetpiles including formation of laydown areas</li> <li>– Protection of existing services and utilities and relocations and connections where required</li> <li>– Foundations and sealing of surfaces</li> <li>– Installation of staff amenity structures and fit out</li> <li>– Installation of laydown and storage areas/facilities</li> <li>– Construction of on-site car park</li> </ul>	<p>Traffic/access impacts on Bexley Road, impacts to residential access on Flatrock Road and Jones Avenue.</p>	<p>Refer to Appendix A – A17, A19, A24 Refer to Appendix B – Traffic and Access Mitigation Measures A107 – A118</p>
	<p>Noise and vibration due to demolition and site establishment works. Sites C4 and C6 are immediately adjacent to residential areas. Potential worst-case NML exceedances of up to 13 dB(A) have been identified.</p> <p>Out of hours noise and vibration issues from approved night works. Section 5.1.1 details hours during establishment.</p>	<p>Refer to Appendix B – A114, A123, A126 Refer to Appendix B – Noise and Vibration Management Measures A82 – A102 Section 6.9 – Construction noise and vibration</p>
	<p>Potential disturbance of contaminated soils may include asbestos, heavy metals and hydrocarbons.</p> <p>Uncontrolled erosion and sediment run off.</p> <p>Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p>	<p>Refer to Appendix A - A20, A25 Refer to Appendix B – Soil and Water Management Measures (flooding and drainage) A155 – A166 Refer to Appendix B – Contamination Management Measures A167 – A176 Section 6.10 – Flood Mitigation Strategy</p>
	<p>Clearing of planted urban native and exotic vegetation (no clearing to occur for any trees identified to be retained by a relevant Tree Report)</p>	<p>Refer to Appendix A – A29 Refer to Appendix B – Flora and Fauna Mitigation Measures A125 – A154</p>



<p align="center"><b>Site Establishment Activities</b></p> <p align="center"><b>Note: items may not occur in sequence order</b></p>	<p align="center"><b>Key Potential Environmental Impacts</b></p>	<p align="center"><b>Key Environmental Controls</b></p> <p><i>Note: Appendix A contains site specific measures for establishment. Appendix B contains project-wide measures for establishment. All operational construction mitigation measures are captured in CEMP and relevant sub Plans.</i></p>
<ul style="list-style-type: none"> <li>- Traffic control works and establishment of gates and access points to Bexley Road</li> <li>- Installation of electrical substation including cabling and earthing</li> <li>- Relocation of existing monitoring station</li> <li>- Installation of mains water supply to site</li> <li>- Traffic control works and establishment of gates and access points to Wolli Avenue</li> </ul>	<p>Dust and amenity impacts from minor earthworks and storage of materials</p>	<p>Refer to Appendix A – A21, A22, A26, A32</p> <p>Refer to Appendix B – Air Quality Mitigation Measures A187 – A208</p> <p>Refer to Appendix B – Stockpile Management Mitigation Measures A218 - A228</p>
	<p>Waste management, including green waste, demolition waste and general construction</p>	<p>Refer to Appendix B – Waste and Resource Mitigation Measures A209 – A217</p>
	<p>Light spillage from minor night works required under ROL on surrounding residents</p> <p>Visual Impact from construction site, including hoardings.</p> <p>Impacts to the community through loss of open space and recreational areas</p> <p>Potential for shading or overshadowing</p>	<p>Refer to Appendix A - A22, A23, A27, A28, A31, A32</p> <p>Refer to Appendix B – Visual Amenity Mitigation Measures A119 - A124</p> <p>Refer to Appendix B – Community Mitigation Measures A103 – A106</p> <p>Refer to Section 3 for project consultation requirements</p>

### 5.3.3 Arncliffe

The work area at Arncliffe is located within the Kogarah Golf Course, adjacent to Marsh Street (refer to the Arncliffe Establishment Plan in Appendix F). This construction compound (C7) will become a major tunnelling and tunnel support site to enable construction of the new tunnels. Permanent operation facilities will also be located on this site and include a motorway operations complex with ventilation facility and water treatment plant.

The land to the east of the Arncliffe Site is Sydney Airport. The majority of land to the west of the site, across Marsh Street, is zoned low density residential with pockets of mixed use, high density residential and public recreation particularly to the north of Marsh Street. The Eve Street Cycle path is part of the greater Cook Park Trail which runs along the north western and south western boundary of the golf course. The Kogarah Golf Course is well connected to other recreational open space along the Cooks River, including Cahill Park to the north of Marsh Street and Riverine Park and Barton Park to the south of the existing M5 East Motorway.

The Arncliffe compound is in a low lying area potentially affected by overland flow from 20-year and 100-year ARI flood events. The site is within a disturbed terrain soil landscape with a likelihood of occurrence for acid sulfate soils. Kogarah Golf Course is underlain by the Botany Sands aquifer (shallow, unconfined aquifer with a high hydraulic conductivity consisting of clay, silt and medium grained sand). The Botany Sands aquifer is up to 15m thick at the golf course. The local groundwater table may be elevated above natural conditions due to irrigation at the Kogarah Golf Course. These levels are expected to be shallow (approximately 2-3m below ground level)

The Kogarah Golf Course has predominantly urban exotic and native vegetation; however Swamp Sclerophyll Forest has been identified with the worksite area and adjacent to the existing M5. The golf course and construction area contains Green and Golden Bell Frog habitat including foraging, sheltering and dispersal habitat. Breeding ponds were created adjacent to the existing M5 during its construction and these ponds continue to be monitored and managed to support this key population of threatened species. An Arncliffe Construction Compound Sub-plan has been prepared in accordance with MCoA D58 and includes specific management measures and procedures to be implemented at Arncliffe for the management of the Green and Golden Bell Frog,

**Table 9** details the key work activities scheduled to take place at Arncliffe as part of site establishment and includes aspects, potential impacts and control measures. These key site establishment activities include:

#### 1. Establishment of Green and Golden Bell Frog exclusion and salvage area

Frog exclusion and construction fencing is required to be placed around the construction footprint. This will enable the commencement of preclearance survey and salvage activities to remove Green and Golden Bell Frogs from the work area in accordance with the Green and Golden Bell Frog Plan of Management and Habitat Creation and Captive Breeding Plan (CoA D59). These activities are described in the Arncliffe Construction Compound Sub-plan and include progressive clearance and decommissioning of the existing ponds in the construction area and subsequent backfilling of ponds to prevent fauna re-entry to these areas. Following the decommissioning of ponds, a clearance survey will be conducted by the RMS Herpetologist prior to further works continuing. Minor access tracks will be installed during this time to enable access to the ponds with equipment (e.g. pumps)

#### 2. Hoarding, noise wall and golf ball netting installation,

Hoarding, noise walls and a section of golf ball netting are required at Arncliffe to maintain amenity for the community and golf course users. It is proposed that these are installed early to provide continuity in amenity. The noise walls and hoarding are also controls for minimising impacts to the breeding ponds of the Green and Golden Bell Frog. Some piling for these environmental controls may be necessary.

#### 3. Vegetation clearing and site preparation

Clearing of vegetation within the site boundaries is required to enable site drainage works (including erosion and sediment controls) and levelling to mitigate potential flood impacts. These works will also enable the installation of facilities and slabs (carpark, office, amenities, workshop etc), laydowns (for the arrival of materials and equipment that will be required for future construction works). It will also enable the commencement of works on site access roads and slabs.



#### 4. Treatment and disposal of Acid Sulfate Soils

A phase 2 contamination report has identified acid sulfate soils within the construction footprint at Arncliffe. Works are required to set up treatment pads, stockpile areas with bunding and clean water diversions and suitable access to enable appropriate and efficient handling, treatment, storage and/or disposal of this material. Further detail on Acid Sulfate Soil management for the Arncliffe Site is within the Arncliffe Construction Compound Sub-plan.

#### 5. Service and utility installation and reticulation

Services for site operation including water, sewer, stormwater and telecommunications will be installed during site establishment activities. This work will include some trenching works. Office and amenity power during this time will be from generators, but site preparations will be made for future power requirements.



Table 9: Site Establishment Works for Arncliffe (construction compound C7)

<p style="text-align: center;"><b>Site Establishment Activities</b> Note: items may not occur in sequence order</p>	<p style="text-align: center;"><b>Key Potential Environmental Impacts</b></p>	<p style="text-align: center;"><b>Key Environmental Controls</b></p> <p><i>Note: Appendix A contains site specific measures for establishment. Appendix B contains project-wide measures for establishment. All operational construction mitigation measures are captured in CEMP and relevant sub Plans.</i></p>
<p>Establishment (May – July 2016)</p> <ul style="list-style-type: none"> <li>- Survey to install control and pick up existing levels</li> <li>- Installation of environmental controls including:                             <ul style="list-style-type: none"> <li>o Further site investigations</li> <li>o Erosion and sedimentation control</li> <li>o Delineation of sensitive areas</li> </ul> </li> <li>- Installation of frog exclusion fencing</li> <li>- Dewater and backfill existing golf course ponds</li> <li>- Installation of site fencing, hoarding and any necessary noise walls along the boundary of the compound, including piling if required</li> <li>- Clearing and grubbing, tree removal and stockpiling of topsoil and mulch</li> <li>- Minor earthworks for ASS management, site levelling, access tracks &amp; preparation works to accommodate site layout</li> <li>- Mobilisation of plant and equipment in preparation for diaphragm walls and sheetpiles including formation of laydown areas</li> <li>- Materials testing, classification and removal of unsuitable materials off site</li> <li>- Construction of drainage and erosion and sediment control structures</li> </ul>	<p>Traffic/access impacts on Marsh Road</p>	<p>Refer to Appendix A – A39</p> <p>Refer to Appendix A Table A2 - Traffic and Access Mitigation Measures A107 – A118</p>
	<p>Noise and vibration due to site establishment works. The site is within 40 m of residential areas. Potential worst-case NML exceedances of up to 15 dB(A) have been identified for site establishment works.</p>	<p>Refer to Appendix A – A35, A40</p> <p>Refer to Appendix B - Noise and Vibration Management Measures A82 – A102</p>
	<p>Uncontrolled erosion and sediment run off.</p> <p>Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p> <p>Potential disturbance of ASS.</p>	<p>Refer to Appendix A – A34, A36, A37, A38</p> <p>Refer to Appendix B – Soil and Water Management Measures (flooding and drainage) A155 – A166</p> <p>Refer to Appendix B – Contamination Management Measures A167 - A176</p> <p>Section 6.10– Flood Mitigation Strategy</p> <p>Arncliffe Construction Compound Sub-plan</p>



<p style="text-align: center;"><b>Site Establishment Activities</b></p> <p style="text-align: center;"><b>Note: items may not occur in sequence order</b></p>	<p style="text-align: center;"><b>Key Potential Environmental Impacts</b></p>	<p style="text-align: center;"><b>Key Environmental Controls</b></p> <p><i>Note: Appendix A contains site specific measures for establishment. Appendix B contains project-wide measures for establishment. All operational construction mitigation measures are captured in CEMP and relevant sub Plans.</i></p>
<ul style="list-style-type: none"> <li>including hardstands, pavements, kerb and gutter and fencing</li> <li>- Protection of existing services and utilities and relocations and connections where required</li> <li>- Installation of staff amenity structures and fit out</li> <li>- Installation of workshop structures and fit out</li> <li>- Installation of laydown and storage areas/facilities</li> <li>- Installation of water treatment plant</li> <li>- Installation of fuel storage and re-fuelling bay</li> <li>- Installation of electrical substation including cabling and earthing</li> <li>- Installation of mains water supply to site</li> <li>- Preparation of on-site car park</li> <li>- Traffic control works and establishment of gates and access points to Marsh Street</li> </ul>	<p>Dust impacts from clearing and grubbing, earthworks and spoil removal and site establishment activities.</p>	<p>Refer to Appendix A – A37</p> <p>Refer to Appendix B – Air Quality Mitigation Measures A187 – A208</p> <p>Refer to Appendix B – Stockpile Management Mitigation Measures A218 - A228</p>
	<p>Clearing and grubbing of planted urban native and exotic vegetation (no clearing of any trees identified to be retained by the relevant Tree Report)</p> <p>Direct impacts to Green and Golden Frog breeding, sheltering, foraging and dispersal habitat</p> <p>Green and Golden Bell Frog injury/mortality</p> <p>Impacts to unexpected Threatened Species</p>	<p>Refer to Appendix A – A33, A34, A41</p> <p>Refer to Appendix B – Flora and Fauna Mitigation Measures A125 - A154</p> <p>Refer to Appendix C-Arncliffe Construction Compound Sub-plan</p>
	<p>Waste management, including green waste, demolition waste and general construction.</p>	<p>Refer to Appendix B – Waste and Resource Mitigation Measures A209 – A217</p>
	<p>Loss of recreational space within Kogarah Golf Course</p>	<p>Refer to Appendix B – Visual Amenity Mitigation Measures A119 - A124</p>
	<p>Light spillage from night works and mobile lighting on surrounding receivers.</p> <p>Visual Impact of construction site, including hoardings</p>	<p>Refer to Appendix B – Community Mitigation Measures A103 – A106</p>

### 5.3.4 St Peters

The site establishment work areas at St Peters are located in and around the former Alexandria Landfill Facility (ALF), east of the Princes Hwy, and between Campbell Road and Canal Road (refer to St Peters Establishment Plan in Appendix F). This area includes Construction Compounds C8-C11. Pre-construction works include the establishment of these facilities and preparations for the Community Information Centre which will be based on site, fronting Burrows road. During construction of the project, construction compounds C8-C11 will support the: cut and cover tunnel works at Canal Road; tunnelling and tunnelling support works from within the ALF; landfill closure and St Peters Interchange works; and support for civil and road upgrade works. During operation, St Peters will house a motorway operations complex, including the St Peters ventilation outlet.

The St Peters works area is zoned as general industrial. The Princes highway borders north of the site and Canal Road borders west of the site. Canal Road is a key arterial route servicing the Sydney CBD as well as the Sydney Airport and Port Botany. Alexandria Canal is located south-east of the work area, across Burrows Road. The site exists in an area of disturbed terrain, being a former landfill and brickpit. The Botany Sands aquifer underlies Alexandria Landfill (up to approximately 10m thick) and is influenced by two existing groundwater extraction schemes, the landfill leachate pumping system and discharge to landfill and Alexandria Canal. The St Peters works area is largely cleared and has the potential to demonstrate a number of noxious weeds. Sydney Park is located north-east of the works area and is a regionally significant open space and valuable community asset.

Table 10 details the key work activities scheduled to take place at St Peters as part of site establishment activities and includes aspects, potential impacts and control measures. These key site establishment activities include:

#### 1. Installation of site access

New site access points are required on Burrows Road. These access points will provide access into the Alexandria Landfill Site (ALF), access to site offices and facilities for construction compounds C10 and C11; and access to the new Community Information Centre and car park to be installed at Burrows Road.

#### 2. Establish offices, facilities and community information centre

Installation of facilities is required at the previous council depot site adjacent to Burrows Road (C10 and C11), with supporting facilities at C8 (cut & cover, tunnelling and tunnel support site: refer to St Peters Establishment Plan in Appendix F). At C11, this work will include the installation of a community information centre, site offices and amenities. Works required for these activities included minor levelling and earthworks, installation of drainage, hardstands and pavements, installation of services (water, sewer, stormwater, power and telecommunications); and provision of car parks and site access ways.

#### 3. Installation of drainage and erosion and sediment control devices on site.

Minor clearing and earthworks are required to install new drainage and erosion and sediment control devices. This includes work at the base of the landfill area to contain and collect water for treatment and disposal. Minor clearing and grubbing works are also required for the maintenance and management of stockpiles that are located on site.

#### 4. Construction of a access tracks

An access track is required to the floor of the former brickpit to enable access during construction works. This work will involve some cut and fill earthworks to provide an appropriately graded and stable track from the tunnel portal area and up to the Burrows Road access point. This track is marked on the St Peters Establishment Plan in Appendix F. Installation of this access track will also include installation of drainage devices for water management on this track.

#### 5. Stabilisation of portal area

Works are required on the western portion of site to stabilize an area near the Princes Highway. This area been stabilised with temporary measures, and these require replacement for longer term use of the site. This will include limited installation of rock bolts and shotcrete in areas near the tunnel portal. These works will not occur in the area of exposed rock face that is subject of the St Peters



Brick Pit Geological Site during site establishment (designated No-Go zone), and will focus on the area south of this formation.

## 6. Demolition of buildings on Canal Road

The buildings on Canal Road near the intersection of Canal Road require demolition for the installation of construction compound C8 (excluding the Dynamo service garage which will be protected throughout the project works). Hoarding will be placed along Canal Road and the Princes Highway as part of these works. The slab will be retained during site establishment and will support the location of the offices and facilities required for this compound which will also be installed. Minor tree clearing is also required along with the relocation of a sewer line in this location to enable the installation of hoarding and noise walls around this compound site that will enable the cut and cover works for tunnel portals.



Table 10: Site Establishment Works for St Peters (construction compounds C8, C9, C10 and C11)

<p style="text-align: center;"><b>Site Establishment Activities</b></p> <p style="text-align: center;">Note: items may not occur in sequence order</p>	<p style="text-align: center;"><b>Key Potential Environmental Impacts</b></p>	<p style="text-align: center;"><b>Key Environmental Controls</b></p> <p style="text-align: center;"><i>Note: Appendix A contains site specific measures for establishment. Appendix B contains project-wide measures for establishment. All operational construction mitigation measures are captured in CEMP and relevant sub Plans.</i></p>
<p>Establishment (May 2016 - September 2017)</p> <ul style="list-style-type: none"> <li>- Survey to install control and pick up existing levels</li> <li>- Installation of environmental controls including:                             <ul style="list-style-type: none"> <li>o Site investigations</li> <li>o Erosion and sedimentation control</li> <li>o Delineation of sensitive areas</li> </ul> </li> </ul>	<p>Traffic/access impacts on Canal Road, Campbell Road and Burrows Road</p> <p>Public transport impacts including adjustment to nearby bus stop on Canal Road southbound (east of Princes Highway). Permanently relocated further south along Canal Road.</p>	<p>Refer to Appendix A – A44, A49, A57, A60</p> <p>Refer to Appendix B - Traffic and Access Mitigation Measures A107 – A118</p>
<ul style="list-style-type: none"> <li>- Installation of site fencing, hoarding and any necessary noise walls, including piling if required</li> <li>- Embankment stabilisation</li> <li>- Minor clearing</li> <li>- Earthworks for access track installation and stabilisation of western embankment</li> <li>- Demolition of existing buildings including removal of support structures including offsite disposal of waste</li> </ul>	<p>Noise and vibration due to site establishment works. Site C9 is immediately adjacent to sensitive receivers (industrial) and residential receivers are located within 75 m of site C8. Potential worst-case NML exceedances of up to 18 dB(A) have been identified.</p> <p>Out of hours noise and vibration issues from approved night works. Section 5.1.1 details hours during establishment.</p>	<p>Refer to Appendix A – A43, A45, A51</p> <p>Refer to Appendix A Table A2 - Noise and Vibration Management Measures A82 - A102</p>
<ul style="list-style-type: none"> <li>- Construction of access roads including minor earthworks, pavements, drainage and fencing</li> <li>- Protection of existing services, utilities and relocations, disconnections and connections where required</li> <li>- Preparation earthworks (i.e. levelling) to accommodate site layout</li> <li>- Service investigation and installation including potholing, hand digging, and excavator works.</li> <li>- Installation of staff amenity structures and fit out</li> </ul>	<p>Uncontrolled erosion and sediment run off.</p> <p>Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p> <p>Potential disturbance heavy metals, hydrocarbon, semi-volatile organic compounds (SVOCs), Polychlorinated biphenyls (PCBs), dioxins and total cyanide.</p> <p>Disturbance of known contamination at the</p>	<p>Refer to Appendix A – A48, A53, A54, A55, A56, A58, A59</p> <p>Refer to Appendix B – Soil and Water Management Measures (flooding and drainage) A155 - A166</p> <p>Refer to Appendix B – Contamination Management Measures A167 - A176</p> <p>Section 6.10– Flood Mitigation Strategy</p> <p>Section 7– Incident Management</p>



<p style="text-align: center;"><b>Site Establishment Activities</b></p> <p style="text-align: center;">Note: items may not occur in sequence order</p>	<p style="text-align: center;"><b>Key Potential Environmental Impacts</b></p>	<p style="text-align: center;"><b>Key Environmental Controls</b></p> <p style="text-align: center;"><i>Note: Appendix A contains site specific measures for establishment. Appendix B contains project-wide measures for establishment. All operational construction mitigation measures are captured in CEMP and relevant sub Plans.</i></p>
<ul style="list-style-type: none"> <li>- Installation of workshop structures and fit out</li> <li>- Installation of laydown and storage areas/facilities</li> <li>- Connection of services and utilities such as water, sewer, power, stormwater and telecommunications</li> <li>- Erection of decking and walkways, construction of concrete paths</li> <li>- Installation of site security devices</li> <li>- Installation of on-site car park</li> </ul>	<p>Alexandria Landfill.</p>	
	<p>Dust impacts from clearing and grubbing, earthworks and spoil removal and site establishment activities.</p>	<p>Refer to Appendix B – Air Quality Mitigation Measures A187 - A208</p> <p>Refer to Appendix B – Stockpile Management Mitigation Measures A218 - A228</p>
	<p>Clearing and grubbing of planted urban native and exotic vegetation (no clearing of any trees identified to be retained by the relevant Tree Report).</p> <p>Demolition of derelict buildings that has the potential to impact microbat habitat.</p>	<p>Refer to Appendix A - A42, A52</p> <p>Refer to Appendix B – Flora and Fauna Mitigation Measures A125 - A154</p>
	<p>Waste management, including green waste, demolition waste and general construction.</p>	<p>Refer to Appendix B – Waste, Resource and Hazardous Materials Mitigation Measures A209 - A217</p>
	<p>Light spillage from night works and mobile lighting on surrounding receivers.</p> <p>Visual Impact of construction site, including hoardings</p>	<p>Refer to Appendix B – Visual Amenity Mitigation Measures A119 – A124</p> <p>Refer to Appendix B – Community Mitigation Measures A103 – A106</p>



#### 5.4 Construction activities at ancillary facilities

Table 11 to Table 23 provides a detailed description of activities to be undertaken at ancillary facilities during the construction phase of the project. The tables provide the environmental aspects, potential impacts and corresponding control measures that relate to these activities, including any locational criteria (Table 6) that are not met for each site. Construction activities will be managed through both this AFMP and through the CEMP and Sub-plans. Appendix G provides indicative site layouts for the ancillary facilities during the construction phase. Note that minor changes to site layouts C1, C5, C7 and C11 have been made due to refinements identified during detailed design.

Management measures that relate to management of the ancillary facilities during the construction phase are provided in the relevant sub-plans as identified in Table 11 to Table 23.

Table 11: Key Work Activities Proposed During Construction - C1 Kingsgrove North Compound

Site Description	Existing Environment	Key Work Activities (and indicative period) Note: items may not occur in sequence order	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Kingsgrove North construction compound (C1) would be located on the northern side of the existing M5 East Motorway between Canterbury Golf Course and Garema Circuit, Kingsgrove. The Kingsgrove North construction compound site is located within Beverly Grove Park.</li> <li>Potential sources of contamination (Calcium phosphate, calcium sulphate, copper chloride, sulphur, sulfuric acid, metals (boron, cadmium, copper, magnesium, molybdenum), herbicides, fungicides, asbestos, hydrocarbons, pesticides and PCBs) relate to historical fertiliser manufacturing and storage for supply, brick and pipe work manufacturing, uncontrolled filling and various commercial / industrial land uses</li> <li>The site would service the construction works between the western limit of works and the eastbound tunnel portal, including construction of the dive structures and cut-and-cover tunnel sections and realignment of the M5 Motorway to accommodate the tunnel portals.</li> <li>This site also provides an off-motorway connection to the Kingsgrove South Compound, via the Kindilan underpass, removing the need to travel on local roads.</li> <li>Temporary noise barrier will be constructed along the northern boundary of the compound.</li> </ul>	<ul style="list-style-type: none"> <li>Existing land uses surrounding the compound site includes the M5 East Motorway corridor, the local and regional road network, residential and industrial zonings to the north.</li> <li>The site currently comprises open space known as Beverly Grove Park North, within the M5 Linear Park. The compound site is largely in an area of open space currently used for public recreation.</li> <li>Beverly Grove bushland contains Cooks River/Castlereagh Ironbark Forest, a critically Endangered Ecological Community (EEC).</li> <li>To the north-west of the compound is the Canterbury Golf Course.</li> <li>The site is adjacent to the M5 East Motorway. The M5 East Motorway is subject to heavy traffic flows and congestion during commuter peak periods and business hours.</li> <li>The vegetation within the site consists of urban exotics and natives.</li> <li>The mapped soil type within the compound site is primarily of the Residual Blacktown soil landscape with the eastern extent of the site within soils mapped as Disturbed terrain.</li> <li>The existing shared pedestrian and cycle path currently passing through the site will be temporarily realigned to generally follow the existing temporary noise barrier along the boundary of the compound.</li> </ul>	<p><b>Construction activities (June 2016-June 2019) in accordance with CEMP including:</b></p> <ul style="list-style-type: none"> <li>Operation of staff amenities, parking and site infrastructure generally</li> <li>Operation of workshop</li> <li>Deliveries including concrete and shotcrete</li> <li>Stockpile/laydown</li> <li>Stockpiling of mulch and topsoil</li> <li>Spoil handling</li> <li>Storage of plant and equipment not in use.</li> <li>Storage of fuels and chemicals</li> <li>Cut and cover/dive structures: earthworks, piling, installation of capping beams and roof structure</li> <li>Construction of bridge structures and retaining walls</li> <li>Roads and ramps: earthworks, road widening, pavements, retaining walls, barriers, road furniture, ITS</li> </ul> <p>In addition, for tunnelling works:</p> <ul style="list-style-type: none"> <li>Operation of site offices</li> <li>Piling, shaft excavation and support.</li> <li>Installation and operation of spoil handling facilities and acoustic sheds</li> <li>Launch of a road header</li> <li>Tunnel: excavation, blasting and profiling (as per EPL)</li> <li>Spoil management and offsite removal utilising spoil shed</li> <li>Tunnel support activities including provision of ventilation, water treatment plant, water supply, electricity supply</li> <li>Tunnel fit out: rock sawing and hammering, permanent services and finishes, paving, install road furniture</li> <li>Tunnel support activities including provision of ventilation, water treatment plant, water supply, electricity supply</li> <li>Tunnel fit out: rock sawing and hammering, permanent services and finishes, paving, install road furniture</li> <li>Operation of workshop</li> <li>Spoil stockpiling and management</li> <li>Backfilling of temporary decline</li> </ul>	<p>Management of spoil from tunnelling and shaft excavation</p>	<p>Construction Soil and Water Management Plan Spoil Management Strategy</p>
		<p>Construction traffic/access impacts on M5 East Motorway and surrounding streets including temporary traffic diversions Speed limit reduction along M5 East and some local roads during high construction traffic periods particularly for increased heavy vehicle movements.</p>	<p>Construction Traffic and Access Management Plan Site Drawings and Traffic Control Plans (TCPs), where required</p>	
		<p>Noise and vibration, including out of hours impacts from compound operation, tunnelling, spoil handling and construction works.</p>	<p>Construction Noise and Vibration Management Plan</p>	
		<p>Dust resulting from stockpiling activities and spoil handling</p>	<p>Construction Air Quality Management Plan</p>	
		<p>Waste management, including green waste, demolition waste and general construction</p>	<p>Construction Waste and Resource Management Plan</p>	
		<p>Uncontrolled Erosion and Sediment run off Spills of fuel, chemicals etc</p>	<p>Construction Soil and Water Quality Management Plan</p>	
		<p>Light spillage from night works and mobile lighting on surrounding residents Visual Impact of construction site, including hoardings</p>	<p>Urban Design and Landscaping Plan</p>	
<p><b>Decommissioning (Apr 2018 – Dec 2019)</b></p> <ul style="list-style-type: none"> <li>Removal of site amenities, plant and equipment</li> </ul> <p>Rehabilitation and landscaping for return to use as a public reserve</p>	<p>Weed dispersal and growth</p>	<p>Construction Flora and Fauna Management Plan (Weed and Pathogen Management Strategy)</p>		

Table 12: Key Work Activities Proposed During Construction - C2 Kingsgrove South Compound

Site Characteristics	Existing Environmental	Key Work Activities (and indicative period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Kingsgrove South construction compound would be located to the south of existing M5 East Motorway, within Beverly Grove Park.</li> <li>The vegetation within the site consists of parkland urban natives and exotics.</li> <li>The construction compound would primarily be used to service the construction of the western surface worksite.</li> <li>During operation, the site would be occupied by the Kingsgrove South motorway operations complex (MOC1) including the western ventilation facility.</li> <li>Pedestrian and cyclist access via Kindilin underpass would be maintain during construction period except for the period of approximately four weeks where the underpass would be extended. Alternative access would be provided during this period via Karingal Street and Coolangatta Road.</li> <li>Potential contamination (M5 Noise mounds)</li> </ul>	<ul style="list-style-type: none"> <li>The local area is characterised by open space as well as commercial and low density residential development. The site is immediately adjacent to commercial properties</li> <li>Urban native and exotic vegetation. The site is adjacent to the M5 East Motorway. The Motorway is subject to heavy traffic flows and congestion during commuter peak periods and business hours</li> <li>The construction compound is located in an area potentially affected by overland flow, located within 50m of Wolli Creek requiring a Flood Management Plan/strategy.</li> <li>The mapped soil type for the wider area is primarily of the Blacktown soil landscape but the site lies in disturbed terrain soil landscape.</li> </ul>	<p><b>Construction (June 2016 – Dec 2019)</b></p> <p>Construction activities in accordance with CEMP including:</p> <ul style="list-style-type: none"> <li>Reconfiguration of traffic access</li> <li>Operation of staff amenities and parking</li> <li>Surface road works</li> <li>Deliveries</li> <li>Stockpile/laydown</li> <li>Storage of plant and equipment not in use</li> <li>Storage of fuels and chemicals</li> <li>Construction of the permanent Kingsgrove South motorway operations complex (MOC1)</li> <li>Decommissioning includes removal of site amenities</li> <li>Demobilisation, rehabilitation and landscaping.</li> </ul>	<p>Traffic/access impacts on M5 East Motorway and surrounding streets including temporary traffic diversions</p>	<p>Construction Traffic and Access Management Plan</p> <p>Site Drawings and Traffic Control Plans (TCPs), where required</p>
			<p>Noise and vibration, including out of hours impacts from compound operation and construction works on adjacent residential areas from deliveries, site personnel and general site use.</p> <p>Noise and vibration impacts to sensitive receivers from tunnelling, blasting and spoil handling activities.</p>	<p>Construction Noise and Vibration Management Plan</p> <p>Spoil Management Strategy</p> <p>Blast Management Strategy</p>
			<p>Waste management, including green waste, demolition waste and general construction</p>	<p>Construction Waste and Resource Management Plan</p>
			<p>Dust resulting from stockpiling activities</p>	<p>Construction Air Quality Management Plan</p>
			<p>Uncontrolled Erosion and Sediment run off</p> <p>Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p>	<p>Construction Soil and Water Quality Management Plan</p>
			<p>Light spillage from night works and mobile lighting on surrounding residents</p> <p>Visual Impact of construction site, including hoardings</p>	<p>Urban Design and Landscape Plan</p>
			<p>Weed dispersal and growth</p>	<p>Construction Flora and Fauna Management Plan (Weed and Pathogen Management Strategy)</p>

Table 13: Key Work Activities Proposed During Construction – (C3 Commercial Road Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and indicative period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Commercial Road construction compound would be located between Tallawalla Street and Commercial Road, Kingsgrove, on the southern side of the Motorway. The site would service surface infrastructure construction works between the western limit of works and the tunnel portals.</li> <li>The vegetation within the site consists of urban exotics and natives.</li> <li>Potential sources of contamination (Calcium phosphate, calcium sulphate, copper chloride, sulphur, sulfuric acid, metals (boron, cadmium, copper, magnesium, molybdenum), herbicides, fungicides, asbestos, hydrocarbons, pesticides and PCBs) relate to historical fertiliser manufacturing and storage for supply, brick and pipe work manufacturing, uncontrolled filling and various commercial / industrial land uses.</li> <li>An acoustic shed no higher than 20m will be established containing the shaft entry, a spoil stockpile area and sufficient space for one heavy vehicle to be loaded with spoil.</li> <li>A 4m hoarding would be installed along the eastern, southern and western boundaries of the site to provide noise attenuation.</li> </ul>	<ul style="list-style-type: none"> <li>The local area surrounding the site is primary light industrial.</li> <li>The site is adjacent to the M5 Motorway. The Motorway is subject to heavy traffic flows and congestion during commuter peak periods and business hours.</li> <li>The East Hills, Airport and inner West railway line passes in an east-west direction approximately 100m to the south of the compound site. Kingsgrove Station is located approximately 150m to the east.</li> <li>Smith Reserve is located immediately south of the East Hills, Airport and inner West railway lines. This reserve/park contains netball courts and the Kingsgrove early childhood health centre.</li> <li>Wolli Creek is located immediately north of the compound, running adjacent along the southern boundary of the existing M5 East Motorway.</li> <li>A small area of land zoned Public Recreation associated with the Wolli Creek corridor is located to the north east of the site.</li> <li>Kingsgrove East Urban Conservation Area is located immediately south of the East Hills, Airport and inner West railway line, approximately 150m from the compound.</li> <li>Compound located in an area potentially affected by overland flow from a 20-year and 100-year ARI flood event, and is within 50m of Wolli Creek.</li> <li>The mapped soil type within the area is primarily Disturbed terrain.</li> </ul>	<p><b>Construction (Jan 2017 – Dec 2019)</b></p> <p>Construction activities in accordance with CEMP including:</p> <ul style="list-style-type: none"> <li>Piling, shaft excavation and support.</li> <li>Installation and operation of spoil handling facilities and acoustic sheds</li> <li>Operation of staff amenities, parking and site infrastructure generally</li> <li>Operation of workshop</li> <li>Deliveries, including concrete and shotcrete</li> <li>Stockpile/laydown</li> <li>Storage of plant and equipment not in use</li> <li>Storage of fuels and chemicals</li> <li>Shaft excavation</li> <li>Launch of a road header</li> <li>Tunnelling: excavation, blasting and profiling (as per EPL)</li> <li>Spoil management and offsite removal utilising spoil shed</li> <li>Tunnel support activities including provision of ventilation, water treatment plant, water supply, electricity supply</li> <li>Tunnel fit out: rock sawing and hammering, permanent services and finishes, paving, install road furniture.</li> </ul>	<p>Traffic/access impacts on Commercial Road and Kingsgrove Road.</p>	<p>Construction Traffic and Access Management Plan</p> <p>Site Drawings and Traffic Control Plans (TCPs), where required</p>
		<p>Noise and vibration, including out of hours impacts from compound operation and construction works on adjacent residential areas from deliveries, site personnel and general site use.</p> <p>Noise and vibration impacts to sensitive receivers from tunnelling, blasting and spoil handling activities.</p>	<p>Construction Noise and Vibration Management Plan</p>	
		<p>Dust resulting from stockpiling activities and spoil handling</p>	<p>Construction Air Quality Management Plan</p>	
		<p>Waste management, including green waste, demolition waste and general construction</p>	<p>Construction Waste and Resource Management Plan</p>	
		<p>Uncontrolled Erosion and Sediment run off</p> <p>Spills of fuel, chemicals etc</p>	<p>Construction Soil and Water Quality Management Plan</p>	
		<p>Light spillage from night works and mobile lighting on surrounding residents</p> <p>Visual Impact from construction site, including hoardings and acoustic/non-acoustic shed</p> <p>Impacts to the community through loss of open space and recreational areas</p> <p>Potential for shading or overshadowing</p>	<p>Urban Landscape and Design Plan</p>	
		<p><b>Decommissioning (late 2019)</b></p> <ul style="list-style-type: none"> <li>Removal of site amenities, offices, plant and equipment, sheds and fencing. Rehabilitation and landscaping of residual land</li> </ul>	<p>Weed dispersal and growth</p>	<p>Construction Flora and Fauna Management Plan (Weed and Pathogen Management Strategy)</p>

Table 14: Key Work Activities Proposed During Construction – (C4 Bexley Road North Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and indicative Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Bexley Road North construction compound is located on the western side of Bexley Road and north of the M5 East motorway. It is located within an area of fenced vacant land bound by the intersection of Bexley Road and Poole Street in the north, Bexley Road in the east, the M5 East motorway in the south and residential properties along Flatrock Road and Jones Avenue on the west.</li> <li>An acoustic shed no higher than 20m will be established containing the shaft entry, a spoil stockpile area and sufficient space for two heavy vehicles to be loaded with spoil.</li> <li>Access to the site would be off Bexley Road, left in, left-out only.</li> <li>A temporary noise barrier about 4.5m high will be constructed along the boundary of the site.</li> <li>Pedestrian access along Bexley Road and within the M5 Linear Park will be maintained during construction.</li> </ul>	<ul style="list-style-type: none"> <li>The compound is north of the existing M5 East Motorway and west of Bexley Road.</li> <li>Bexley Road North construction compound is located in an area potentially affected by overland flow from a 20-year and 100-year ARI flood event.</li> <li>The mapped soil type within the area is primarily Erosional Gynea.</li> <li>Land surrounding the Bexley Road surface works area is predominantly residential, zoned medium density to the west of Bexley Road, north of the M5 East motorway, and low density to the west of Bexley Road.</li> <li>Beaumont Park is located north-west of the compound.</li> <li>The Clemton Park Urban conservation Area is located east of the compound.</li> <li>Bexley North Station and Wollli Creek Culvert are listed on the s170 heritage register for TfNSW and RMS respectively.</li> <li>The compound site is north-east of Bexley North Railway Station (approximately 250m) and the East Hills, Airport and inner West railway line.</li> <li>Urban exotic and native vegetation is located on the western boundary of the compound.</li> <li>The compound site contains uncontrolled fill material with the potential for asbestos, heavy metals and hydrocarbons.</li> </ul>	<p><b>Construction (June 2016 – December 2019)</b></p> <p>Construction activities in accordance with CEMP including:</p> <ul style="list-style-type: none"> <li>Piling, shaft excavation and support.</li> <li>Installation and operation of spoil handling facilities and acoustic sheds</li> <li>Operation of staff amenities, parking and site infrastructure generally</li> <li>Operation of workshop</li> <li>Deliveries, including concrete and shotcrete</li> <li>Stockpile/laydown.</li> <li>Storage of plant and equipment not in use</li> <li>Storage of fuels and chemicals</li> <li>Launch of road headers</li> <li>Tunnelling: excavation, blasting and profiling (as per EPL)</li> <li>Spoil management and offsite removal utilising spoil shed</li> <li>Tunnel support activities including provision of ventilation, water treatment plant, water supply, electricity supply</li> <li>Tunnel fit out: rock sawing and hammering, permanent services and finishes, paving, install road furniture</li> <li>Removal of site amenities, offices, plant and equipment, sheds and fencing.</li> <li>Rehabilitation and landscaping of residual land</li> </ul>	<p>Traffic/access impacts on Bexley Road, impacts to residential access on Flatrock Road and Jones Avenue.</p>	<p>Construction Traffic and Access Management Plan</p>
		<p>Noise and vibration, including out of hours impacts from compound operation and construction works on adjacent residential areas from deliveries, site personnel and general site use.</p> <p>Noise and vibration impacts to sensitive receivers from tunnelling, blasting and spoil handling activities.</p>	<p>Construction Noise and Vibration Management Plan</p>	
		<p>Dust resulting from stockpiling activities and spoil handling</p>	<p>Construction Air Quality Management Plan</p>	
		<p>Direct/indirect impacts on heritage-listed conservation area</p>	<p>Construction Heritage Management Plan</p>	
		<p>Waste management, including green waste, demolition waste and general construction</p>	<p>Construction Waste and Resource Management Plan</p>	
		<p>Uncontrolled erosion and sediment run off.</p> <p>Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p>	<p>Construction Soil and Water Quality Management Plan</p> <p>Flood Management Strategy</p>	
		<p><b>Decommissioning (late 2019)</b></p> <ul style="list-style-type: none"> <li>Removal of site amenities, offices, plant and equipment, sheds and fencing.</li> <li>Rehabilitation and landscaping of residual land</li> </ul>	<p>Weed dispersal and growth</p>	<p>Construction Flora and Fauna Management Plan (Weed and Pathogen Management Strategy)</p>

Table 15: Key Work Activities Proposed During Construction – (C5 Bexley Road South Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and indicative Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Bexley Road South construction compound is located within Kingsgrove Avenue Reserve on the western side of Bexley Road to the south of the M5 East Motorway tunnel in an area of open space, currently used for public recreation.</li> <li>The site would be used for tunnelling support during construction and Bexley Road South motorway operations complex (MOC2) for operation.</li> <li>An acoustic shed no higher than 20m will be established containing the shaft entry, a spoil stockpile area and sufficient space for two heavy vehicles to be loaded with spoil.</li> <li>A 4.5m hoarding will be constructed along the Wollie Creek frontage of the site and a temporary noise barrier approximately 4.5m high would be constructed along all the other boundaries of the site.</li> <li>Access to and from the site is from Bexley Road (left in-left out arrangement). No parking provisions are provided at this compound site.</li> </ul>	<ul style="list-style-type: none"> <li>The Bexley Road South construction compound is located along the Wollie Creek canal, with the southern boundary of the compound adjacent to the canal.</li> <li>The compound is located in an area potentially affected by overland flow from a 20-year and 100-year ARI flood event.</li> <li>South of the site Coastal Sandstone Foreshores Forest currently exists.</li> <li>The Clemton Park Urban Conservation Area exists north of the site, east of Bexley Road.</li> <li>Bexley North Station is located south-east of the compound site and Wollie Creek Culvert located directly east of the site, close to the eastern boundary of the compound site.</li> <li>Both Bexley North Station and Wollie Creek culvert are listed on the s170 heritage register for TfNSW and RMS respectively.</li> <li>The Bexley North urban centre is situated on the southern side of the rail corridor, approximately 150m from the southern boundary of the compound site. It comprises of a small commercial area with retail and eatery outlets, community facilities (public library) and areas of open space.</li> <li>The site is within the Erosional Gynea soil landscape.</li> <li>Kingsgrove Avenue Reserve has the potential for uncontrolled fill containing the potential for asbestos, heavy metals and hydrocarbons.</li> </ul>	<p><b>Construction (June 2016 – December 2019)</b></p> <p>Construction activities in accordance with CEMP including:</p> <ul style="list-style-type: none"> <li>Piling, shaft excavation and support.</li> <li>Installation and operation of spoil handling facilities and acoustic sheds</li> <li>Operation of site offices and parking</li> <li>Deliveries, including shotcrete and concrete</li> <li>Oversize deliveries</li> <li>Operation of workshop</li> <li>Stockpile/laydown</li> <li>Storage of plant and equipment not in use</li> <li>Storage of fuels and chemicals</li> <li>Launch of road headers</li> <li>Tunnelling: excavation, blasting and profiling (as per EPL)</li> <li>Spoil management and offsite removal utilising spoil shed</li> <li>Tunnel support activities including provision of ventilation, water treatment plant, water and electrical supplies</li> <li>Tunnel fit out: rock sawing and hammering, permanent services and finishes, paving, install road furniture</li> <li>Construction of permanent operational facilities including emergency smoke extraction facility, operational water treatment facility, electricity distribution substation.</li> <li>Removal of site amenities, offices, plant and equipment, sheds and fencing.</li> <li>Rehabilitation and landscaping of residual land</li> </ul>	<p>Traffic/access impacts on Bexley Road and impacts to local roads.</p>	<p>Construction Traffic and Access Management Plan</p>
			<p>Noise and vibration, including out of hours impacts from compound operation and construction works on adjacent residential areas from deliveries, site personnel and general site use.</p> <p>Noise and vibration impacts to sensitive receivers from tunnelling, blasting and spoil handling activities.</p>	<p>Construction Noise and Vibration Management Plan</p>
			<p>Dust resulting from stockpiling activities and spoil handling</p>	<p>Construction Air Quality Management Plan</p>
			<p>Direct/indirect impacts on heritage-listed conservation area</p>	<p>Construction Heritage Management Plan</p>
			<p>Waste management, including green waste, demolition waste and general construction</p>	<p>Construction Waste and Resource Management Plan</p>
			<p>Uncontrolled erosion and sediment run off.</p> <p>Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p>	<p>Construction Soil and Water Quality Management Plan</p> <p>Flood Management Strategy</p>
			<p>Weed dispersal and growth</p>	<p>Construction Flora and Fauna Management Plan (Weed and Pathogen Management Strategy)</p>

Table 16: Key Work Activities Proposed During Construction – (C6 Bexley Road East Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and indicative Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Bexley Road East construction compound would be located on the eastern side of Bexley Road, south of the intersection with Wolli Avenue on land currently used to support the operation of the M5 East Motorway.</li> <li>The site will be used mainly for car parking and administrative support activities for the Bexley Road North construction compound (C4) and Bexley Road South compound (C5).</li> <li>A temporary noise barrier approximately 4.5m high would be constructed on the eastern boundary of the site.</li> <li>Temporary hoarding (4.5m) would be constructed on the southern and western boundaries of the site.</li> <li>The site would include a footpath for site staff to access the existing footpaths along Bexley Road and pedestrian bridge over Bexley Road.</li> <li>Vehicles would enter and exit the site off Wolli Avenue.</li> </ul>	<ul style="list-style-type: none"> <li>The Bexley Road East construction compound is located in close proximity to Wolli Creek, with the south-eastern boundary bordering the Wolli Creek riparian corridor bushland which has Coastal Sandstone Foreshores Forest and urban exotic and native species along the southern and eastern boundaries.</li> <li>The compound site is located within the Clemton Park Urban Conservation Area.</li> <li>Bexley North Station is located south of the compound site and Wolli Creek Culvert located directly south of the site.</li> <li>Both Bexley North Station and Wolli Creek culvert are listed on the s170 heritage register for TfNSW and RMS respectively.</li> <li>The Bexley North urban centre is situated on the southern side of the rail corridor, approximately 200m from the southern boundary of the compound site. It comprises of a small commercial area with retail and eatery outlets, community facilities (public library) and areas of open space.</li> <li>The site is within the Colluvial Hawkesbury and Erosional Gynea soil landscapes.</li> </ul>	<p><b>Construction (July 2016 – December 2019)</b></p> <p>Construction activities in accordance with CEMP including:</p> <ul style="list-style-type: none"> <li>Operation of site offices and parking</li> <li>Deliveries</li> <li>Storage of plant and equipment not in use</li> </ul>	Traffic/access impacts on Bexley Road	Construction Traffic and Access Management Plan
		Noise and vibration due to site establishment works. Out of hours noise and vibration issues from approved night works.	Construction Noise and Vibration Management Plan	
		Dust impacts from clearing and grubbing, earthworks and spoil removal and site establishment activities.	Construction Air Quality Management Plan	
		Clearing and grubbing of planted urban native and exotic vegetation Demolition of derelict buildings that has the potential to impact microbat habitat	Construction Flora and Fauna Management Plan	
		Waste management, including green waste, demolition waste and general construction.	Construction Waste and Resource Management Plan	
		Uncontrolled erosion and sediment run off. Spills of fuel, chemicals etc Potential flooding of compound site from overland flows from flood events. Disturbance from potential disturbance contamination.	Construction Soil and Water Management Plan	
		Direct impacts on Heritage Conservation area	Construction Heritage Management Plan	
		Light spillage from night works and mobile lighting on surrounding receivers. Visual Impact of construction site, including hoardings	Refer to Appendix B – Visual Amenity Mitigation Measures A119 - A124	
		<p><b>Decommissioning (late 2019)</b></p> <ul style="list-style-type: none"> <li>Removal of site amenities, offices and fencing.</li> <li>Rehabilitation and landscaping</li> </ul>	Weed dispersal and growth	Construction Flora and Fauna Management Plan (Weed and Pathogen Management Strategy)

Table 17: Key Work Activities Proposed During Construction – (C7 Arncliffe Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Arncliffe construction compound is located within the Kogarah Golf Course within a recreational area south of marsh Street and east of the junction with the M5 East Motorway.</li> <li>The site is for civil construction activities and for tunnelling support.</li> <li>During operation, the site would be occupied by the Arncliffe motorway operations complex (MOC3), including a ventilation facility and water treatment plant.</li> <li>Temporary hoarding noise wall of approximately 3m will be constructed along all northern and western street-facing boundaries of the compound. A 3m hoarding would be constructed along all other boundaries.</li> <li>In the southern section of the site will be used for tunnelling support including laydown areas, a construction water treatment plant, spoil stockpile and non-acoustic shed.</li> <li>In the northern half of compound, support for tunnelling works including access shaft and permanent infrastructure as part of the Arncliffe motorway operations centre (MOC3).</li> <li>Infrastructure in the northern section of compound will include staff and administrative facilities, laydown areas, construction water treatment plant, non-acoustic shed for shaft and stockpile with space for one heavy vehicle to be loaded.</li> </ul>	<ul style="list-style-type: none"> <li>Land to east of the compound is Sydney Airport. The majority of land to the west of the site is zoned low density residential with pockets of mixed use, high density residential and public recreation particularly to the north of Marsh Street. The Eve Street Cycle path is part of the greater Cook Park Trail which runs along the north western and south western boundary of the golf course.</li> <li>The Kogarah Golf Course is well connected to other recreational open space along the Cooks River, including Cahill Park to the north of Marsh Street and Riverine Park and Barton Park to the south of the existing M5 East Motorway.</li> <li>The Arncliffe compound is located in an area potentially affected by overland flow from a 20-year and 100-year ARI flood event requiring a flood management strategy.</li> <li>The site is within a disturbed terrain soil landscape with the likelihood of acid sulfate soils (ASS) being present. ASS may be excavated during earthworks with treatment required as part of any re-contouring or excavation works</li> <li>Kogarah Golf Course contains Green and Golden Bell Frog habitat including breeding pond, foraging, sheltering and dispersal habitat.</li> <li>The Kogarah Golf Course has predominantly urban Exotic and native vegetation. Immediately west of the existing M5 East Motorway contains Coastal Freshwater Swamp Forest and Coastal Flats Swamp Mahogany Forest.</li> <li>Cooks River is adjacent to the Kogarah Golf Course.</li> <li>The Cooks River Castlereagh Ironbark Forest and Cooks River are known Groundwater Dependant Ecosystems (GDEs).</li> <li>Historical land use activities at and</li> </ul>	<p><b>Construction (July 2016 – December 2019)</b></p> <p>Construction activities in accordance with CEMP including:</p> <ul style="list-style-type: none"> <li>Piling, shaft and decline excavation and support.</li> <li>Installation and operation of spoil handling facilities and acoustic sheds</li> <li>Operation of site offices and parking</li> <li>Deliveries, including shotcrete and concrete</li> <li>Oversize deliveries</li> <li>Operation of workshop</li> <li>Stockpile/laydown</li> <li>Storage of plant and equipment not in use</li> <li>Storage of fuels and chemicals</li> <li>Excavation of temporary decline access tunnel and shaft including:                             <ul style="list-style-type: none"> <li>Piling</li> <li>Use of excavators, rock-hammers and road headers</li> <li>Use of cranes</li> <li>Spoil removal</li> <li>Concrete work</li> </ul> </li> <li>Excavation and lining of permanent shaft</li> <li>Launch of road headers</li> <li>Tunnelling: excavation, blasting and profiling (as per EPL)</li> <li>Spoil management and offsite removal utilising spoil shed</li> <li>Tunnel support activities including provision of ventilation, water treatment plant, water and electrical supplies</li> <li>Tunnel fit out: rock sawing and hammering, permanent services and finishes, paving, install road furniture</li> <li>Construction of permanent operational facilities including emergency smoke extraction facility, operational water treatment facility, electricity distribution substation.</li> <li>Removal of site amenities, offices, plant and equipment, sheds and fencing.</li> <li>Rehabilitation and landscaping of residual land, including backfilling of temporary tunnel access dive and temporary tunnel access shaft.</li> </ul>	<p>Traffic/access impacts on Canal Road</p> <p>Public transport impacts including adjustment to nearby bus stop</p> <p>Noise and vibration from tunnelling activities, stockpile management and deliveries</p> <p>Out of hours noise and vibration issues from approved night works.</p> <p>Direct impacts on heritage-listed items</p> <p>Dust resulting from stockpiling activities and spoil handling</p> <p>Waste management, including green waste, demolition waste and general construction</p> <p>Uncontrolled Erosion and Sediment run off</p> <p>Spills of fuel, chemicals etc</p> <p>Light spillage from night works and mobile lighting on surrounding residents</p> <p>Visual Impact of construction site, including hoardings</p> <p>Loss of recreational area within Kogarah Golf Course</p> <p>Weed dispersal and growth</p>	<p>Construction Traffic and Access Management Plan</p> <p>Construction Noise and Vibration Management Plan</p> <p>Construction Heritage Management Plan</p> <p>Construction Air Quality Management Plan</p> <p>Construction Waste and Resource Management Plan</p> <p>Construction Soil and Water Quality Management Plan</p> <p>Urban Design and Landscape Plan</p> <p>Community Communication Strategy</p> <p>Construction Flora and Fauna Management Plan (Weed and Pathogen Management Strategy)</p>



Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
	<p>around the site included market gardens, sewerage board works and potential uncontrolled fill for golf course creation. There is current pesticide and herbicide use for the existing golf course and the Cooks River and Alexandra Canal lie in vicinity of study area. The potential for contaminants at this compound site therefore exist to include hydrocarbons, pesticides, heavy metals, PCBs, herbicides, fungicides and ASS.</p> <ul style="list-style-type: none"> <li>• Kogarah Golf Course is underlain by the Botany Sands aquifer (shallow, unconfined aquifer with a high hydraulic conductivity consisting of clay, silt and medium grained sand). The Botany Sands aquifer is up to 15m thick at the golf course.</li> <li>• Local groundwater table may be elevated above natural conditions due to irrigation at the Kogarah Golf Course. These levels are expected to be shallow (approximately 2-3m below ground level)</li> <li>• There are 15 existing groundwater registered boreholes at Kogarah Golf Course or areas surrounding.</li> <li>• Western Outfall Main Sewer – Rockdale to Homebush is a State Heritage listed items located on the corner of Marsh Street and M5 East motorway at Tempe.</li> </ul>			

Table 18: Key Work Activities Proposed During Construction – (C8 Canal Road Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Canal Road construction compound is located within the St Peters interchange site at St Peters. The compound site is located within the Alexandria Landfill. The St Peters interchange lies within a flat, low-lying area adjacent to the Alexandria Canal. The construction compound supports tunnelling and civil infrastructure activities. During operation, the site would be occupied by the St Peters motorway operations complex (MOC4), including the St Peters ventilation outlet. Temporary noise barrier approximately 2.5m high would be installed along Canal Road and Princes Highway.</li> <li>Spoil handling will occur 24 hrs per day, seven days a week.</li> <li>Site entry and exit is via Canal Road.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of the St Peters Interchange lies on land zoned as general industrial. The Princes highway borders north of the site and Canal Road borders west of the site.</li> <li>Canal Road is a key arterial route servicing the Sydney CBD as well as the Sydney Airport and Port Botany.</li> <li>Alexandra Canal is located approximately 500m south-east of the construction compound.</li> <li>The site exists in an area of Disturbed terrain.</li> <li>The footprint for the St Peters interchange and local roads upgrades includes a number of areas of potential contamination concern. Historical and existing land use for the construction footprint including landfill and uncontrolled filled quarries, metal smelter, manufacturing, fuel storage and dispensing, waste facilities and ASS.</li> <li>For compound C8, the Dynamo workshop located on 318 Princes Highway, St Peters has the potential to contain heavy metals, hydrocarbon, semi-volatile organic compounds (SVOCs), Polychlorinated biphenyls (PCBs), dioxins and total cyanide.</li> <li>Alexandria Landfill has the potential contaminants such as landfill gases (including methane, carbon dioxide, carbon monoxide, hydrogen sulphide, VOCs), nutrients, heavy metals, herbicides, fungicides, asbestos and biological hazards.</li> <li>A Phase 2 Environmental Site Assessment (ESA) has been completed for the Alexandria Landfill (AECOM 2015) and determined that land at 5/5A Canal Road has fill contaminated with heavy metals, asbestos, Polyaromic Hydrocarbons (PAHs), PCBs, Total Recoverable Hydrocarbons (TRH).</li> <li>The Botany Sands aquifer underlies Alexandria Landfill (up to approximately 10m thick) and is influenced by two existing groundwater</li> </ul>	<p><b>Construction (June 2016 – December 2019)</b></p> <p>Construction activities in accordance with CEMP including:</p> <ul style="list-style-type: none"> <li>Operation of site offices and parking</li> <li>Deliveries of all materials, including shotcrete and concrete and reinforcement</li> <li>Oversize deliveries</li> <li>Operation of workshop</li> <li>Stockpile/laydown</li> <li>Storage of plant and equipment not in use</li> <li>Storage of fuels and chemicals</li> <li>Excavation of temporary decline access tunnel, including:                             <ul style="list-style-type: none"> <li>Piling</li> <li>Use of excavators, rock-hammers and road headers</li> <li>Use of cranes</li> <li>Spoil removal</li> <li>Concrete work</li> </ul> </li> <li>Spoil management and offsite removal utilising spoil shed</li> <li>Tunnel support activities including provision of ventilation, water treatment plant, water and electrical supplies</li> <li>Tunnel fit out: rock sawing and hammering, permanent services and finishes, paving, install road furniture</li> <li>Construction of permanent operational facilities including emergency smoke extraction facility, operational water treatment facility, electricity distribution substation.</li> <li>Removal of site amenities, offices, plant and equipment, sheds and fencing.</li> <li>Rehabilitation and landscaping of residual land, including backfilling of temporary tunnel access dive.</li> <li>Excavation of the cut and cover portal structure</li> <li>Installation of ground anchors and shotcrete</li> <li>Installation of precast concrete girders, slabs and columns</li> <li>Concrete works including installation of formwork, steelfixing, and pouring concrete</li> <li>Installation of a tower crane and other crane works</li> <li>Drainage and pavement works</li> <li>Finishing works including landscaping, kerbs, gutters, linemarking, signage, lighting, asphaltting Construction of building facilities</li> </ul>	<p>Landfill closure – soil and water/ air quality/ contamination</p> <p>Traffic/access impacts on Canal Road</p> <p>Noise and vibration impacts on adjacent residential areas. Out of hours noise and vibration issues from approved night works.</p> <p>Dust impacts resulting from spoil handling and storage of materials on nearby receivers</p> <p>Waste management, including green waste, demolition waste and general construction</p> <p>Uncontrolled erosion and sediment run off. Spills of fuel, chemicals etc Potential flooding of compound site from overland flows from flood events. Potential disturbance of contamination, including metals, hydrocarbons, SVOCs, PCBs, dioxins and total cyanide. Disturbance of known contamination at the Alexandria Landfill.</p> <p>Indirect impacts to the St Peters Geological Site</p> <p>Weed dispersal and growth</p> <p>Light spillage from night works and mobile lighting on surrounding residents Visual Impact of construction site, including hoardings</p>	<p>Landfill Closure Plan Construction Landfill Closure Sub Plan</p> <p>Construction Traffic and Access Management Plan</p> <p>Construction Noise and Vibration Management Plan</p> <p>Construction Air Quality Management Plan</p> <p>Construction Waste and Resource Management Sub Plan</p> <p>Construction Soil and Water Quality Management Plan</p> <p>Construction Heritage Management Plan</p> <p>Construction Flora and Fauna Management Plan (Weed and Pathogen Management Strategy)</p> <p>Urban Design and Landscape Plan</p>



Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
	<p>extraction schemes, the landfill leachate pumping system and discharge to landfill and Alexandra Canal.</p> <ul style="list-style-type: none"> <li>Alexandra Canal is a State Heritage listed item (Item 01621). A number of other significant heritage items are contained within or in close proximity to the compound including the St Peters Brickpit (Register of the National Estate, Item 162040) and the locally listed Service Garage at 316 Princes Highway (I312).</li> <li>Other non-Aboriginal heritage items in close proximity include St Peters Anglican Church and graveyard (SHR Item 00032) is approximately 100m away from this compound site, north of the Princes Highway. Other items within a 200m are locally listed under the Marrickville LEP or under the Roads and Maritime S170 Heritage register.</li> <li>Sydney Park is located approximately 300m north-east of the compound site. Sydney Park is a regionally significant open space and valuable community asset providing important cycle and pedestrian connection to the interchange.</li> <li>The site is largely cleared with grassed area and low level vegetation present representing a disturbed site. The site has the potential to demonstrate a number of noxious weeds.</li> </ul>			

Table 19: Key Work Activities Proposed During Construction – (C9 Campbell Road Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Campbell Road construction compound would be located on the southern side of Campbell Road between Woodley Street and Harber Street, St Peters.</li> <li>The construction compound is to be situated on land which currently comprises residential dwellings and commercial and industrial businesses.</li> <li>The compound would be mainly used to support construction of the St Peters interchange and local road upgrades.</li> <li>Access to and from the compound would be via entry and exit gates along Campbell Road. A two-lane, one-way site road would provide access throughout the construction compound.</li> <li>A 2.5 metre temporary hoarding would be constructed along the Holland Street and west-facing boundaries of the compound to provide noise attenuation and to minimise impacts to visual amenity.</li> <li>The construction compound would include a car park for approximately 260 light vehicles, laydown and storage areas, a stockpile, fuel storage, a sedimentation pond and site offices.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of the St Peters Interchange lies on land zoned as general industrial. The Princes highway borders north of the site and Canal Road borders west of the site.</li> <li>Canal Road is a key arterial route servicing the Sydney CBD as well as the Sydney Airport and Port Botany.</li> <li>Alexandra Canal is located approximately 500m south-east of the construction compound.</li> <li>The site exists in an area of Disturbed terrain.</li> <li>The footprint for the St Peters interchange and local roads upgrades includes a number of areas of potential contamination concern. Historical and existing land use for the construction footprint including landfill and uncontrolled filled quarries, metal smelter, manufacturing, fuel storage and dispensing, waste facilities and ASS.</li> <li>For compound C9, the Alexandria Landfill (including Boiling Pty Ltd and Bradshaw Mountain), 10-16 Albert Street, St Peters have been assessed by a Phase 2 ESAs has contaminant of concern including landfill gases (methane, carbon dioxide, carbon monoxide, hydrogen sulphide, (SVOCs), VOCs, nutrients, heavy metals, herbicides, fungicides, asbestos and biological hazards.</li> <li>A Phase 2 Environmental Site Assessment (ESA) has been completed for the Alexandria Landfill (AECOM 2015) and determined that land at 5/5A Canal Road has fill contaminated with heavy metals, asbestos, Polyaromic Hydrocarbons (PAHs), PCBs, Total Recoverable Hydrocarbons (TRH).</li> <li>The Botany Sands aquifer underlies Alexandria Landfill (up to approximately 10m thick) and is influenced by two existing groundwater extraction schemes, the landfill leachate pumping system and discharge to landfill and Alexandra</li> </ul>	<p><b>Construction (September 2017 to December 2019)</b></p> <p>Local Road upgrades:</p> <p>Removal of existing road pavements, as required</p> <ul style="list-style-type: none"> <li>Installation of the drainage and utility infrastructure</li> <li>Installation of road base, lighting, kerb and guttering, verges, medians, and new jersey barriers</li> <li>Earthworks and excavation</li> <li>Spoil stockpiling and removal</li> <li>Installation of final asphalt layer</li> <li>Sign installation and street lighting</li> <li>Line-marking, traffic switches to tie in with existing road network landscaping.</li> </ul> <p>St Peters Interchange</p> <ul style="list-style-type: none"> <li>Bulk excavation and material disposal</li> <li>Foundation works to pavements including piling</li> <li>Structural and flexible pavement construction to St Peters interchange</li> <li>Construction of the on-and off-ramps</li> <li>Construction of the St Peters interchange bridges including the Campbell Road pedestrian and cycle bridge, local road upgrades and shared paths</li> <li>Construction of carriageways</li> <li>Tie-in with existing roads onto Campbell Road</li> <li>Construction of retaining walls and landscaping.</li> </ul> <p>Finishing works, including asphaltting, linemarking, signage installation and landscaping</p> <ul style="list-style-type: none"> <li>Demobilisation and removal of construction facilities</li> <li>Testing and commissioning testing of plant and equipment</li> <li>Landscaping</li> <li>Rehabilitation of affected areas</li> <li>Post-construction condition surveys</li> <li>Removal of construction environmental controls</li> <li>Removal of construction ancillary facility related traffic signage.</li> </ul>	<p>Landfill closure – soil and water/ air quality/ contamination/</p> <p>Traffic/access impacts on Campbell Road</p> <p>Noise and vibration impacts on adjacent residential areas.</p> <p>Out of hours noise and vibration issues from approved night works.</p> <p>Dust impacts resulting from spoil handling and storage of materials on nearby receivers</p> <p>Waste management, including green waste, demolition waste and general construction</p> <p>Uncontrolled erosion and sediment run off.</p> <p>Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p> <p>Potential disturbance of contamination, including metals, hydrocarbons, SVOCs, PCBs, dioxins and total cyanide.</p> <p>Disturbance of known contamination at the Alexandria Landfill.</p> <p>Indirect impacts to the St Peters Geological Site</p> <p>Weed dispersal and growth</p>	<p>Landfill Closure Plan</p> <p>Construction Landfill Closure Sub Plan</p> <p>Construction Traffic and Access Management Sub Plan</p> <p>Construction Noise and Vibration Management Sub Plan</p> <p>Construction Air Quality Management Plan</p> <p>Construction Waste and Resource Management Sub Plan</p> <p>Construction Soil and Water Quality Management Plan</p> <p>Construction Heritage Management Sub Plan</p> <p>Construction Flora and Fauna Management Plan (Weed and Pathogen Management Strategy)</p>



Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
	<p>Canal.</p> <ul style="list-style-type: none"> <li>Alexandra Canal is a State Heritage listed item (Item 01621). A number of other significant heritage items are contained within or in close proximity to the compound including the St Peters Brickpit (Register of the National Estate, Item 162040) and the locally listed Service Garage at 316 Princes Highway (I312).</li> <li>Other non-Aboriginal heritage items in close proximity include St Peters Anglican Church and graveyard (SHR Item 00032) is approximately 100m away from this compound site, north of the Princes Highway. Other items within a 200m are locally listed under the Marrickville LEP or under the Roads and Maritime S170 Heritage register.</li> <li>Sydney Park is located approximately 300m north-east of the compound site. Sydney Park is a regionally significant open space and valuable community asset providing important cycle and pedestrian connection to the interchange.</li> <li>The site is largely cleared with grassed area and low level vegetation present representing a disturbed site. The site has the potential to demonstrate a number of noxious weeds</li> </ul>			

Table 20: Key Work Activities Proposed During Construction – (C10 Landfill Closure Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Landfill Closure construction compound is located on the southern side of Campbell Road and would be used to support closure of the Alexandria Landfill site.</li> <li>The compound would include site offices, amenities, and laydown and material storage areas.</li> <li>Access to and from the construction compound would be via a site road off Campbell Road. A single lane, one-way site road would provide access through the construction compound.</li> <li>The constructed containment mound would contain approximately 70,000 cubic metres of material excavated from a stockpile in the north-western corner of the Alexandria Landfill site.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of the St Peters Interchange lies on land zoned as general industrial. The Princes highway borders north of the site and Canal Road borders west of the site.</li> <li>Canal Road is a key arterial route servicing the Sydney CBD as well as the Sydney Airport and Port Botany.</li> <li>Alexandria Canal is located approximately 500m south-east of the construction compound.</li> <li>The site exists in an area of Disturbed terrain.</li> <li>The footprint for the St Peters interchange and local roads upgrades includes a number of areas of potential contamination concern. Historical and existing land use for the construction footprint including landfill and uncontrolled filled quarries, metal smelter, manufacturing, fuel storage and dispensing, waste facilities and ASS.</li> <li>For compound C10, the Alexandria Recycling Centre has the potential to contain heavy metals, hydrocarbons, semi-volatile organic compounds (SVOCs), Polychlorinated biphenyls (PCBs), dioxins and total cyanide.</li> <li>Alexandria Landfill has the potential contaminants such as landfill gases (including methane, carbon dioxide, carbon monoxide, hydrogen sulphide, VOCs), nutrients, heavy metals, herbicides, fungicides, asbestos and biological hazards.</li> <li>A Phase 2 Environmental Site Assessment (ESA) has been completed for the Alexandria Landfill (AECOM 2015) and determined that land at 5/5A Canal Road has fill contaminated with heavy metals, asbestos, Polyaromic Hydrocarbons (PAHs), PCBs, Total Recoverable Hydrocarbons (TRH).</li> <li>The Botany Sands aquifer underlies Alexandria Landfill (up to approximately 10m thick) and is influenced by two existing groundwater extraction schemes, the landfill</li> </ul>	<p><b>Construction and Landfill Closure Works and St Peters Interchange as roadworks (June 2016 – December 2019)</b></p> <ul style="list-style-type: none"> <li>Relocation of utilities</li> <li>Site wide vegetation removal</li> <li>Installation of erosion and sedimentation devices</li> <li>Removal of topsoil</li> <li>Installation of a cut off wall to minimise inflow from the Botany Sands aquifer</li> <li>Bulk works to produce the final landform</li> <li>Installation of a capping layer including preparatory works including clearing and levelling the ground surface.</li> <li>Upgrade of the existing leachate treatment plant, installation of new leachate drainage collection system and decommissioning existing leachate treatment.</li> <li>Construction of a new leachate treatment plant management system</li> <li>Installation of a landfill gas collection and management system</li> <li>Installation of a groundwater management system.</li> <li>Landscaping and demobilisation.</li> </ul> <p>This site office will also be used during the road construction and finishing works:</p> <ul style="list-style-type: none"> <li>Cut and fill foundation preparation</li> <li>Installation of permanent drainage systems including pumping infrastructure</li> <li>Pavement construction</li> <li>Driven piles and concrete slab</li> <li>Finishing works including line marking, erection of signs, street lighting, vegetation, safety barriers and verge</li> <li>Installation of drainage systems and water quality basins</li> </ul>	<p>Landfill closure – soil and water/ air quality/ contamination/</p>	<p>Landfill Closure Plan Construction Landfill Closure Sub Plan</p>
			<p>Traffic/access impacts on Burrows Road</p>	<p>Construction Traffic and Access Management Sub Plan</p>
			<p>Noise and vibration impacts on adjacent residential areas. Out of hours noise and vibration issues from approved night works.</p>	<p>Construction Noise and Vibration Management Sub Plan</p>
			<p>Dust impacts resulting from spoil handling and storage of materials on nearby receivers</p>	<p>Construction Air Quality Management Plan</p>
			<p>Waste management, including green waste, demolition waste and general construction</p>	<p>Construction Waste and Resource Management Sub Plan</p>
			<p>Uncontrolled erosion and sediment run off. Spills of fuel, chemicals etc Potential flooding of compound site from overland flows from flood events. Potential disturbance of contamination, including metals, hydrocarbons, SVOCs, PCBs, dioxins and total cyanide. Disturbance of known contamination at the Alexandria Landfill.</p>	<p>Construction Soil and Water Quality Management Plan</p>
			<p>Indirect impacts to the St Peters Geological Site</p>	<p>Construction Heritage Management Sub Plan</p>
			<p>The site has the potential to demonstrate a number of noxious weeds</p>	<p>Weed and Pathogen Management Strategy (Flora and Fauna Management Sub Plan).</p>



Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
	<p>leachate pumping system and discharge to landfill and Alexandra Canal.</p> <ul style="list-style-type: none"> <li>Alexandra Canal is a State Heritage listed item (Item 01621). A number of other significant heritage items are contained within or in close proximity to the compound including the St Peters Brickpit (Register of the National Estate, Item 162040) and the locally listed Service Garage at 316 Princes Highway (I312).</li> <li>Other non-Aboriginal heritage items in close proximity include St Peters Anglican Church and graveyard (SHR Item 00032) is approximately 100m away from this compound site, north of the Princes Highway. Other items within a 200m are locally listed under the Marrickville LEP or under the Roads and Maritime S170 Heritage register.</li> <li>Sydney Park is located approximately 300m north-east of the compound site. Sydney Park is a regionally significant open space and valuable community asset providing important cycle and pedestrian connection to the interchange.</li> <li>The site is largely cleared with grassed area and low level vegetation present representing a disturbed site.</li> </ul>			

Table 21: Key Work Activities Proposed During Construction – (C11 Burrows Road Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Burrows Road construction compound would be located on the south-western corner of Campbell Road and Burrows Road.</li> <li>The compound would mainly be used to support civil infrastructure construction activities, including construction of the St Peters interchange and the local road upgrades.</li> <li>The Burrows Road construction compound site would be used for the Burrows Road motorway operations complex (MOC5), including the New M5 motorway control centre, for operations.</li> <li>The site is located within 100m of Alexandra Canal. Alexandra Canal (Item 01621) is a listed heritage item on the State Heritage Register.</li> <li>Urban exotic and native vegetation is located on the western perimeter of the C11 site and along Burrows Road.</li> </ul>	<ul style="list-style-type: none"> <li>This compound site lies on land zoned as general industrial.</li> <li>The site exists in an area of Disturbed terrain.</li> <li>The Rudders Bond Store Warehouse on Campbell Street is of State historical significance (Item 1405).</li> <li>The Alexandra Canal is highly contaminated, declared a remediation site due to the contamination of bed sediments resulting from industrial history. Primary contaminants of concern previously identified include organochlorine pesticides (OCPs), PCBs and metals.</li> <li>Petroleum hydrocarbon soil and potential groundwater contamination at 34 Burrows road was confirmed during borehole test.</li> <li>Given the industrial history of sites along Burrows Road, for compound C11 a number of sites demonstrate the potential for contaminants. A number of sites along Burrows Road, in particular 34 Burrows Road have the potential to contain heavy metal, hydrocarbon, asbestos and dioxin/furan contamination from previous metal smelter works.</li> <li>Waste facilities located at along Burrows Road, including 33 Burrows Road, have heavy metals, hydrocarbons, SVOCs, PCBs, pesticides, dioxins and asbestos as potential contaminants. For manufacturing and fuel storage activities undertaken within the vicinity of the compound C11 site, there is also the potential for lead contamination.</li> <li>The Botany Sands aquifer underlies Alexandria Landfill (up to approximately 10m thick) and is influenced by two existing groundwater extraction schemes, the landfill leachate pumping system and discharge to landfill and Alexandra Canal.</li> </ul>	<p><b>Construction (June 2016 – December 2019)</b></p> <ul style="list-style-type: none"> <li>Construction of the St Peters Interchange and local road upgrades</li> <li>Construction of Burrows Road motorway operations complex (MOC5)</li> <li>Demobilisation and rehabilitation</li> </ul>	<p>Traffic/access impacts on Burrows</p>	<p>Construction Traffic and Access Management Sub Plan</p>
			<p>Noise and vibration impacts on adjacent industrial receivers from construction activities associated with the Campbell Road Bridge construction and tie in with local road upgrades.</p> <p>Out of hours noise and vibration issues from approved night works.</p>	<p>Construction Noise and Vibration Management Sub Plan</p>
			<p>Dust impacts resulting from storage, laydown and movement of construction materials, machinery and equipment.</p>	<p>Construction Air Quality Management Plan</p>
			<p>Waste management including general construction and hazardous material waste</p>	<p>Construction Waste and Resource Management Sub Plan</p>
			<p>Uncontrolled Erosion and Sediment run off</p> <p>Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p> <p>Potential disturbance of contamination, including metals and hydrocarbons.</p>	<p>Construction Soil and Water Quality Management Plan</p>
<p>Indirect impacts on Alexandra Canal as a State Heritage listed item.</p>	<p>Construction Heritage Management Sub Plan</p>			

Table 22: Key Work Activities Proposed During Construction – (C12 Campbell Road Bridge Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Campbell Road bridge construction compound would be located on the south-eastern side of Burrows Road, opposite Campbell Road on land currently used for commercial business purposes.</li> <li>The compound would be mainly used for the construction of a new bridge across the Alexandra Canal as part of the Campbell Road extension.</li> <li>Vehicle access to and from the site would be via a gate off Burrows Road.</li> <li>The compound would include a car park, laydown area, crib area and ablutions facilities.</li> </ul>	<ul style="list-style-type: none"> <li>The Campbell Road bridge construction compound would be located in an area potentially affected by overland flow from a 20 year and 100 year ARI flood event.</li> <li>This compound site lies on land zoned as general industrial.</li> <li>The site exists in an area of Disturbed terrain.</li> <li>The site is located directly adjacent to Alexandra Canal. Alexandra Canal (Item 01621) is a listed heritage item on the State Heritage Register.</li> <li>The Canal is also highly contaminated, declared a remediation site due to the contamination of bed sediments resulting from industrial history. Primary contaminants of concern previously identified include organochlorine pesticides, PCBs and metals.</li> <li>For compound C12, Shipping Container Logistics, located 12-18 Burrows Road St Peters has the potential to contain heavy lead and hydrocarbons.</li> <li>The Botany Sands aquifer underlies Alexandria Landfill (up to approximately 10m thick) and is influenced by two existing groundwater extraction schemes, the landfill leachate pumping system and discharge to landfill and Alexandra Canal.</li> </ul>	<p><b>Establishment (January 2017 – June 2017) following CEMP implementation</b></p> <ul style="list-style-type: none"> <li>Site establishment for the construction activities associated with the Campbell Road bridge (vehicle) and Campbell Road pedestrian and cycle bridge across the Alexandra Canal</li> <li>Demolition of buildings</li> <li>Utilities relocation</li> </ul>	<p>Traffic/access impacts on Burrows Road</p> <p>Noise and vibration impacts on adjacent industrial receivers from building demolition and site establishment activities.</p> <p>Out of hours noise and vibration issues from approved night works. Section 5.5.1 details hours during establishment.</p> <p>Uncontrolled erosion and sediment run off. Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p> <p>Potential disturbance of contamination, including metals and hydrocarbons.</p> <p>Waste management, including green waste, demolition waste and general construction.</p> <p>Dust impacts from establishment activities.</p> <p>Demolition of derelict buildings impacting potential habitat for microbats.</p> <p>Indirect impacts on Alexandra Canal as a State Heritage listed item.</p> <p>Direct impacts on heritage-listed buildings</p> <p>Visual Impact of construction site, including hoardings.</p>	<p>Construction Traffic and Access Management Sub Plan</p> <p>Construction Noise and Vibration Management Sub Plan</p> <p>Construction Soil and Water Quality Management Plan</p> <p>Construction Air Quality Management Plan</p> <p>Construction Waste and Resource Management Sub Plan</p> <p>Construction Air Quality Management Plan</p> <p>Construction Flora and Fauna Sub Plan and Microbat Management Plan</p> <p>Construction Heritage Management Sub Plan</p> <p>Urban Design and Landscape Plan</p>
		<p><b>Construction (January 2017 – December 2019)</b></p> <ul style="list-style-type: none"> <li>Stockpiling of materials for construction works</li> <li>Support for construction of new bridges across Alexandra Canal as part of the local road upgrades</li> <li>Works to enable tie in with Campbell Road upgrade works</li> <li>Laydown and storage area for plant and equipment, and permanent materials for bridge works, including precast concrete</li> <li>Finishing works including landscaping asphaltting, line marking and signage installation</li> <li>Demobilisation.</li> </ul>	<p>Traffic/access impacts on Burrows</p> <p>Noise and vibration impacts on adjacent industrial receivers from construction activities associated with the Campbell Road Bridge construction and tie in with local road upgrades.</p> <p>Out of hours noise and vibration issues from approved night works.</p> <p>Dust impacts resulting from storage, laydown and movement of construction materials, machinery and equipment.</p> <p>Waste management including general construction and hazardous material waste</p> <p>Uncontrolled Erosion and Sediment run off</p> <p>Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p> <p>Indirect impacts on Alexandra Canal as a State Heritage listed item.</p>	<p>Construction Traffic and Access Management Sub Plan</p> <p>Construction Noise and Vibration Management Sub Plan</p> <p>Construction Air Quality Management Plan</p> <p>Construction Waste and Resource Management Sub Plan</p> <p>Construction Soil and Water Quality Management Plan</p> <p>Construction Heritage Management Sub Plan</p>

Table 23: Key Work Activities Proposed During Construction – (C13 Gardeners Road Bridge Compound)

Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
<ul style="list-style-type: none"> <li>The Gardeners Road Bridge construction compound (C13) is located on the southern side of Burrows Road, St Peters on land owned by Roads and Maritime Services (Roads and Maritime) and currently used for commercial business purposes.</li> <li>The Gardeners Road bridge construction compound would be used to service the construction of a bridge over the Alexandra Canal, which would connect the St Peters interchange directly with Gardeners Road, Mascot.</li> <li>Vehicle access to and from the site would be via a gate off Burrows Road.</li> <li>The compound would include a car park, laydown area, crib area and ablutions facilities. The site would include a crib hut, laydown area and car parking.</li> </ul>	<ul style="list-style-type: none"> <li>This compound site lies on land zoned as general industrial.</li> <li>The site exists in an area of Disturbed terrain.</li> <li>The Gardeners Road bridge construction compound would be located in an area potentially affected by overland flow from a 20 year and 100 year ARI flood event.</li> <li>The site is located directly adjacent to Alexandra Canal. Alexandra Canal (Item 01621) is a listed heritage item on the State Heritage Register.</li> <li>The Canal is also highly contaminated, declared a remediation site due to the contamination of bed sediments resulting from industrial history. Primary contaminants of concern previously identified include organochlorine pesticides, PCBs and metals.</li> <li>For compound C13, Shipping Container Logistics, located 12-18 Burrows Road St Peters has the potential to contain lead and hydrocarbons.</li> <li>The Botany Sands aquifer underlies Alexandria Landfill (up to approximately 10m thick) and is influenced by two existing groundwater extraction schemes, the landfill leachate pumping system and discharge to landfill and Alexandra Canal.</li> </ul>	<p><b>Establishment (January 2017 – September 2017) following CEMP implementation</b></p> <ul style="list-style-type: none"> <li>Site establishment for construction activities associated with the Gardeners Road bridge</li> <li>Demolition of buildings</li> <li>Relocation of utilities</li> </ul>	<p>Traffic/access impacts on Burrows Road</p>	<p>Construction Traffic and Access Management Sub Plan</p>
		<p>Noise and vibration impacts on adjacent industrial receivers from building demolition and site establishment activities.</p> <p>Out of hours noise and vibration issues from approved night works. Section 5.5.1 details hours during establishment.</p>	<p>Construction Noise and Vibration Management Sub Plan</p>	
		<p>Uncontrolled erosion and sediment run off.</p> <p>Spills of fuel, chemicals etc</p> <p>Potential flooding of compound site from overland flows from flood events.</p> <p>Potential disturbance of contamination, including metals and hydrocarbons.</p>	<p>Construction Soil and Water Quality Management Plan</p> <p>Construction Air Quality Management Plan</p>	
		<p>Waste management, including green waste, demolition waste and general construction.</p>	<p>Construction Waste and Resource Management Sub Plan</p>	
		<p>Demolition of derelict buildings impacting potential habitat for microbats</p>	<p>Construction Flora and Fauna Management plan</p>	
		<p>Dust impacts from establishment activities.</p>	<p>Construction Air Quality Management Plan</p>	
		<p>Indirect impacts on Alexandra Canal as a State Heritage listed item.</p>	<p>Construction Heritage Management Plan</p>	
		<p>Visual Impact of construction site, including hoardings.</p>	<p>Urban Design and Landscape Plan</p> <p>Refer to Section 3 for Community and Business Communication Strategy</p>	
		<p><b>Construction (April 2017 – December 2019)</b></p> <ul style="list-style-type: none"> <li><b>Tie-in of the Gardeners Road bridge with the local road upgrades</b></li> <li>Storage of bridge construction plant and equipment</li> <li>Stockpiling of construction materials</li> <li>Laydown and storage of bridge materials, such as precast concrete</li> <li>Storage of temporary access platforms for bridge works (western side of the Alexandra Canal)</li> <li>Pre-assembly of segments, heavy lifts and associated bridge and local road upgrade construction</li> <li>Finishing works, including landscaping, asphaltting, line marking and signage</li> </ul>	<p>Traffic/access impacts on Burrows and Gardener's Road</p>	<p>Construction Traffic and Access Management Sub Plan</p>
		<p>Noise and vibration impacts on adjacent industrial receivers from construction activities associated with the Gardeners Bridge construction and tie in with local road upgrades and pre-assembly of bridge segments.</p> <p>Out of hours noise and vibration issues from approved night works.</p> <p>Use of heavy machinery including heavy lifts</p>	<p>Construction Noise and Vibration Management Sub Plan</p>	
<p>Dust impacts resulting from storage, laydown and movement of construction materials, machinery and equipment.</p>	<p>Construction Air Quality Management Plan</p>			



Site Characteristics	Existing Environmental	Key Work Activities (and Indicative Operational Period)	Key Potential Environmental Impacts	Key Environmental Controls (refer to the following documents)
		<ul style="list-style-type: none"> <li>- Demobilisation.</li> </ul>	<p>Waste management including general construction and hazardous material waste</p> <p>Uncontrolled Erosion and Sediment run off Spills of fuel, chemicals etc Potential flooding of compound site from overland flows from flood events. Potential disturbance of contamination, including metals and hydrocarbons.</p> <p>Indirect impacts on Alexandra Canal as a State Heritage listed item.</p> <p>Visual Impact of construction site, including hoardings.</p>	<p>Construction Waste and Resource Management Sub Plan</p> <p>Construction Soil and Water Quality Management Plan</p> <p>Construction Heritage Management Plan</p> <p>Urban Design and Landscape Plan Refer to Section 3 for Community and Business Communication Strategy</p>

# Ancillary Facilities Management Plan



## 5.5 Services / Utilities

Ancillary facilities will require essential services including power, water and sewer. Where possible, CDS-JV will connect to existing services at the nearest location with minimal environmental impacts.

HV power is required for the operation of Ancillary facilities during the construction period. This is addressed in Appendix J) which describes environmental management of the establishment works required to provide temporary HV power to construction sites during construction.

## 5.6 Site Access

The proposed site access for both light and heavy vehicles is identified in Table 24 during site establishment and during operation of the ancillary facility (sites identified in the EIS). Site access has been developed to limit movements on local streets, particularly for spoil haulage. Refer to Appendix F and Appendix G for figures showing site access arrangements. In accordance with CoA D46, heavy vehicles are only permitted to use local roads identified and approved in the New M5 EIS and Submissions Report during the construction phase. The use of a local road that is not identified in the New M5 EIS or Submissions Report is not permitted during the construction phase without the approval of the Secretary, DP&E.

Refer to Appendices L and M for site access arrangements for ancillary facilities approved subsequent to the SSI approval.

Table 24: Site Access

Site	Vehicle type	Site Establishment	Out of Hours Works - Establishment	*Operation (including OOH works)
<b>Kingsgrove North civil and tunnel site (C1)</b>	Light vehicles	Garema Circuit and M5 East Motorway	Garema Circuit and M5 East Motorway	Garema Circuit and M5 East Motorway
	Heavy vehicles	Garema Circuit M5 East Motorway	M5 East Motorway	M5 East Motorway
<b>Kingsgrove South civil and tunnel site (C2)</b>	Light vehicles	Garema Circuit and M5 East Motorway	Garema Circuit and M5 East Motorway	Garema Circuit and M5 East Motorway
	Heavy vehicles	M5 East Motorway	M5 East Motorway	M5 East Motorway
<b>Commercial Road civil and tunnel site (C3)</b>	Light vehicles	Commercial Road	Commercial Road	Commercial Road
	Heavy vehicles	Commercial Road	Commercial Road	Commercial Road
<b>Bexley Road North civil and tunnel site (C4)</b>	Light vehicles	Bexley Road	Bexley Road	Bexley Road
	Heavy vehicles	Bexley Road	Bexley Road	Bexley Road
<b>Bexley Road South civil and tunnel site (C5)</b>	Light vehicles	Bexley Road	Bexley Road	Bexley Road
	Heavy vehicles	Bexley Road	Bexley Road	Bexley Road
<b>Bexley Road East civil and tunnel site (C6)</b>	Light vehicles	Wolli Avenue	Wolli Avenue	Wolli Avenue
	Heavy vehicles	Wolli Avenue	Wolli Avenue	Wolli Avenue
<b>Arncliffe civil and tunnel site (C7)</b>	Light vehicles	Marsh Street	Marsh Street	Marsh Street

## Ancillary Facilities Management Plan



Site	Vehicle type	Site Establishment	Out of Hours Works - Establishment	*Operation (including OOH works)
	Heavy vehicles	Marsh Street	Marsh Street	Marsh Street
Canal Road civil and tunnel site (C8)	Light vehicles	Canal Road	Canal Road	Canal Road
	Heavy vehicles	Canal Road	Canal Road	Canal Road
Campbell Road civil and tunnel site (C9)	Light vehicles	Campbell Road	Campbell Road	Campbell Road
	Heavy vehicles	Campbell Road	Campbell Road	Campbell Road
Landfill Closure civil and tunnel site (C10)	Light vehicles	Campbell Road	Campbell Road	Campbell Road
	Heavy vehicles	Campbell Road	Campbell Road	Campbell Road
Burrows Road civil and tunnel site (C11)	Light vehicles	Burrows Road	Burrows Road	Burrows Road
	Heavy vehicles	Burrows Road	Burrows Road	Burrows Road
Campbell Road Bridge civil and tunnel site (C12)	Light vehicles	Burrows Road	Burrows Road	Burrows Road
	Heavy vehicles	Burrows Road	Burrows Road	Burrows Road
Gardeners Road bridge civil and tunnel site (C13)	Light vehicles	Burrows Road	Burrows Road	Burrows Road
	Heavy vehicles	Burrows Road	Burrows Road	Burrows Road

\* Note: Heavy vehicle construction traffic during the construction phase of the Project will be managed in accordance with the Construction Traffic and Access Sub-Plan required under CoA D68(a).

## 5.7 Parking

Estimated parking requirements for the establishment phase are provided in Table 25. These volumes are representative only and will fluctuate up and down throughout the site establishment phase. Drivers will be required to park in areas designated for project parking. Car parking capacity during the site establish phase is considered to be approximately half that of the final construction phase capacity. Parking arrangements during the construction phase are identified in the Construction Parking and Access Strategy (M5N-ES-PLN-PWD-0040) required by CoA D50.

Table 25: Site parking requirements during establishment

Site	Light Vehicle Demand (D1)	Heavy Vehicle Demand (D2)	Overall Parking Capacity (C)	Demand: Capacity Ratio*
Kingsgrove North & South civil and tunnel sites (C1, C2)	16	32	95	0.51
Kingsgrove (Garema Circuit)	50	0	50**	1.00
Commercial Road civil and tunnel site (C3)	5	5	18	0.56
Bexley Road North civil and tunnel site (C4)	4	6	15	0.67

## Ancillary Facilities Management Plan



Site	Light Vehicle Demand (D1)	Heavy Vehicle Demand (D2)	Overall Parking Capacity (C)	Demand: Capacity Ratio*
Bexley Road South civil and tunnel site (C5)	2	6	16	0.50
Bexley Road East civil and tunnel site (C6)	12	8	56	0.36
Arncliffe civil and tunnel site (C7)	24	60	110	0.76
Canal Road civil and tunnel site (C8)	12	12	56	0.43
Campbell Road & Burrows Road civil and tunnel sites (C9, C10, C11)	56	60	145	0.8

\* Note: D2 Demand for heavy vehicles has been converted to Passenger Car Units (PCU's) for (D1+D2):C ratio comparison. Actual heavy vehicle volumes are half those figures shown after converting back from PCU equivalents.

\*\* Note: Off-street parking area within Garema Circuit

## 5.8 Construction Workforce and Vehicle Movements

Indicative vehicle and personnel numbers for ancillary facilities identified in the EIS are identified in Table 26. The construction traffic volumes are the two-way volumes (inbound and outbound) during the peak construction period for a 24-hour period. Volumes of construction vehicles during the construction phase are addressed in the Construction Traffic and Access Sub-Plan (M5N-ES-PLN-PWD-0004).

Refer to the relevant Site-specific Ancillary Facility Management Plan (Appendix M) for vehicle and personnel numbers for ancillary facilities approved under CoA D63.

Table 26: Indicative Vehicle and Personnel Numbers across a 24-hour period

Site	Light Vehicle Movements (construction)	Heavy vehicle movements (construction)	Personnel (construction)
C1 Kingsgrove North civil and tunnel site	989	1975	177
C2 Kingsgrove South civil and tunnel site	24	72	90
C3 Commercial Road civil and tunnel site	133	192	86
C4 Bexley Road North civil and tunnel site	96	432	42
C5 Bexley Road South civil and tunnel site	96	432	42
C6 Bexley Road East civil and tunnel site	418	0	34
C7 Arncliffe civil and tunnel site	374	1057	190
C8 Canal Road civil and tunnel site	1132	710	193
C9 Campbell Road civil and tunnel site	1038	716	215

## Ancillary Facilities Management Plan



Site	Light Vehicle Movements (construction)	Heavy vehicle movements (construction)	Personnel (construction)
C10 Landfill Closure civil and tunnel site	170	218	30
C11 Burrows Road civil and tunnel site	260	200	40
C12 Campbell Road bridge	79	117	35
C13 Gardeners Road bridge civil and tunnel site	260	196	45

### 5.9 Plant, Equipment and Materials

Key plant and equipment to be used and stored on site at ancillary facilities identified in the EIS during establishment and construction is detailed in Table 27. Due to the nature of having distinct phases in the construction program, the overall equipment and plant numbers are likely to change throughout the Project.

An indication of the types of chemicals and hazardous materials to be stored at the ancillary facilities is included in Table 28.

Refer to Appendices L and M for plant, equipment and materials to be used and stored at ancillary facilities approved subsequent to the SSI Approval.

Table 27: Indicative Plant and Equipment

Plant/equipment	Kingsgrove North	Kingsgrove South	Commercial Road	Bexley Road North	Bexley Road South	Bexley Road East	Arncliffe	Canal Road	Campbell Road	Landfill closure	Burrows Road	Campbell Road Bridge	Gardeners Road
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
<b>Surface works</b>													
30 tonne excavator with rock hammer	◆	◆	◆	◆	◆			◆		◆	◆	◆	◆
35 tonne excavator with bucket	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
45 tonne excavator with rock hammer	◆		◆					◆	◆	◆			◆
100 tonne crane – wheeled		◆			◆		◆	◆					
Asphalt truck and sprayer	◆	◆	◆					◆	◆	◆	◆	◆	◆
Bobcat									◆		◆	◆	◆
Bulldozer (D7)	◆	◆	◆					◆					
Chainsaw	◆	◆	◆	◆	◆	◆	◆	◆					

# Ancillary Facilities Management Plan



Plant/equipment	Kingsgrove North	Kingsgrove South	Commercial Road	Bexley Road North	Bexley Road South	Bexley Road East	Arncliffe	Canal Road	Campbell Road	Landfill closure	Burrows Road	Campbell Road Bridge	Gardeners Road
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
Compressor	◆	◆	◆		◆	◆	◆	◆		◆			
Concrete agitator	◆	◆	◆	◆			◆	◆	◆	◆	◆	◆	◆
Concrete grinding machine		◆			◆		◆	◆					
Concrete pump	◆	◆	◆	◆	◆		◆	◆	◆	◆			◆
Concrete saw	◆	◆	◆					◆	◆	◆	◆	◆	◆
Concrete vibrator		◆			◆		◆	◆					
Daymaker lighting tower	◆	◆	◆					◆	◆	◆	◆	◆	◆
Drilling machine – diesel	◆	◆	◆	◆	◆		◆	◆					
Excavator									◆		◆		◆
Franna crane (20 tonne)	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆			◆
Grader (25 tonne)								◆	◆	◆	◆	◆	◆
Hiab truck									◆		◆	◆	◆
Light vehicle	◆	◆	◆	◆	◆	◆	◆	◆		◆			
Mobile crane (up to 500 tonnes)									◆		◆		◆
Paver	◆	◆	◆					◆	◆	◆	◆	◆	◆
Piling Rig (bored)	◆	◆	◆	◆	◆								
Piling rig (driven concrete piles)									◆	◆	◆		◆
Pneumatic hammer	◆	◆	◆	◆	◆		◆	◆			◆	◆	◆
Road profiler (17 tonne)	◆	◆	◆					◆	◆	◆	◆	◆	◆
Roller (12 tonne)	◆	◆	◆					◆	◆	◆	◆	◆	◆

# Ancillary Facilities Management Plan



Plant/equipment	Kingsgrove North	Kingsgrove South	Commercial Road	Bexley Road North	Bexley Road South	Bexley Road East	Arncliffe	Canal Road	Campbell Road	Landfill closure	Burrows Road	Campbell Road Bridge	Gardeners Road
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
Saw cutting reo		◆			◆		◆	◆					
Saw cutting formwork		◆			◆		◆	◆					
Scissor Lift		◆	◆					◆		◆			
Shotcrete Rig – diesel	◆	◆	◆	◆	◆		◆	◆	◆		◆	◆	◆
Truck – deliveries	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Truck – large (20 tonnes)													
Truck – line marking	◆	◆	◆	◆	◆	◆	◆	◆	◆		◆		◆
Truck – road	◆	◆	◆					◆	◆	◆	◆	◆	◆
Truck – small (less than 20 tonnes)	◆	◆	◆	◆	◆	◆	◆	◆		◆			
Truck and dog	◆	◆	◆	◆	◆		◆	◆			◆	◆	◆
Truck and dog (spoil haulage)	◆	◆	◆					◆	◆	◆	◆	◆	◆
Tub grinder / mulcher	◆	◆	◆	◆	◆	◆	◆	◆					
Wacker Packer													
Water cart (15 kilo litre)	◆	◆	◆		◆		◆	◆	◆	◆			◆
Water treatment plant		◆			◆		◆	◆					
Water treatment plant pumps	◆	◆	◆			◆	◆	◆		◆			
Workshop hand tools	◆	◆	◆		◆	◆	◆	◆		◆			
<b>Underground works</b>													
1 kilo volt electric	◆	◆	◆	◆	◆		◆	◆					

# Ancillary Facilities Management Plan



Plant/equipment	Kingsgrove North	Kingsgrove South	Commercial Road	Bexley Road North	Bexley Road South	Bexley Road East	Arncliffe	Canal Road	Campbell Road	Landfill closure	Burrows Road	Campbell Road Bridge	Gardeners Road
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13
road header													
1 kilo volt ventilation fan	♦	♦	♦	♦	♦		♦	♦					
30 tonne excavator with rock hammer	♦	♦	♦				♦	♦					
35 tonne excavator with bucket	♦	♦	♦	♦	♦	♦	♦	♦					
38 tonne Moxie	♦	♦	♦	♦	♦		♦	♦					
Compressor	♦	♦	♦	♦	♦		♦	♦					
Concrete pump	♦	♦	♦	♦	♦		♦	♦					
Concrete truck	♦	♦	♦	♦	♦		♦	♦					
Dust scrubber	♦	♦	♦	♦	♦		♦	♦					
Franna crane	♦	♦	♦	♦	♦	♦	♦	♦					
Front-end loader	♦	♦	♦	♦	♦		♦	♦					
Pneumatic vibrator	♦	♦	♦	♦	♦		♦	♦					
Power generator	♦	♦	♦				♦	♦					
Shotcrete rig – Diesel													
Truck – small (less than 20 tonnes)	♦	♦	♦	♦	♦	♦	♦	♦					
Truck and dog	♦	♦	♦				♦	♦					
Truck and dog – spoil haulage	♦	♦	♦	♦	♦		♦	♦					

# Ancillary Facilities Management Plan



Table 28: Chemicals and Hazardous Materials

Chemicals	Australian Dangerous Goods Classification	Kingsgrove North Compound	Commercial Road	Bexley Road North Compound	Bexley Road South Compound	Bexley Road East Compound	Arncliffe Compound	Canal Road Compound	Campbell Road	Landfill Compound	Burrows Road Compound	Burrows Road Bridge Compound	Burrows Road Bridge Compound	Sydney Park Compound
		C1	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14
Acetylene	2.1	1,040L	1,000L	1,000L	1,000L	1,000L	1,000L	1,040L	40	-	40L	40L	40L	40L
Ammonium nitrate emulsion	5.1	4000L for the whole tunnel												
Concrete bonding agent base	N/A	20L	-	-	-	-	-	20L	20L	-	20L	20L	20L	20L
Concrete bonding agent hardener	8	20L	-	-	-	-	-	20L	20L	-	20L	20L	20L	20L
Concrete surface retarder	C3 PGIII	200L	-	-	-	-	-	200L	200L	-	200L	200L	200L	200L
Construction Grout	N/A	60kg	-	-	-	-	-	60kg	60kg	-	60kg	60kg	60kg	60kg
Curing compound	N/A	1,000L	600L	600L	600L	600L	600L	1,000L	400L	-	400L	400L	400L	400L
Diesel	C1 PGIII	60,200L	60,000L	60,000L	60,000L	60,000L	60,000L	60,200L	200L	200L	200L	200L	200L	200L

# Ancillary Facilities Management Plan



Chemicals	Australian Dangerous Goods Classification	Kingsgrove North Compound	Commercial Road	Bexley Road North Compound	Bexley Road South Compound	Bexley Road East Compound	Arncliffe Compound	Canal Road Compound	Campbell Road	Landfill Compound	Burrows Road Compound	Burrows Road Bridge Compound	Burrows Road Bridge Compound	Sydney Park Compound
		C1	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14
Epoxy Paste Part A	C3 PGIII	20L	-	-	-	-	-	20L	20L	-	20L	20L	20L	20L
Epoxy Paste Part B	C3 PGIII	20L	-	-	-	-	-	20L	20L	-	20L	20L	20L	20L
Form oil	C2	600L	400L	400L	400L	400L	400L	600L	200L	-	200L	200L	200L	200L
Grease	C2	10kg	-	-	-	-	-	10kg	10kg	10kg	10kg	10kg	10kg	10kg
Hydraulic Oil	C2	2,100L	2,000L	2,000L	2,000L	2,000L	2,000L	2,100L	100L	100L	100L	100L	100L	100L
Injectable mortar	N/A	10kg	-	-	-	-	-	10kg	10kg	-	10kg	10kg	10kg	10kg
Joint sealant	N/A	12kg	-	-	-	-	-	12kg	12kg	-	12kg	12kg	12kg	12kg
Linemarking Aerosol	C2.1	18kg	-	-	-	-	-	18kg	18kg	-	18kg	18kg	18kg	18kg
Liquid Nails	C3	7kg	-	-	-	-	-	7kg	7kg	-	7kg	7kg	7kg	7kg
Oxygen	C2.2	1,100L	1,000L	1,000L	1,000L	1,000L	1,000L	1,100L	100L	-	100L	100L	100L	100L
Polyurethane Foam	C2.1	15kg	-	-	-	-	-	15kg	15kg	-	15kg	15kg	15kg	15kg



Chemicals														
	Australian Dangerous Goods Classification	Kingsgrove North Compound	Commercial Road	Bexley Road North Compound	Bexley Road South Compound	Bexley Road East Compound	Arncliffe Compound	Canal Road Compound	Campbell Road	Landfill Compound	Burrows Road Compound	Burrows Road Bridge Compound	Burrows Road Bridge Compound	Sydney Park Compound
		C1	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14
<b>Sodium hydroxide</b>	C8	3,000L	3,000L	3,000L	3,000L	3,000L	3,000L	3,000L	-	-	-	-	-	-
<b>Sulphuric acid</b>	C8	3,000L	3,000L	3,000L	3,000L	3,000L	3,000L	3,000L	-	-	-	-	-	-
<b>Unleaded Petrol</b>	C3 PGII	600L	500L	500L	500L	500L	500L	600L	100L	100L	100L	100L	100L	100L

\* Note: for some compounds the quantity of diesel and unleaded petrol delivered to site is greater than the quantity stored onsite as the delivery volume takes into the account fuel which is brought to site by mini-tanker and used to directly refuel plant. As this fuel is “in use” in the Plant it is not classified as being “stored”.

## 6. Implement Controls

### 6.1 Environmental Management System Overview

The Environmental Management System (EMS) provides a framework to define how CDS-JV will minimise impacts to the environment. It comprises a combination of governance documentation, the Construction Environmental Management Plan (CEMP), procedures and tools. The CDS-JV EMS is based on the CDS-JV EMS, which has the following structure:

- Whole of CDS-JV:
  - Principles
  - Environmental policy
  - Environmental elements and expectations
  - Whole of CPB environmental procedures, tools and knowledge
- WestConnex New M5 Project:
  - Construction environmental Management Plan
  - Project specific environmental procedures, tools and knowledge.

The EMS is described in more detail in the CEMP.

### 6.2 Construction Environmental Management Plan

A CEMP has been prepared for the project to outline the environmental management practices and procedures that are to be followed during the construction phase of the project. As part of the CEMP, issue-specific sub-Plans will be prepared and implemented. These sub-Plans outline specific environmental management and mitigation measures identified to address potential impacts for a range of environmental factors. Both the CEMP and nominated sub-Plans must be submitted to the Secretary of Department of Planning and Environment (DP&E) for approval prior to commencement of construction.

During construction of the project, the operation of the ancillary facilities would be managed in accordance with the approved CEMP and sub-Plans.

### 6.3 Sensitive Area Plans

Sensitive Area Plans (SAPs) have been prepared to assist in the planning and management of specific areas. Sensitive areas including flora and fauna, heritage and other issues are included in these plans where relevant.

SAPs are included in the CEMP sub plans (eg. Flora and Fauna Management Plan, Heritage Management Plan) to assist in the management of these areas during construction.

### 6.4 Site Environment Plans

A Site Environment Plan (SEP) is a document prepared to assist in the Planning and Management of specific areas. Environmental and socially sensitive areas including vegetation, heritage, sensitive receivers, waterways, etc. may be included on a SEP.

A series of SEPs spanning the Project boundary will be prepared prior to the establishment the ancillary facilities. These SEPs will be used to inform construction Planning and will be included in applicable Work Packs, which consist of relevant construction documents to assist supervisors to manage specific packages of work. The SEP provides a simple but effective tool to identify key risk areas and to promote ongoing communication to construction personnel throughout the Project.

### 6.5 Environmental Work Method Statements

Environmental Work Method Statements (EWMS) will be prepared for activities within or near environmentally sensitive areas and will include protection measures that minimise the risk of impacting the sensitive areas. The requirement for EWMS will be directed by Roads and Maritime Specification D&C G36 – Environmental Protection and by the Environment Manager for those activities deemed to carry an inherent level of environmental risk.



EWMS will be prepared prior to the establishment of ancillary facilities and will incorporate relevant mitigation measures and controls from this document. As a minimum, EWMS will include (D&C G36):

- description of the work activity, including any plant and equipment to be used
- outline of the sequence of tasks for the activity, including interfaces with other construction activities
- identification of any environmental and/or socially sensitive areas, sites or places
- identification of potential environmental risks/impacts due to the work activity
- mitigation measures to reduce the identified environmental risk, including assigned responsibilities to site management personnel
- process for assessing the performance of the implemented mitigation measures.

The EWMS will be reviewed by the relevant Construction Manager and then approved by the Environmental Manager. Regular monitoring, inspections and auditing against compliance with the EWMS will be undertaken by environmental personnel to ensure that all controls are being followed and that any non-conformances are recorded and corrective actions implemented.

## 6.6 Progressive Erosion and Sediment Control Plan

Progressive Erosion and Sediment Control Plans (ESCPs) will be prepared for all ancillary facilities prior to establishment activities. The ESCPs contain site specific details including identifying locations for material storage, acoustic sheds, noise walls and detention basins. These Plans are developed as the Project progresses and as the site conditions evolve to meet construction and permanent facilities requirements.

The progressive ESCPs will incorporate the following:

- location of erosion, sedimentation and water quality control measures proposed to treat stormwater before disposal
- layout of the site, cleared and protected areas and stockpiling areas
- construction period and staging.

Information relevant to the preparation of the progressive ESCPs is obtained from *Managing Urban Stormwater: Soils and Construction Volume 1* (Landcom 2006) (the Blue Book) and *Volume 2D Main Roads Construction* (DECCW 2008) and site specific soil data.

Environmental personnel in consultation with the Project's Soil Conservationist, Superintendent/Foreman and Environment Manager, would prepare and update the progressive ESCPs.

## 6.7 Internal Hold Points

CDS-JV management systems and processes establish internal hold points for key activities that require environmental management measures to be in place as identified in Table 29.

Table 29: Internal Hold Points

Process held	Permit required	Where addressed
Activities outside of normal construction hours	Out of Hours Works Permit	Construction Noise and Vibration Impact Statement for Establishment  Construction Noise and Vibration Management Plan
Clearing/pruning vegetation, disturbing / excavating new area	Land disturbance permit	M5N-ES-FLC-PWD-0011 Vegetation Clearing Flowchart (Manage Flora and Fauna Procedure)



Process held	Permit required	Where addressed
Discharge of all dewatering operations, including sediment basins and excavated areas retaining water	Water Discharge Permit	M5N-ES-FLC-PWD-0008 Water Discharge Flowchart (Manage Soil and Water Procedure)
Establishment of new minor ancillary facility	Minor Ancillary Facilities Permit	Appendix D of Ancillary Facilities Management Plan

## 6.8 Roads and Maritime Hold Points

Roads and Maritime Specification D&C G36 Environmental Protection identifies a schedule of hold points applicable for all Roads and Maritime Projects (refer to Table 30). The commencement or recommencement of works may require release of a hold point by the Roads and Maritime Representative.

Table 30: Roads and Maritime Specification D&C G36 hold points

G36 hold point reference	Process held	Submission details	Where addressed
3.1	Commencement of work not previously addressed by EMS and CEMP documents and authorised by earlier Hold Point release.	For establishment - submit this AFMP to DP&E for approval prior to commencement of establishment activities.  For construction - at least ten (10) working days prior to the proposed commencement of the stage of Work Under the deed, submit the CEMP and associated sub-Plans, EWMS and documents listed in Clause 3.1.	Section 1.2
3.2.2	Commencement of any activity requiring an approval, licence and/or permit from an appropriate authority.	The project environment protection licence (EPL) would be provided to WCXM5 Co when the licence is issued by EPA.	Section 2.3
3.10	Any activity that causes or has the potential to cause harm to the environment due to your failure to meet your environmental obligations under the deed.	Verification that the failure has been rectified, and details of the measures implemented to prevent recurrence.	Section 8.3
4.2	Activities within the vicinity of actual or suspected contaminated land.	If required, a remediation strategy will be prepared and implemented for contaminated sites. If required, this will be endorsed by an independent auditor, accredited under the CLM Act.	Section 6.14
4.7	Commencement of blasting, pile driving, excavation by hammering or ripping, dynamic compaction or demolition operations or any other activities which may cause damage through vibration or air blast.	Construction noise and vibration impact statements have been prepared for each ancillary facility.	Section 6.9

G36 hold point reference	Process held	Submission details	Where addressed
4.11	Transport of waste to a place that is not owned by RMS and is not a licensed waste facility.	Completed and signed original copy of 's.143 Notice' received from the landholder receiving the waste with evidence that the Waste Site has the appropriate Planning consent.	Appendix B - A214
4.13	Working in or near environmentally sensitive areas	At least five (5) working days prior, provide to the RMS Representative a copy of the EWMS for working in or near the environmentally sensitive areas and written notice that the environmentally sensitive areas are clearly delineated with locations and boundaries signposted.	Section 6.5
4.15.2	Taking possession of any land nominated or authorised by the Principal for use for the Contractor's site facilities.	Pre-construction land condition assessment report for each area which you intend to use for the Contractor's site facilities, and evidence of any necessary statutory and environmental approvals.	Section 6.14

## 6.9 Construction Noise and Vibration

### 6.9.1 Construction Noise and Vibration Impact Statements

Works associated with the establishment of each ancillary facility will be assessed within a construction noise and vibration impact statement (CNVIS). A noise model has been prepared by suitably qualified acoustic consultants to predict the extent of noise and vibration impacts on surrounding receivers. The location of surrounding receivers has been determined through the land use survey required by CoA D10. Based on the predicted impacts, appropriate mitigation measures will be implemented on a site specific basis.

The CNVIS will be prepared considering the anticipated establishment scenarios (including size and type of equipment and operating times) and existing environment to predict the noise and vibration levels. The specific mitigation measures detailed within the CNVIS will be implemented, along with Project wide measures identified in Appendix B.

### 6.9.2 Temporary Noise Barrier Strategy

A Temporary Noise Barrier Strategy is being prepared to describe all temporary noise barriers for the project. The strategy describes the consultation and decision making process for temporary noise barriers and will provide the final barrier heights, materials and predicted noise outcomes.

The Temporary Noise Barrier Strategy will be submitted for approval prior to commencement of any of the following works:

- Establishment/construction works at the Kingsgrove North compound;
- Removal of the permanent noise barriers on the northern and southern sides of the M5 East Motorway;
- Road widening works along Campbell Road, Campbell Street or Euston Road.

## 6.10 Flood Mitigation Strategy

There are three areas where project works may affect flood risk. These are listed below, and described in more detail in the CDS-JV's Flood Mitigation Strategy.

- Wolli Creek / Kingsgrove area;
- Cooks River / Arncliffe area; and
- Alexandra Canal / St Peters area.

Works associated with the establishment of each ancillary facility have been assessed as part of the Flood Mitigation Strategy in order to minimise flood risks associated with the relevant works. The Flood Mitigation Strategy has been developed in accordance with condition B23 and aims to not worsen existing flooding characteristics within and in the vicinity of the project boundary, during both construction and operation. The Strategy provides mitigation measures to be implemented to minimize soil erosion and scour as a result of the project and to protect project works/operations. Measures to be implemented at ancillary facilities are provided on the establishment layout drawings (Appendix F) and are also described in Appendix A.

All relevant flooding information from the project will be provided to the relevant council(s) and/or NSW State Emergency Service.

## 6.11 Traffic and Access

Any new or modified local roads, parking, pedestrian and cycle infrastructure will be designed to meet relevant design, engineering and safety guidelines, including *Austroroads Guide to Traffic Engineering Practice*. As described in Section 5.6, only local roads approved under the New M5 EIS, Submissions Report and CoA D46 will be used by heavy vehicles during establishment and construction, unless otherwise approved by the Secretary, DP&E.

### 6.11.1 Road Safety Audits

Prior to the implementation of new or modified access arrangements to ancillary facilities, desktop road safety audits will be undertaken.

### 6.11.2 Traffic Control Plans

A Traffic Control Plan (TCP) is a diagram identifying signs and devices in specific locations to allow the public and workers at the work site to be safely separated from traffic, while minimising disruption and risk to road users.

Where required, TCPs will be prepared in accordance with the principles and measures outlined in the Traffic Management and Safety Plan, AS1742.3-2009 and Roads and Maritime's Traffic Control at Worksites Manual Version 4. TCPs required during ancillary facility establishment may include construction access point signage, site deliveries, plant movements, traffic control works and installation of portable traffic signals.

## 6.12 Visual Screening and Light Spill

Visual impacts, including light spill, from the Project's construction sites, including ancillary facilities, will be minimised where possible in accordance with CoA B73. Privacy of adjoining residential development will also be considered in the design and establishment of ancillary facilities (CoA D66).

Where feasible and reasonable, the layout arrangements for ancillary facilities will have regard to the following amenity criteria:

- Existing vegetation around the perimeter of the construction compounds will be retained where feasible and reasonable and will be described in the Tree Reports required by CoA B63 and described in Section 6.16, in particular:
  - Vegetation surrounding the Bexley Road East construction compound (C6), particularly along the boundary between residential properties and the compound along the northern and eastern boundaries
  - Mature trees along the north-west (Marsh Street) and south-west boundaries of the Arncliffe construction compound site
  - Mature trees and vegetation along the boundary of Sydney Park along Campbell Road and Barwon Park Road.

- Landscape planting would use fast growing species where reasonable and feasible. This would soften views of construction sites, particularly for compounds located within public recreational spaces.
- Revegetation and landscaping would be undertaken progressively.
- Where an ancillary facility overlooks residential property, privacy measures will be provided in consultation with the affected property owner.
- Temporary noise walls would be erected early within the site establishment phase where required to minimise noise impacts and provide visual screening.
- Temporary noise walls would be designed to include painted surface and Project information / logo to deter graffiti and reduce the scale of noise walls, particularly adjacent to residential areas or public open space.
- Site hoardings and fencing would be regularly maintained, including the prompt removal of graffiti.
- Acoustic sheds would be designed to minimise noise impacts and provide visual screening to be visually recessive, such as the use of mid toned colours and materials to minimise the intrusiveness and potential glare of the sheds.
- Cut-off or and directed lighting would be used within and outside of construction compounds with lighting location and direction considered to ensure glare and light spill are minimised .
- The lighting design for shared paths located within the M5 Linear Park impacted by the Project or located adjacent to compounds would be designed to minimise light spill to adjoining residential properties while maintaining a safe night time environment for path users (e.g. lighting position below the height of the fence line).
- A signage strategy would be developed during detailed design for temporary wayfinding and safety. Potentially affected receivers would be consulted on the final signage in relation to the location and associated impacts.
- Elements within construction sites would be located to minimise visual impacts as far as feasible and reasonable, for example, locating equipment back from site boundaries.
- Opportunities would be investigated to maximise the separation distances as far as reasonable and feasible :
  - Between the Kingsgrove North construction compound to the adjoining residential areas to reduce shading and visual impacts
  - Between the Bexley Road North and Bexley Road East construction compounds and adjoining residential areas to reduce shading and visual impacts.
- The location of temporary buildings and structures will consider overlooking and overshadowing impacts on adjacent sensitive receivers.

The environment team will participate in the review of the layout arrangements for ancillary facilities to ensure these criteria are considered during the design and establishment of the ancillary facilities.

Where reasonable and feasible, lighting within the ancillary facilities will be turned off or reduced to a level that maintains site safety when the facilities are not in use.

## 6.13 Boundary Screening

Boundary screening will be installed within ancillary facilities adjoining or adjacent to residential and/or commercial properties in accordance with CoA D56. Consultation regarding boundary screens will be undertaken prior to installation as described in Section 3.2.

## 6.14 Land Condition Assessments

Land condition assessments will be undertaken prior to commencement of establishment at the ancillary facilities. The assessments will be undertaken by an independent environmental consultant approved by the SMC Representative, who has experience in site environmental inspections and construction waste management.

Once the ancillary facilities are no longer required, and after rehabilitation of the area in accordance with Section 6.19, a post-construction land condition assessment will be undertaken by an independent environmental consultant approved by the SMC Representative.

## 6.15 Flora and fauna

Prior to the commencement of any works that will impact on the Cooks River/Castlereagh Ironbark Forest, Paperbark Swamp Forest or the Green and Golden Bell Frog, a report detailing progress made towards securing the required offsets (as described in the New M5 EIS) for these vegetation communities/species will be submitted for approval of the Secretary, DP&E.

## 6.16 Trees

The project will be designed to retain as many trees as possible and to provide a net increase in the number of replacement trees in accordance with CoA B63. An independent experienced and qualified arborist will prepare comprehensive Tree Reports prior to any trees being removed on the periphery and/or outside the construction footprint. The reports will include:

- (a) a visual tree assessment with inputs from design, urban design and construction;
- (b) consideration of all options to amend the project where a tree has been identified for removal; and
- (c) measures to avoid the removal of trees or minimise damage to existing trees and to ensure the health and stability of trees to be protected.

The reports will be submitted to the Secretary, DP&E, for approval prior to the removal, damage and/or pruning of any trees.

Any required replacement trees will be planted within, or in close proximity to, the project boundary in consultation with the relevant council.

## 6.17 Heritage

### 6.17.1 Heritage items and conservation areas

All buildings and structures identified as potential heritage items in the New M5 EIS, Submissions Report and identified during detailed design and construction of the project, will be dealt with as though they are a locally listed heritage item.

All heritage items and conservation areas will be identified on Sensitive Area Plans and Site Environment Plans.

### 6.17.2 Historical Archaeology

An Excavation Director will be engaged for the project to oversee and advise on matters associated with historic archaeology. A Historic Archaeological Research Design, incorporating an excavation methodology has been prepared for the project in accordance with the Heritage Council of NSW's *Archaeological Assessments Guideline (1996)* and will be implemented as required and as advised by the Excavation Director. The Excavation Director will be present during excavation works in the vicinity of potential archaeological sites.

In the event that archaeological relics are discovered during establishment or construction activities, the Unexpected Heritage Items Procedure would be implemented and the Excavation Director notified. Where relics are determined to be of State or local significance, an Archaeological Relics Management Plan would be prepared in consultation with the Heritage Council of NSW and in accordance with CoA D40. Subsequent to the discovery of any archaeological relics, an Excavation Report would be prepared in accordance with CoA D41. The report would be submitted to DP&E, the Heritage Council of NSW, the local library and the local Historical Society in the relevant local government area.

## 6.18 Contamination

Where required, Phase 2 contamination investigations will be undertaken within areas identified as having a moderate to high risk of contamination. The findings of Phase 2 investigations will be provided in progressive Soil Contamination Reports. Where the Soil Contamination Reports identify areas that require remediation for the intended final land use, remediation strategies will be prepared and implemented for these sites.

Construction Contamination Management Plans will be prepared and implemented prior to construction to manage potential contamination impacts during construction of the project. The plans will be prepared progressively for construction areas in accordance with CoA D54 and will incorporate the findings of the relevant Soil Contamination Reports.

The Construction Contamination Management Plans will be submitted to the Secretary, DP&E, prior to the disturbance of any land identified as having moderate to high contamination risk.



## 6.19 Rehabilitation

In accordance with CoA D65, ancillary facilities must be rehabilitated to at least their pre-construction condition or better, to the satisfaction of the Secretary, unless otherwise agreed by the landowner where relevant. Restoration works may include cleanup, dismantling of temporary facilities, ripping, topsoiling of the area, planting, etc.

Nine of the 14 ancillary facilities identified in the EIS will include permanent facilities or permanent road infrastructure as listed in Table 5. The built form and landscaping for the operational footprint will be included in the Project's Urban Design and Landscape Plan (CoA B61).

Residual land, not required for operational purposes for the Project (refer Table 5), will be rehabilitated in accordance with the Residual Land Management Plan (CoA B67) and the Flora and Fauna Management Plan (CoA D68(d)), which will nominate those flora species and sources to be used in rehabilitated areas. Revegetation and landscaping across the Project would be undertaken progressively.

## 7. Incident Management

CDS-JV will actively prepare for and respond to emergency situations. CDS-JV will identify potential emergencies in accordance with the CDS-JV Incident Response Plan for Construction (M5H-HS-PLN-PWD-0003) including resourcing, testing and communication with personnel.

In the event of an emergency and/or incident, CDS-JV will effectively respond to, report and investigate all incidents. Appropriate corrective and preventative actions will be taken and lessons learned will be shared.

The immediate response to all incidents is to make the area safe and undertake measures to prevent further environmental harm. The Environmental and Sustainability Manager and Project Director will be notified immediately in the event of an environmental incident.

The Environmental and Sustainability Manager and Project Director or nominated delegates will notify Roads and Maritime, Project Company, the Environmental Representative, parent companies and relevant authorities, where required.

The Roads and Maritime *Environmental Incident Classification and Reporting Procedure* will be followed in the first instance for initial response, classification and notification. As per the Incident Response Plan, the CPB Contractors' *Managing HSE Incidents – Synergy* procedure will be implemented for internal notification, classification, reporting and incident investigations.

### Notification to EPA and other agencies

Where required in accordance with the project environment protection licence (EPL) and the *Protection of the Environment Operations Act 1997* (POEO Act), notification to Environment Protection Authority (EPA) will be undertaken for any non-conformances with the conditions of the EPL and pollution incidents. The Secretary shall be provided with a record of any such notifications in accordance with CoA A15.

CSD JV will prepare a Pollution Incident Response Management Plan (PIRMP) to comply with requirements set out in part 5.7A of the POEO Act and the Protection of the Environment Operations (General) Regulation 2009, stating that holders of an EPL must prepare, implement and test a PIRMP in relation to the activity to which that licence relates. The PIRMP shall be implemented immediately if a pollution incident occurs and material harm to the environment is caused or threatened.

If the Environment and Sustainability Manager (or delegate) determines that an incident causes actual or potential harm to the health or safety of human beings or to ecosystems that is not minor; or if actual or potential loss or property damage (including costs to prevent, mitigate or make good harm to the environment) associated with a pollution incident exceeds \$10,000, then the relevant agencies and authorities will be notified immediately. Notifications will be undertaken in accordance with the project's PIRMP.

### Notification to the Secretary of DP&E

In accordance with CoA A16, CDS-JV will notify the Secretary of any incident (other than those relating to the POEO Act) with actual or potential significant off-site impacts on people or the biophysical environment immediately (on weekdays, or by the following business day for weekends, public holidays and site shutdown periods) of becoming aware of the incident. CDS-JV will provide full written details of the incident to the Secretary within seven days of the date on which the incident occurred. CDS-JV will provide the Secretary with records of any notification of incidents to the EPA. CDS-JV will meet the requirements of the Secretary, or other relevant public authority as determined by the Secretary, to address the cause or impact of any incident in accordance with CoA A17.

### Project incident investigations

Depending on the severity of the event, the scene of the incident, including any associated plant and equipment, is to be preserved until relevant data and evidence is collected. Environmental incidents, including community complaints, will be entered into and closed out in Synergy using *Managing HSE Incidents – Synergy*.

All incidents will be investigated according to the requirements of *Managing HSE Incidents – Synergy*. The level of investigation will be dependent on the classification of the incident. The incident investigation team will be a mix of both operational and HSE staff selected by the Project Manager based on the severity of the incident and the availability of experienced personnel.

As part of the incident investigation, corrective and preventative actions will be identified, assigned to the appropriate person and closed out according to set timeframes. Corrective actions will be assigned, tracked and closed out in Synergy – Action Plan Module. All corrective actions will include reference to the relevant incident record for ease of tracking.

## **Incident reporting**

For incidents classified as Category 1 or 2 incidents (in accordance with Roads and Maritime – Environmental Incident and Classification Reporting Procedure), a Roads and Maritime environmental incident form 624 will be completed and submitted to WCX M5 Pty Ltd by email within three days of the date of the incident.

SH&E Alerts will be prepared for all Class 1 and 2 incidents and high potential incidents (HPI) for distribution within the Project or outside of the Project, where appropriate. SH&E Alerts may also be raised at the discretion of the Environmental and Sustainability Manager.

Details of environmental incidents and resulting corrective or preventative actions will be recorded in Synergy and included in monthly environmental reports and in the quarterly compliance reports required under the Compliance Tracking Program. The Environmental and Sustainability Manager will identify trends in incidents and trends in root causes to suggest the nature of preventative actions which are warranted.

## **Notification to parent companies**

The Project Director or delegate will notify the joint venture parent companies, CPB Contractors, Dragados and Samsung as appropriate, in accordance with the severity and status of the incident.

## 8. Review and Improvement

### 8.1 Monitoring, Inspection and Reporting

Regular compliance activities, such as inspections, observations and monitoring will be undertaken throughout establishment, construction and operation of the ancillary facilities. Subcontractors works would be included in regular inspections, observations, monitoring and audits as appropriate.

Environmental controls are to be inspected regularly to ensure their ongoing suitability and effectiveness. Environmental monitoring is carried out to establish pre-construction benchmarks, confirm compliance with the conditions of environmental approvals, licences and laws and to provide early indication of potential adverse impacts to the environment or community. Formal periodic review of the suite of Conditions of Approval will be undertaken six monthly. The review will be led by the Environment and Sustainability Manager with input from other disciplines including community engagement, design and construction. An indicative monitoring, inspections, reporting, review and audit (MIRRA) schedule is included in Table 31. For operation, refer to individual sub Plans for monitoring, inspections and reporting specific to each environmental issue.

Table 31: Monitoring, Inspections, Reporting, Review, Audit Schedule

Item	Frequency	Standards	Reporting	Responsibility
<b>Regular inspections</b>				
Visual surveillance of environmental issues and controls	Daily	EWMS	Daily Diary	Site Foremen
Environment site inspections including traffic and parking arrangements, air quality, erosion and sediment controls, new/modified hazards/risks, damage to third party property / infrastructure	Weekly	Weekly Environmental Inspection Checklist	Completed inspection checklist	Environment personnel
Environment Representative (ER) site inspections	Fortnightly, at minimum	D&C Deed CoA D1, D2	ER Inspection checklist / notes Monthly ER Report to DP&E	Environmental Representative
Plant / equipment inspections including maintenance and emissions	Regularly	POEO Act	plant and vehicle inspection logs	Mechanical Foremen
Management observations (CEMP Element 1.2)	As per CEMP	CPB EMS	Observation records	Project Director
<b>As required / specific inspections</b>				
Asbestos survey	As required prior to demolition	CoA D67 Qualified asbestos surveyor; Asbestos Guideline (M5N-ES-GUI-PWD-0001)	Reporting as per Asbestos Guideline	WHS Manager
Building, service, utility inspections	Prior to the commencement of construction (including demolition) that may impact on surrounding buildings, services &	CoA B58 D&C G36 AS 4349.1	Pre-construction inspection report to owner (and Secretary on request)	Surface Works D&C Director

# Ancillary Facilities Management Plan



Item	Frequency	Standards	Reporting	Responsibility
	<p>utilities putting them at risk from damage</p> <p>Subsequent inspections of buildings, services &amp; utilities within 3 months of completion of relevant construction works to assess any damage</p>			
Pre-clearance survey	Prior to any vegetation clearance/ pruning	CoA D53; Vegetation Clearing Flowchart (M5N-ES-FLC-PWD-0011-00) ; RMS Biodiversity Guidelines	Land Disturbance Permit	Environmental & Sustainability Manager
Pre-clearance inspection	Prior to vegetation clearance/pruning	CoA D53; Vegetation Clearing Flowchart; Fauna Handling Flowchart (M5N-ES-FLC-PWD-0004-00) RMS Biodiversity Guidelines	Pre-clearance checklist Land Disturbance Permit	Environmental & Sustainability Manager
Local road dilapidation	<p>Prior to the use of the local road by heavy/oversized vehicles</p> <p>Subsequent report within 4 weeks of the completion of construction</p>	CoA B59	Local Road Dilapidation Report to relevant local Councils at least 2 weeks prior to use of road	Surface Works D&C Director
Visual surveillance	Continual during activities with high potential to produce dust and during prolonged dry or windy conditions	No visible dust emissions	Site Foremen's log book	Site Foremen
Unanticipated potential heritage discovery	Upon discovery of potential heritage item	Manage Cultural Heritage Procedure; Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	As required by Manage Cultural Heritage Procedure	Environmental and Sustainability Manager / Heritage specialist
Discovery of human remains	Upon discovery of human remains	Roads and Maritime Standard Management Procedure: Unexpected Heritage Items	As required by RMS Procedure	Environmental and Sustainability Manager

# Ancillary Facilities Management Plan



Item	Frequency	Standards	Reporting	Responsibility
<b>Monitoring</b>				
ER to monitor the implementation of environmental management Plans and monitoring programs required by the <b>CoA</b>	Monthly	CoA D1, D2	Submit to the Secretary, within 7 days of the end of each month	Environmental Representative
Monitor / review in accordance with EPL conditions	Monthly	EPL (TBA); EPA annual return proforma	EPL Monthly Report EPL Annual Return	Environmental and Sustainability Manager
Water quality monitoring program	Bimonthly (once in dry conditions and once in wet conditions when possible) prior to construction  Quarterly (once in dry conditions and once in wet conditions when possible) prior to construction.	Water Quality Monitoring Program	Baseline water quality report prior to construction. Quarterly water quality reporting during construction.	Environmental and Sustainability Manager
Attendance of ecologist or fauna spotter/catcher during vegetation clearance/pruning	As determined by pre-clearance survey and EIS.	Manage Flora and Fauna Procedure ; RMS Biodiversity Guidelines	Pre-clearance checklist Post-clearance checklist	Environmental and Sustainability Manager
Attendance of Environmental Advisor or arborist during excavations in critical root zone	As required, during excavation	Manage Flora and Fauna Procedure ; RMS D&C G40	Pre-clearance checklist Land Disturbance Permit	Environmental and Sustainability Manager
Noise or vibration monitoring	Where required by Construction Noise and Vibration Impact Statement	As per CNVIS	Vibration monitoring report	Environmental and Sustainability Manager
Monitoring of State or locally significant archaeological excavation , if required	As required by the HARD and/or upon identification of State significant archaeology, for duration of excavation	CoA D40 Heritage Council of NSW Archaeological Assessments Guideline (1996)	Excavation report within 12 months of completing the excavations, where required	Environmental and Sustainability Manager / authorised Excavation Director
Contamination monitoring	As required by Construction Contamination Management Plan	CoA D54	As required by Construction Contamination Management Plan	Environmental and Sustainability Manager

# Ancillary Facilities Management Plan



Item	Frequency	Standards	Reporting	Responsibility
Waste avoidance and resource recovery (including procurement)	Monthly	G36 Section 4.11.2 and Appendix G36/F; NSW Government "Waste Reduction and Purchasing Policy"; WRAPP reporting guidelines 2011.	Waste avoidance and resource recovery report	Environmental and Sustainability Manager
<b>Reviews</b>				
Project progress review – performance against requirements of EMS, including status of compliance with Environmental Documents	Monthly	CPB EMS	For inclusion in the Project Progress Report, monthly to RMS and IC by the 5 <sup>th</sup> Business Day of each month	Environmental and Sustainability Manager
Management reviews of the effectiveness and proper implementation of the CEMP	Bi-Annually	D&C G36 Section 3.12; CPB EMS	Meeting minutes, corrective and preventative actions in Synergy – Action Plan Module	Environmental and Sustainability Manager; Project Director; Quality Manager
Statement of Compliance, summary of monitoring undertaken and complaints received	Yearly	EPL (TBA)	EPL Annual Return	Environmental and Sustainability Manager
<b>Audits</b>				
Pre-construction compliance audit – status against the CoA and REMM	Once, prior to commencement of construction	Compliance Tracking Programme	Pre-construction compliance report to the Secretary	Environmental and Sustainability Manager
Construction compliance audit – status against the CoA and REMM	Quarterly throughout construction	Compliance Tracking Programme	Quarterly compliance report to the Secretary	Environmental and Sustainability Manager
Pre-operation compliance audit – status against the CoA and REMM	Once, prior to commencement of operation	Compliance Tracking Programme	Pre-operation compliance report to the Secretary	Environmental and Sustainability Manager
Audit environmental activities to evaluate the implementation, effectiveness and level of compliance of on-site construction activities with the CEMP	Periodically	As per frequency in CEMP	Audit reports	Environmental Representative
CPB Contractors Internal SHEQ Audit	As required by CEMP	CPB Contractors EMS	TBC	SHEQ Team
Compliance with CEMP	Not exceeding 5 months and 15 Business Days	D&C Deed	Audit report to Project Company and IC	Independent Auditor



Item	Frequency	Standards	Reporting	Responsibility
<b>Certification</b>				
Certification of environmental performance	2 months and 15 Business Days	D&C Deed	Certification letter directed to Project Company's Representative	Environmental and Sustainability Manger

## 8.2 Revision of this Plan

Continual improvement is achieved through constant measurement and evaluation, audit and review of the effectiveness of the Plan. Monthly reviews undertaken by the Environmental Representative and quarterly management reviews provide specific opportunities to identify improvements in the environmental management system and/or this AFMP. This Plan will be updated as required:

- to add / amend ancillary facilities;
- to take into account changes to the environment or generally accepted environmental management practices, new risks to the environment, any hazardous substances, contamination or changes in law;
- where requested or required by the NSW Department of Planning and Environment or any other Authority; or
- in response to internal or external audits or quarterly management reviews.

The updated Plan must be endorsed by the Environmental and Sustainability Manager and approved internally by the Project Director. Minor changes may be approved by the Environmental Representative. 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
- do not compromise the ability of the Project to meet approval or legislative requirements
- to address:
  - minor changes to previously approved facilities (refer Section 4.2.3)
  - additional ancillary facilities approved by the Environmental Representative under CoA D64, or
  - additional ancillary facilities approved by the Secretary under CoA D63.

Where the Environmental Representative deems it necessary, the AFMP will be provided to relevant stakeholders for review and comment if required and forwarded to the Secretary of DP&E for approval. Where required, a revised AFMP that address any potential new ancillary facilities will also be submitted for approval of the Secretary of DP&E in accordance with Section 4.

## 8.3 Non-Conformance Management, Corrective and Preventative Actions

A non-conformance is a failure to comply with a requirement, standard or procedure such as this AFMP or associated documents. Environmental non-conformances may be identified through improvement opportunities, regular environmental inspections or monitoring, internal or external audits, complaints, community consultation, observations or through incident management. The Environmental Representative, SMC Representative and/or a public authority may also raise a non-conformance or improvement notice.

Where non-conformances are identified during regular inspections, corrective actions are raised, tracked and closed out through the inspection records if the actions can be closed out without 72 hours. All other non-conformances are recorded and reported as incidents in Synergy using the protocol *Managing HSE Incidents – Synergy*.

Following the identification of a non-conformance, corrective and/or preventative actions will be identified and assigned to the appropriate person with set timeframes. Timeframes will be set to



ensure any damage incurred is rectified and any chance of recurrence is eliminated as soon as practicable. The Synergy – Action Plan Module will be used to assign, track and close out corrective actions (except for those actions identified, tracked and closed out within 72 hours through inspection records). All corrective actions will include reference to the relevant inspection, incident or review record for ease of tracking.

The database will be reviewed regularly to ensure actions are being closed out in a timely manner. The status of corrective actions will be reported at least monthly for review at the monthly management meeting (*Managing HSE Incidents – Synergy*). Non-conformances will be reviewed and reported on in the monthly environmental progress reports.



## Appendix A: Site-specific Management Measures

The Ancillary Facilities Management Plan, Construction Area Plans (CAPs), Environmental Work Method Statements (EWMS) and Construction Environmental Management Plan (CEMP) form a management guide that clearly identifies the required environmental management actions to be undertaken. CDS-JV procedures will be utilised for work across all pre-construction, construction and operational activities at the 14 nominated ancillary facilities and power alignments. These procedures and Plans include:

- Incident Response Plan for Construction	M5N-HS-PLN-PWD-0003
- Manage Soil and Water Procedure	M5N-ES-PRC-PWD-0035
- Manage Contaminated Land Procedure	M5N-ES-PRC-PWD-0036
- Manage Work with Asbestos Procedure	M5N-ES-PRC-PWD-0037
- Manage Acid Sulfate Soils Procedure	M5N-ES-PRC-PWD-0038
- Manage Cultural Heritage Procedure	M5N-ES-PRC-PWD-0039
- Manage Air Quality Procedure	M5N-ES-PRC-PWD-0040
- Manage Hazardous Substances Procedure	M5N-ES-PRC-PWD-0041
- Manage Flora and Fauna Procedure	M5N-ES-PRC-PWD-0042
- Manage Environmental Noise Procedure	M5N-ES-PRC-PWD-0043
- Manage Waste Procedure	M5N-ES-PRC-PWD-0044

The following table contains site-specific mitigation and management measures for the ancillary facilities identified in the EIS. These measures are applicable to the establishment of ancillary facilities as part of the Project. Mitigation measures provided below will be incorporated into Construction Area Plans (CAPs), Work Packs and EWMS. Site personnel will be required to undertake all works in accordance with the safeguards identified in the relevant documents.

Refer to Appendices J, L and M for site-specific management measures for ancillary facilities that were not identified in the EIS.

Appendix B provides project-wide management measures that would be consistently applied across all compound/ancillary sites.



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
EM – Environmental & Sustainability Manager, EC – Environmental Coordinator, PM – Project Manager, PE- Project Engineers, CM – Construction Manager, CRM – Community Relations Mgr					
<b>Kingsgrove North Construction Compound (C1)</b>					
A1.	Access to site to include: <ul style="list-style-type: none"> <li>▪ Purpose designed light vehicle access to and from the compound to occur via Garema Circuit and via the M5 East Motorway. Heavy vehicle access to and from compound via M5 East Motorway. Off-motorway connection via Kindilan underpass to minimise use of local roads.</li> <li>▪ The location of the car park and site office would be further refined to consider alternatives.</li> </ul>	CM, SS	Establishment	EIS Volume 1A	Site design/ Site layout CAP / WP
A2.	A temporary noise barrier (as specified in the Temporary Noise Barrier Strategy) will be constructed along northern and eastern boundary to provide noise attenuation and minimise visual impact.	CM, SS	Establishment	Temporary Noise Barrier Strategy	Site design/ Site layout CAP / WP
A3.	Realignment of existing pedestrian and cycle path to provide a safe alternate route around the compound site.	CM, SS	Establishment	EIS Volume 1A	Site design/ Site layout CAP / WP
A4.	Access for residential properties and residential localities on Kingsgrove Road, Moorfields Avenue, Wirega Avenue and Garema Circuit to be maintained during compound establishment and construction period.  Temporary road closure if required to be approved and adequately sign posted.	CM, SS	Establishment/ Construction	EIS Volume 1A	Site design/ Site layout CAP / WP TCP
A5.	No-go zones to clearly delineate areas outside of construction footprint to avoid impact to vegetation in Beverly Grove Bushland containing Cooks River/Castlereagh Ironbark Forest that is not approved for clearance	EM, CM	Establishment/ Construction	CoA D57 Manage Flora and Fauna Procedure	Site design/ Site layout CAP / WP
A6.	Maximise the separation distances as far as reasonable and feasible: <ul style="list-style-type: none"> <li>▪ Between the Kingsgrove North construction compound to the adjoining residential areas to reduce shading and visual impacts</li> </ul>	EM, CM	Establishment/ Construction	EIS Volume 1A CoA D66	Site design/ Site layout CAP / WP

# Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
<b>Kingsgrove South Construction Compound (C2)</b>					
A7.	Purpose designed heavy and light vehicle access to and from the Kingsgrove South Construction Compound will be via the Kindilin underpass, once established, through C1 compound.	EM, CM	Establishment/ Construction	EIS Volume 1A	Site design/ Site layout CAP / WP
A8.	Pedestrian and cyclist access via Kindilin underpass will be maintained during construction and physically separated from construction traffic with safety barriers.	EM, CM	Establishment/ Construction	EIS Volume 1A REMM TT08	Site design/ Site layout
A9.	Alternative access for pedestrians and cyclists will be provided during temporary closure of the Kindilin Underpass during site establishment. This alternative access will be provided via Karingal Street and Coolangatta Road.	CM, PE	Establishment / Construction	EIS Volume 1A REMM TT08	Site design/ Site layout
A10.	Contingency flood management and mitigation measures to be implemented at the site in accordance with the Flood Mitigation Strategy. Where feasible, the site layout is to avoid potential flood affected areas at the site, and avoid the use of these areas for stockpiling, fuel and materials storage, water treatment plants and substations.	CM, PE	Establishment / Construction	Flood Mitigation Strategy	Site design/ Site layout
A11.	<p>Stockpiles at the C2 compound will be sited in low-hazard areas:</p> <ul style="list-style-type: none"> <li>▪ – at least 20m clear of watercourses</li> <li>▪ – not under the dripline of any retained trees</li> <li>▪ – outside of the 20 year ARI flood extent if feasible</li> </ul> <p>Otherwise appropriate management controls such as bunding would be implemented and described on an Erosion and Sediment Control Plan (ESCP).</p>	CM, PE, EA	Establishment / Construction	EIS Volume 1A	Site design/ Site layout ESCP
<b>Commercial Road Construction Compound (C3)</b>					
A12.	Purpose designed heavy and light vehicle access to and from the compound via the existing access point on Commercial Road.	CM, SS	Establishment	EIS Volume 1A	Site design/ Site layout CAP / WP
A13.	Site boundary hoarding to be provided along the eastern, southern and western boundaries of the site.	CM, SS	Establishment	EIS Volume 1A	Site design/ Site layout CAP / WP

## Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
A14.	A temporary noise barrier (as specified in the Temporary Noise Barrier Strategy) will be constructed at the site to provide noise attenuation and minimise visual impact. A chain link fence will be installed along the northern boundary of the site abutting the existing M5 East Motorway.	CM, SS	Establishment	EIS Volume 1A	Site design/ Site layout
A15.	Contingency flood management and mitigation measures to be implemented at the site (within the 20 year ARI flood extent) in accordance with the Flood Mitigation Strategy. Where feasible, the site layout is to avoid potential flood affected areas at the site, and avoid the use of these areas for stockpiling, fuel and materials storage, water treatment plants and substations.	CM, PE, EM	Establishment / Construction	Flood mitigation strategy	Site design/ Site layout CAP / WP
A16.	Stockpiles at the C3 compound will be sited in low-hazard areas: <ul style="list-style-type: none"> <li>▪ – at least 20m clear of watercourses</li> <li>▪ – not under the dripline of any retained trees</li> <li>▪ – outside of the 20 year ARI flood extent if feasible</li> </ul> Otherwise appropriate management controls such as bunding would be implemented and described on an ESCP.	CM, PE, EA	Establishment / Construction	EIS Volume 1A	Site design/ Site layout ESCP
<b>Bexley Road North Construction Compound (C4)</b>					
A17.	Vehicles will enter and exit the compound via Bexley Road	EM, CM	Establishment/ Construction	EIS Volume 1A	Site design/ Site layout CAP / WP
A18.	Temporary noise barrier (as specified by the Temporary Noise Barrier Strategy) to be constructed along the boundary of the site to provide noise attenuation and to minimise impacts to visual amenity.	EM, CM	Establishment/ Construction	Temporary Noise Barrier Strategy	Site design/ Site layout CAP / WP
A19.	Pedestrian access along Bexley Road and within M5 Linear Park will be maintained during construction with appropriate signage installed along pedestrian walkways within the vicinity of the compound.	EM, CM	Establishment/ Construction REMM TT08	EIS Volume 1A	Site design/ Site layout

## Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
A20.	Contingency flood management and mitigation measures to be implemented at the site (within the 20 year ARI flood extent) in accordance with the Flood Mitigation Strategy. Where feasible, the site layout is to avoid potential flood affected areas at the site, and avoid the use of these areas for stockpiling, fuel and materials storage, water treatment plants and substations.	CM, PE	Establishment / Construction	Flood mitigation strategy	Site design/ Site layout CAP / WP
A21.	Stockpiles at the C4 compound will be sited in low-hazard areas: <ul style="list-style-type: none"> <li>■ – at least 20m clear of watercourses</li> <li>■ – not under the dripline of any retained trees</li> <li>■ – outside of the 20 year ARI flood extent if feasible</li> </ul> Otherwise appropriate management controls such as bunding would be implemented and listed on an ESCP.	CM, PE, EA	Establishment / Construction	EIS Volume 1A	Site design/ Site layout ESCP
A22.	Maximise the separation distances as far as reasonable and feasible: <ul style="list-style-type: none"> <li>■ Between the Bexley Road North and Bexley Road East construction compounds and adjoining residential areas to reduce sharing and visual impacts.</li> </ul>	EM, CM	Establishment/ Construction	EIS Volume 1A CoA D66	Site design/ Site layout CAP / WP
A23.	Prior to establishment, any impacts to business and community facilities at Bexley North will be identified through consultation where required.	CM, EM	Establishment/ Construction	CoA C1	Section 3.2, Community Consultation
<b>Bexley Road South Construction Compound (C5)</b>					
A24.	Access to and from the compound site will be via Bexley Road	EM, CM	Establishment/ Construction	EIS Volume 1A	Site design/ Site layout CAP / WP
A25.	Contingency flood management and mitigation measures to be implemented at the site (within the 20 year ARI flood extent) in accordance with the Flood Mitigation Strategy. Where feasible, the site layout is to avoid potential flood affected areas at the site, and avoid the use of these areas for stockpiling, fuel and materials storage, water treatment plants and substations.	CM, PE	Establishment / Construction	Flood Mitigation Strategy	Site design/ Site layout CAP / WP

## Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
A26.	<p>Stockpiles at the C5 compound will be sited in low-hazard areas:</p> <ul style="list-style-type: none"> <li>– at least 20m clear of watercourses</li> <li>– not under the dripline of any retained trees</li> <li>– outside of the 20 year ARI flood extent if feasible</li> </ul> <p>Otherwise appropriate management controls such as bunding would be implemented and listed on an ESCP.</p>	CM, PE, EA	Establishment / Construction	EIS Volume 1A	Site design/ Site layout ESCP
A27.	Construction hoarding will be provided along the Wollie Creek frontage boundary of the site and a temporary noise barrier (as specified by the Temporary Noise Barrier Strategy) will be provided to all other boundaries to provide noise attenuation and to minimise impacts to visual amenity.	CM, SS	Establishment	Temporary Noise Barrier Strategy	Site design/ Site layout CAP / WP
A28.	Prior to establishment, any impacts to business and community facilities at Bexley North will be identified through consultation where required.	CM, EM	Establishment/ Construction	CoA C1	Section 3.2, Community Consultation
<b>Bexley Road East Construction Compound (C6)</b>					
A29.	No-go areas will be established to prevent impact to the Wollie Creek riparian corridor bushland	EA, PM, SS	Establishment/ Construction	Manage Flora and Fauna Procedure	Site design/ Site layout CAP / WP Permit to clear land or vegetation
A30.	A temporary noise barrier (as specified by the Temporary Noise Barrier Strategy) will be constructed on the eastern boundary of the site. Temporary construction hoarding will be constructed on the southern and western boundaries of the site.	CM, SS	Establishment	Temporary Noise Barrier Strategy	Site design/ Site layout CAP / WP
A31.	Prior to establishment, any impacts to business and community facilities at Bexley North will be identified through consultation where required.	CM, PE, EA	Establishment / Construction	EIS Volume 1A	Section 3.2, Community Consultation
A32.	<p>Maximise the separation distances as far as reasonable and feasible:</p> <p>Between the Bexley Road North and Bexley Road East construction compounds and adjoining residential areas to reduce shading and visual impacts.</p>	EM, CM	Establishment/ Construction	EIS Volume 1A CoA D66	Site design/ Site layout CAP / WP

# Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
<b>Arncliffe Construction Compound (C7)</b>					
A33.	<p>Prior to establishing the Arncliffe construction compound (C7), the following management measures (from Table 1 of the Green and Golden Bell Frog Plan of Management, New M5 EIS):</p> <p>(a) define the construction clearing area;</p> <p>(b) establish a frog exclusion zone; and</p> <p>(c) undertake pre-clearance survey and salvage activities (i.e. frog collection).</p> <p>The presence of tadpoles will be determined in accordance with the Decommissioning of ponds flowchart. Any salvaged frogs and tadpoles must be either relocated to the RTA ponds or an appropriate holding facility which is staffed by appropriately trained and experienced frog specialists.</p> <p>No site establishment or construction-related works are permitted at the proposed Arncliffe construction compound site until such time that these management measures have been implemented and written notice has been provided to the Secretary by a suitably qualified and experienced frog specialist.</p>	EM, EA, CM, Project Ecologist and Herpetologist	Prior to establishment	CoA D59 Vegetation clearing flowchart Decommissioning of ponds flowchart	CAP/WP Permit to clear land or vegetation
A34.	Establishment works at the site must be undertaken in accordance with the Arncliffe Construction Compound Sub-plan to the AFMP, which includes Specific Green and Golden Bell Frog (GGBF) procedures and management measures to be implemented during site establishment works	EM, EA, CM, Project Ecologist and Herpetologist	Establishment/ Construction	Arncliffe Construction Compound Sub-plan	CAP/WP EWMS Manage Flora and Fauna Procedure
A35.	Temporary noise wall (as specified the Temporary Noise Barrier Strategy) will be constructed along all northern and western street-facing boundaries of the compound. Construction hoarding will be constructed along all other boundaries.	CM, SS	Establishment	Temporary Noise Barrier Strategy	Site design/ Site layout CAP / WP
A36.	Contingency flood management and mitigation measures to be implemented at the site (within the 20 year ARI flood extent) in accordance with the Flood Mitigation Strategy. Where feasible, the site layout is to avoid potential flood affected areas at the site, and avoid the use of these areas for stockpiling, fuel and materials storage, water treatment plants and substations.	CM, PE,	Establishment / Construction	Flood Mitigation Strategy	Site design/ Site layout

## Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
A37.	<p>Stockpiles at the C7 compound will be sited in low-hazard areas:</p> <ul style="list-style-type: none"> <li>– at least 20m clear of watercourses</li> <li>– not under the dripline of any retained trees</li> <li>– outside of the 20 year ARI flood extent if feasible</li> </ul> <p>Otherwise appropriate management controls such as bunding would be implemented and listed on an ESCP.</p>	CM, PE, EA	Establishment / Construction	EIS Volume 1A	Site design/ Site layout ESCP
A38.	Acid Sulfate Soil (ASS) or Acid Sulfate Material (ASM) identified and encountered at C7 will be handled and managed according to the Manage Acid Sulfate Soils Procedure.	CM, PE	Establishment / Construction	Manage Acid Sulfate Soils Procedure	CAP/WP EWMS
A39.	Access to and from C7 will be from the Marsh Street/ Flora Street intersection.	EM, CM	Establishment/ Construction	EIS Volume 1A	Site design/ Site layout CAP / WP
A40.	Safe working distances will be established as specified in the relevant CNVIS to ensure any vibration caused through establishment and construction surface works is undertaken to avoid indirect impacts to the Western outfall Main Sewer (SHR #01647).	CM, PE, SS	Establishment / Construction	CNVIS	Site design/ Site layout CAP / WP
A41.	No-go zones to clearly delineate areas outside of construction footprint to avoid impact to vegetation outside the approved construction footprint containing Swamp Sclerophyll Forest EEC.	EA, PM, SS	Establishment/ Construction	REMM B05 Manage Flora and Fauna Procedure	Site design/ Site layout CAP / WP Permit to clear land or vegetation
<b>Canal Road Construction Compound (C8)</b>					
A42.	Pre-clearance surveys of any derelict industrial buildings prior to demolition to determine potential microbat habitat.	EM, EA, Project Ecologist	Pre-construction, construction	Manage Flora and Fauna Procedure	Permit to clear land or vegetation
A43.	A temporary noise barrier (as specified by the Temporary Noise Barrier Strategy) will be constructed along Canal Road and Princes Highway facing boundaries of the site to provide noise attenuation and minimise visual amenity impacts.	CM, SS	Establishment	CoA D19, D20 Temporary Noise Barrier Strategy	Site design/ Site layout CAP / WP
A44.	Prior to construction, an existing bus stop on the eastern (southbound) side of Canal Road will be relocated further south towards Burrows Road.	PM, EA, RMS	Establishment	EIS Volume 1A	TCP

## Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
A45.	Safe working distances would be established to ensure any vibration caused through establishment and construction surface works is undertaken avoid indirect impacts to the Service Garage at 316 Princes Highway (Marrickville LEP 2011 I312), St Peters Anglican Church, 187-209 Princes Highway and Southern Cross Hotel, 340 Princes Highway.	CM, PE, SS	Establishment / Construction	CNVIS	CAP / WP
A46.	<p>There is to be no physical impact at the Service Garage at 316 Princes Highway, except for necessary stabilisation or maintenance works. The following actions will be undertaken for this heritage item:</p> <ul style="list-style-type: none"> <li>An existing condition survey report and programme of monitoring will be undertaken to identify early potential risks to the heritage item</li> <li>A photographic archival recording will be undertaken prior to the current use ceasing. The archival recording will conform to the guidelines provided in How to prepare archival records (NSW Heritage Office, 2003) and Photographic recording of heritage items using film or digital capture (NSW Heritage Office, 2006). The archival recording will be lodged with the relevant local libraries and the State Library of NSW.</li> <li>The oral history will be prepared, which will seek to contact past and present employees as well as others with memories of the service station. The oral history will be lodged with the relevant local libraries and the State Library of NSW .</li> </ul>	EA, EM, Heritage Consultant	Establishment	REMM NAH08	CAP/ WP Manage Cultural Heritage Procedure Survey Report Archival Record Oral History
A47.	<p>Prior to construction, a number of measures will be undertaken for the St Peter's Brickpit including:</p> <ul style="list-style-type: none"> <li>Interpretation of the geology of the area within the interchange</li> <li>Retaining an exposed section of the fresh shales and siltstones, including features associated with deposition of the sedimentary rocks and later formed fractures.</li> <li>Photographic and drawn archival recording of the geological features prior to any works that would obscure the brickpit features</li> </ul>	EA, EM, Heritage Consultant	Establishment	CoA D42 REMM NAH17	CAP/WP Manage Cultural Heritage Procedure Archival Record Specialist input

## Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
	<ul style="list-style-type: none"> <li>An assessment /and or consultation with a palaeontologist is required to determine whether the Project impact has potential to contain further specimens of scientific interest.</li> </ul>				
A48.	Soil contamination survey/ report of St Peters Interchange sites will be undertaken prior to commencement of construction to confirm the presence of contamination; specific measures relating to handling and treatment will be implemented upon confirmation of potential contaminants.	PM, EA	Establishment / Construction	CoA B31	Soil Contamination Reports
<b>Campbell Road Construction (C9)</b>					
A49.	Access to and from the compound will be via entry and exit gates along Campbell Road.	EM, CM	Establishment/ Construction	EIS Volume 1A	Site design/ Site layout CAP / WP
A50.	<p>In relation to Rudders Bond Store, the following would be undertaken:</p> <ul style="list-style-type: none"> <li>The bond store would be subject to a full archival recording following the NSW Heritage Division guidelines How to Prepare an Archival Recording (NSW Heritage Office, 2003) and Photographic recording of heritage items using film or digital capture (NSW Heritage Office, 2006)</li> <li>Consideration would be given as to whether the laminated timber columns could be salvaged and re-erected and clad elsewhere within the St Peters interchange or the local area. The cladding and brick walls are not considered to be of heritage significance and are not included within the reuse proposal</li> <li>Investigate options for documenting the history of the Ralph Symonds Company and presenting it to a national audience, in partnership with stakeholders such as the City of Sydney and Powerhouse Museum. The focus would be on their development of innovative timber construction methods during and after World War II (somewhat effective).</li> </ul>	EA, EM, Heritage Consultant	Pre-construction	REMM NAH17- NAH19	Manage Cultural Heritage Procedure Archival Record Heritage Specialist input
A51.	Temporary hoarding (as specified by the Temporary Noise Barrier Strategy) will be constructed along the Holland Street and west-facing boundaries of the compound to provide noise attenuation and to minimise impacts to visual amenity.	CM, SS	Establishment	CoA D19, D20 Temporary Noise Barrier Strategy	Site design/ Site layout CAP / WP

# Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
A52.	Pre-clearance surveys of any derelict industrial buildings such as the Warehouse Rudders Bond Store prior to demolition to determine potential microbat habitat.	EM, EA, Project Ecologist	Pre-construction, construction	Manage Flora and Fauna Procedure	Permit to clear land or vegetation
A53.	Acid Sulfate Soil (ASS) or Acid Sulfate Material (ASM) identified and encountered at C9 will be handled and managed according with the Acid Sulfate Soil Manual (ASSMAC, 1998) and in accordance with the Manage Acid Sulfate Soil Procedure.	CM, PE	Establishment / Construction	Acid Sulfate Soil Manual (ASSMAC, 1998) Manage Acid Sulfate Soil Procedure	CAP/WP EWMS Manage Acid Sulfate Soil Procedure
A54.	Soil contamination survey/ report of St Peters Interchange sites will be undertaken prior to commencement of construction to confirm the presence of contamination; specific measures relating to handling, treatment and will be implemented upon confirmation of potential contaminants.	PM, EA	Establishment / Construction	EIS Volume 1A CoA B31	Soil Contamination Report
<b>Landfill Closure Compound (C10)</b>					
A55.	Acid Sulfate Soil (ASS) or Acid Sulfate Material (ASM) identified and encountered at C10 will be handled and managed according to the Acid Sulfate Soil Manual (ASSMAC, 1998) and in accordance with the Manage Acid Sulfate Soil Procedure.	CM, PE	Establishment / Construction	Acid Sulfate Soil Manual (ASSMAC, 1998) Manage Acid Sulfate Soil Procedure	CAP/WP EWMS Manage Acid Sulfate Soil Procedure
A56.	Soil contamination survey/ report of St Peters Interchange sites will be undertaken prior to commencement of construction to confirm the presence of contamination; specific measures relating to handling, treatment and will be implemented upon confirmation of potential contaminants.	PM, EA	Establishment / Construction	EIS Volume 1A CoA B31	Soil Contamination Report
A57.	Access to and from the compound will be off Campbell Road.	EM, CM	Establishment/ Construction	EIS Volume 1A	Site design/ Site layout CAP / WP
<b>Burrows Road Construction (C11)</b>					
A58.	Acid Sulfate Soil (ASS) or Acid Sulfate Material (ASM) identified and encountered at C11 will be handled and managed according with the Acid Sulfate Soil Manual (ASSMAC, 1998) and in accordance with the Manage Acid Sulfate Soil Procedure.	CM, PE	Establishment / Construction	Acid Sulfate Soil Manual (ASSMAC, 1998) Manage Acid Sulfate Soil Procedure	CAP / WP EWMS Manage Acid Sulfate Soil Procedure

## Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
A59.	Soil contamination survey/ report of St Peters Interchange sites will be undertaken prior to commencement of construction to confirm the presence of contamination; specific measures relating to handling, treatment and will be implemented upon confirmation of potential contaminants.	PM, EA	Establishment / Construction	EIS Volume 1A CoA B31	Soil Contamination Report
A60.	Access to and from the compound will be via a gate off Burrows Road.	EM, CM	Establishment/ Construction	EIS Volume 1A	Site design/ Site layout CAP / WP
<b>Campbell Road Bridge (C12)</b>					
A61.	Temporary work over Alexandra Canal will be staged to minimise the duration of construction activities and temporary facilities removed as soon as practicable.	CM, PE	Establishment / Construction	EIS Volume 1A POEO Act	CAP / WP
A62.	Acid Sulfate Soil (ASS) or Acid Sulfate Material (ASM) identified and encountered at C12 will be handled and managed according with the Acid Sulfate Soil Manual (ASSMAC, 1998) and in accordance with the Manage Acid Sulfate Soil Procedure.	CM, PE	Establishment / Construction	Acid Sulfate Soil Manual (ASSMAC, 1998) Manage Acid Sulfate Soil Procedure	CAP / WP EWMS Manage Acid Sulfate Soil Procedure
A63.	Soil contamination survey/ report of St Peters Interchange sites will be undertaken prior to commencement of construction to confirm the presence of contamination; specific measures relating to handling, treatment and will be implemented upon confirmation of potential contaminants.	PM, EA	Establishment / Construction	EIS Volume 1A CoA B31	Soil Contamination Report
A64.	Access to and from the compound will be via a gate off Burrows Road.	EM, CM	Establishment/ Construction	EIS Volume 1A	Site design/ Site layout CAP / WP
A65.	Contingency flood management and mitigation measures to be implemented at the site (within the 20 year ARI flood extent) in accordance with the Flood Mitigation Strategy. Where feasible, the site layout is to avoid potential flood affected areas at the site, and avoid the use of these areas for stockpiling, fuel and materials storage, water treatment plants and substations.	CM, PE,	Establishment / Construction	Flood Mitigation Strategy	Site design/ Site layout CAP / WP
<b>Gardeners Road Bridge (C13)</b>					
A66.	Temporary work over Alexandra Canal will be staged to minimise the duration of construction activities and remove temporary facilities as soon as practicable.	CM, PE	Establishment / Construction	EIS Volume 1A POEO Act	CAP / WP

## Ancillary Facilities Management Plan



No.	Site Specific Mitigation and Management Measures	Responsibility	Timing	Reference	Where addressed
A67.	Acid Sulfate Soil (ASS) or Acid Sulfate Material (ASM) identified and encountered at C13 will be handled and managed according with the Acid Sulfate Soil Manual (ASSMAC, 1998) and in accordance with the Manage Acid Sulfate Soil Procedure.	CM, PE	Establishment / Construction	EIS Volume 1A Acid Sulfate Soil Manual (ASSMAC, 1998) Manage Acid Sulfate Soil Procedure	CAP / WP EWMS Manage Acid Sulfate Soil Procedure
A68.	Soil contamination survey/ report of St Peters Interchange sites will be undertaken prior to commencement of construction to confirm the presence of contamination; specific measures relating to handling, treatment and will be implemented upon confirmation of potential contaminants.	PM, EA	Establishment / Construction	EIS Volume 1A CoA B31	Soil Contamination Report
A69.	Access to and from the compound will be via a gate off Burrows Road.	EM, CM	Establishment/ Construction	EIS Volume 1A	Site design/ Site layout CAP / WP



## Appendix B: Project-wide Management Measures

No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
EM – Environmental & Sustainability Manager, EC – Environmental Coordinator, PM – Project Manager, PE- Project Engineers, CM – Construction Manager, CRM – Community Relations Mgr					
<b>General Requirements – Measures to apply to all ancillary facilities</b>					
A70.	All licences, permits and approvals will be obtained as required by law and maintained as required throughout the establishment and operation of the ancillary facilities.	EM	Establishment / Construction	CoA A8	Environmental obligations register
A71.	Ancillary facilities would be established in accordance with this AFMP.	EM, CM	Establishment	CoA D57	This Plan
A72.	Training will be provided to all Project personnel, including relevant sub-contractors on ancillary facility management requirements from this Plan through inductions, toolboxes and targeted training.	EA/SS	Prior to Establishment/ Establishment	CoA D57 REMM NV2 REMM NAH02	Sections 1.6, Site induction and training
A73.	Community complaints will be recorded and actioned in accordance with the Construction Complaints Management System (Appendix K).	CRM	Prior to Establishment/ Establishment	CoA C4 REMM AQ44-46	Section 3.2 Construction Complaints Management System (Appendix K)
A74.	Prepare dilapidation surveys and reports on the current condition of local roads buildings, services and utilities identified to be at risk of vibration or settlement impacts. The surveys/reports must be prepared by a suitably qualified and experienced person and must be provided to the relevant owner for review prior to commencement of the relevant activity.	CM/EM	Prior to Establishment/ Post-construction of the SSI	CoA B58, B59 REMM TT12	Site mobilisation CAP
A75.	Consult with relevant utilities and services owners/providers prior to establishment to determine requirements for access to, diversion, protection, and/or support. Ensure that disruption to services are minimised and that local residents and businesses to be affected are advised prior to any planned disruption of service.	CM	Prior to Establishment/ Establishment	CoA B57 REMM LP08	Site mobilisation CAP Permit to excavate

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A76.	The project will be designed and constructed with the objective of minimising impacts to, and interference with, third party property and infrastructure. Any damage caused to property as a result of the project must be rectified within a reasonable timeframe.	CM/EM	Establishment / construction	CoA B72	Site layout/ Site design CAP / WP EWMS
A77.	The weekly environmental inspection checklist will be completed and will record ancillary facility management related issues.	EM	Establishment	Good practice	Environmental inspection checklist
A78.	Materials and machinery should be stored tidily during the works.	SS	Establishment	Good practice	Environmental inspection checklist
A79.	Minor refinements to ancillary facilities may occur in accordance with the Ancillary Facilities Flow Chart (for example alteration to car parking, relocation of containers, laydown/storage) provided impacts do not increase environmental and/or amenity impacts in the vicinity.	CM/EM/SS	Prior to Establishment/ Establishment	CoA D62 CoA D64	Ancillary Facilities Flow Chart (Appendix E) Site mobilisation CAP
A80.	Graffiti will be managed by the contractor throughout construction.	CM/SS	Establishment	REMM V06	Environmental inspection checklist
A81.	Emergency spill kits would be kept on-site at all times. Staff would be made aware of the location of the spill kits.	EM/ EA	Prior to Establishment/ Establishment (pre-construction)	REMM SW12	Environmental inspection checklist Induction EWMS
<b>Noise and Vibration</b>					
A82.	Reasonable and feasible noise mitigation measures (such as those listed within this table or those within Chapter 6 of the Interim Construction Noise Guidelines (ICNG)) will be implemented with the aim of achieving the noise management levels and vibration criteria:  (a) construction noise management levels established using the Interim Construction Noise Guideline (DECC, 2009);  (b) vibration criteria established using the Assessing Vibration: a Technical Guide (DEC, 2006) (for human exposure); and  (c) the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage).  Establishment activities that exceed these levels or criteria will be managed in accordance with the CNVIS for that site.	PE/EA/SS	Prior to Establishment/ Establishment (pre-construction)	EPL CoA D16 REMM NV2-NV16 Interim Construction Noise Guideline, NSW DECC, 2009 (ICNG) CNVIS	Manage Environmental Noise Issues Procedure EWMS

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A83.	Noise and vibration monitoring will be conducted to confirm noise and vibration goals are being achieved and confirmation of the number of affected receivers at the commencement of approved ancillary facility establishment.	EM/EA/CM/PM	Establishment	CoA D22, D23 REMM NV10, NV11, NV21 EPL CNVIS	EWMS
A84.	Prior to conducting vibration generating activities that have potential to impact on heritage items that are to be retained, vibration testing/monitoring must be undertaken to identify minimum working distances. Additional measures must be implemented where vibration goals are likely to be exceeded.	PM/EA	Establishment / construction	CoA D22 REMM NV21	EWMS
A85.	Feasible and reasonable noise mitigation measures should be applied to construction activities when the following residential ground-borne noise levels are exceeded: (a) evening (6:00 pm to 10:00 pm) — internal LAeq(15 minute): 40 dB(A); and (b) night (10:00 pm to 7:00 am) — internal LAeq(15 minute): 35 dB(A).	EM/EA/CM/PM	Establishment	CoA D17 EPL REMM NV24	EWMS
A86.	A Temporary Noise Barrier Strategy will be submitted to DP&E for approval prior to commencement of any of the following works: <ul style="list-style-type: none"> <li>Establishment/construction works at the Kingsgrove North compound;</li> <li>Removal of the permanent noise barriers on the northern and southern sides of the M5 East Motorway;</li> <li>Road widening works along Campbell Road, Campbell Street or Euston Road.</li> </ul>	EM/CM/PM	Establishment	CoA D20 REMM NV7	Temporary Noise Barrier Strategy Site layout design
A87.	The establishment of approved ancillary facilities will be undertaken during the following standard construction hours: <ul style="list-style-type: none"> <li>7:00am to 6:00pm Mondays to Fridays, inclusive.</li> <li>8:00am to 1:00pm Saturdays.</li> <li>at no time on Sundays or public holidays.</li> </ul> Unless otherwise assessed and approved in accordance with the CoA / ROL / EPL (where applicable).	EM/EA/CM/PM	Establishment	CoA D12, D60	WP EWMS

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
<b>A88.</b>	<p>Activities required for the establishment of approved ancillary facilities that result in tonal or impulsive noise generation (such as rock breaking, rock hammering and pile driving) will be undertaken during:</p> <ul style="list-style-type: none"> <li>8:00 am to 6:00 pm, Mondays to Fridays;</li> <li>8:00 am to 1:00 pm on Saturdays;</li> <li>in continuous blocks not exceeding three (3) hours each with a minimum respite from the activities no less than one (1) hour between each block; and at no time on Sundays or public holidays.</li> </ul>	EM/EA/CM/PM	Establishment/ construction	CoA D14, D60 REMM NV16 RMS D&C G36	WP / EWMS
<b>A89.</b>	Undertake consultation (at least 5 days prior to relevant works) with potentially-affected community, religious, educational institutions and vibration-sensitive business and critical working areas, to ensure, where feasible and reasonable, works that may impact on the above groups/businesses are not timetabled during sensitive periods.	CRM/PM/EA	Establishment/ construction	CoA D24	Section 3.2 EWMS CAP / WP
<b>A90.</b>	During construction, proponents of other construction works in the vicinity of the SSI must be consulted and reasonable steps taken to coordinate works to minimise impacts on, and maximise respite for, affected sensitive receivers	CRM/PM/EA	Establishment/ construction	CoA D25	EWMS CAP / WP
<b>A91.</b>	Temporary noise management measures will be implemented around ancillary facilities where feasible and reasonable during the establishment of the approved ancillary facility. The design and location of noise management measures will be identified in the Temporary Noise Barrier Strategy (A90).	CM/PM	Establishment	REMM NV7 CoA D20 Temporary Noise Barrier Strategy	Site layout/ Site design
<b>A92.</b>	Non-tonal movement alarms will be used in place of tonal reversing alarms. Where possible, plant and machinery movement within approved ancillary facilities will limit the need for reversing movements.	CM/PM/SS	Establishment / construction /operation	CoA D26 REMM NV12	EWMS
<b>A93.</b>	Plant and equipment would be switched off when not in operation for periods of greater than 15 minutes. Where reasonable and feasible, noisy equipment will be substituted for alternative low-emitting equipment particularly for activities or in locations that may impact on potential noise sensitive receivers.	SS/EA	Establishment / construction /operation	Good practice	EWMS

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A94.	Plant and equipment used for the establishment of ancillary facilities will be maintained in an efficient condition and operated in a proper and efficient condition. Where practical, plant and equipment will be fitted with noise suppression devices in accordance with manufacturer's specifications.	SS/EA	Establishment / construction	Good practice	EWMS
A95.	Noisy equipment and equipment with directional noise emissions will be orientated away from neighbouring properties where practicable. The distance between plant and noise sensitive receivers will be maximised where practical.	SS/EA	Establishment / construction	Good practice NV9	Site layout EWMS
A96.	Wherever practical, piling activities that affect sensitive receivers must be undertaken using quieter alternative methods than impact or percussion piling, such as bored piles or vibrated piles.	PM/CM/EA	Establishment / construction	CoA D18	CAP / WP EWMS
A97.	The safe working distances for vibration intensive plant would be complied with where feasible and reasonable. This would include the consideration of smaller equipment when working in close proximity to existing structures.	PM/SS/PE/EA	Establishment / construction	CoA D22 REMM NV20	CAP/ WP
A98.	Prior to the commencement of vibration intensive activities at an approved ancillary facility, properties at risk of vibration impacts must be notified and condition surveys undertaken of existing property, roads and structures (including heritage items).	PM/SS/PE	Establishment / construction	CoA D11 REMM NV19	CAP/ WP
A99.	Verification checks on the noise emissions of plant and machinery will be conducted.	PM/SS/EA	Establishment / construction	REMM NV10	CAP/ WP EWMS
A100.	Loading and unloading will be carried out away from sensitive receivers, where practicable.	PM/SS/EA	Establishment / construction	REMM NV13	CAP/ WP EWMS
A101.	Deliveries will be carried out during standard construction hours where feasible and reasonable.	PM/SS/EA	Establishment / construction	CoA D60 REMM NV14	CAP/ WP EWMS
A102.	Truck drivers will be advised of designated vehicle routes, parking and queuing locations, acceptable delivery hours and other relevant practices (i.e. no use of compression brakes unless an emergency, and no extended periods of engine idling).	PM/SS/EA	Establishment / construction	CoA D26, D27 REMM NV14	CAP/ WP EWMS

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
<b>Community</b>					
A103.	<p>Neighbours, potentially noise affected sensitive receivers, local councils, EPA and key stakeholders will be notified of planned establishment of approved ancillary facility sites at least five days and no longer than 14 days prior to commencement.</p> <ul style="list-style-type: none"> <li>Information provided will include: <ul style="list-style-type: none"> <li>The hours establishment works will be carried out,</li> <li>The types of activities to be undertaken,</li> <li>The location of activities,</li> </ul> </li> </ul> <p>Details of the community information line and how to make an enquiry and/or complaint will be included in the notifications.</p>	CRM/EM/PM	Establishment / construction	CoA C1, D24 EPL	Section 3.2
A104.	Community updates will be provided throughout the establishment of the approved ancillary facility.	CRM/EM/PM	Establishment / construction	CoA C1 CoA C5 D&C G36	Section 3.2
A105.	All complaints, including those related to property damage, will be managed in accordance with the Complaints Management System and the Project EPL.	CRM/EM/PM	Establishment / construction	CoA C3, C4 EPL D&C G36	Section 3.2 Complaints Management System (Appendix K)
A106.	Community consultation protocols for sensitive receivers likely to be impacted by construction activities such as vibration and noise will be prepared and implemented, as required.	CRM/EM/PM	Establishment (pre-construction)/ construction	CoA C1 EMM NV30	Section 3.2
<b>Traffic and Transport</b>					
A107.	<p>Temporary traffic and heavy vehicle access along the M5 East Motorway to be managed with appropriate temporary road closures and traffic controls during establishment/construction.</p> <p>Out of hours deliveries to ancillary facility sites will be in accordance with the Project EPL and as directed by a road authority or NSW Police.</p>	CM, SS	Establishment / Construction	EPL REMM TT02- TT04	TCP

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A108.	Local road dilapidation report(s) will be prepared by a suitably qualified and experienced independent expert to assess the current condition of local roads approved for heavy vehicle use by the project and describe mechanisms to repair damage to the road network caused by heavy vehicle movements associated with the Project. The reports must be submitted to the relevant Council for review at least 2 weeks prior to the use of the roads by heavy/oversized vehicles for the project. A subsequent Local Road Dilapidation Report will be prepared within four weeks of the completion of construction to assess any road damage that may have occurred as a result of the use of the roads by vehicles associated with the establishment and/or construction works.	CM, SS	Establishment / Construction	REMM TT12 CoA B59	Site Mobilisation CAP
A109.	Independent Road Safety Audits will be undertaken by an appropriately qualified and experienced person during detailed design to assess the safety performance of any new or modified local road, parking, pedestrian and cycle infrastructure to ensure the requirements of relevant design, engineering and safety guidelines are met. Audit findings and recommendations must be actioned prior to construction of the relevant infrastructure.	CM, SS	Establishment / Construction	CoA B49	TCP Site design / layout CAP / WP
A110.	Functional and safe pedestrian and cyclist access through and around worksites will be maintained throughout establishment and construction, or alternate routes provided and signposted. Footpaths are to be provided where pedestrian access is reliant on grassed verges. Safer by design principles are to be considered in any alternate access provided.	CM, SS	Establishment / Construction	CoA D48 REMM TT08	Site layout Plans CAP / WP
A111.	Construction methods and staging will be designed to minimise road closures, subject to other possible constraints, and ensure that disruption to existing traffic is minimised where feasible and reasonable	CM, SS	Establishment / Construction	REMM TT02	TCP Site layout Plans CAP / WP
A112.	Road Occupancy Licences (ROLs) to be obtained in accordance with EPL and out of hours works.	CM, SS, Traffic Manager	Establishment / Construction	REMM TT13 EPL	CAP / WP

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A113.	Heavy vehicle construction traffic operating outside of standard construction hours (as detailed in the EPL), must operate to minimize sleep disturbance, traffic and safety impacts.	CM, SS	Establishment / Construction	CoA D26	TCP Site layout plans Induction CAP/WP
A114.	Access to all properties must be maintained unless otherwise agreed with the property owner/occupier. All affected access must be reinstated to at least an equivalent standard, unless agreed with the property owner.	CM, SS	Establishment/ Construction	CoA D49 REMM TT10	TCP Site layout Plans CAP / WP
A115.	All drivers will be advised of designated vehicle routes, parking locations, acceptable delivery hours specific to the approved ancillary facility and other relevant practices such as the minimisation of idling and queuing in local streets.	CM, SS	Establishment/ Construction	CoA D47 Good Practice	TCP Induction Site design / layout CAP / WP
A116.	Deliveries and removal of materials and wastes to and from the approved ancillary facility will be planned to minimise parking or queuing on public roads and particularly in local residential streets unless required by a road authority for community and motorist safety.	CM, SS	Establishment/ Construction	REMM NV18 Good Practice	TCP Induction Site design / layout CAP / WP
A117.	Deliveries and removal of materials and wastes to and from the approved ancillary facility will be managed through specific Traffic Control Plans to manage truck movements in order to minimise noise impacts.	CM, SS	Establishment/ Construction	Good Practice	TCP
A118.	Construction vehicles (including staff vehicles) associated with the Project shall be managed to ensure access and egress from construction compounds is undertaken in a safe and lawful manner, with particular regard given to:  (i) implementation of traffic management or signalisation in consultation with the relevant roads authority; and  (ii) changes of shifts occur outside of school zone hours	CM, SS	Establishment/ Construction	CoA D47 Good Practice	TCP Site design / layout CAP / WP
<b>Visual amenity and urban design</b>					
A119.	Where an ancillary facility overlooks residential property, privacy measures will be provided in consultation with the affected property owner.	PM, CRM	Establishment/ Construction	CoA D66	Site design / layout SEPs

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A120.	<p>Existing vegetation around the perimeter of the construction compounds would be retained where feasible and reasonable, particularly:</p> <ul style="list-style-type: none"> <li>Vegetation surrounding the Bexley Road East construction compound, particularly along the boundary between residential properties and the compound along the northern and eastern boundaries</li> <li>Mature trees along the north-west (Marsh Street) and south-west boundaries of the Arncliffe construction compound site</li> <li>Mature trees and vegetation along the boundary of Sydney Park along Campbell Road and Barwon Park Road.</li> </ul>	PM, EM	Establishment/ Construction	CoA D56 REMM V01 REMM B02	Site design / layout SEPs
A121.	Landscape planting will use fast growing species where reasonable and feasible to soften views of construction sites, particularly for compounds located within public recreational spaces.	PM, EM	Establishment/ Construction	REMM V02	UDLP SEPs
A122.	<p>Temporary noise barriers will be erected early within the site establishment phase where required to minimise noise impacts and provide visual screening.</p> <p>Site hoardings/ temporary noise barriers would be maintained during establishment and construction stages.</p>	PM, EM	Establishment/ Construction	CoA D56 REMM V04 Temporary Noise Barrier Strategy	Site design / layout CAP / WP
A123.	Cut-off and/or directed lighting would be used within and outside of construction compounds with lighting location and direction considered to ensure glare and light spill are minimised. Lighting to be generally consistent with the requirements of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting. Any residual night lighting impacts to adjoining or adjacent properties to be managed in consultation with affected landowners.	PM, EM	Establishment/ Construction	REMM V09 CoA B73	Site design / layout CAP / WP
A124.	The lighting design for shared paths located within the M5 Linear Park impacted by the Project or located adjacent to compounds would be designed to minimise light spill to adjoining residential properties while maintaining a safe night time environment for path users (e.g. lighting position below the height of the fence line).	PM, EM	Establishment/ Construction	REMM V10	Site design / layout CAP / WP

# Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
<b>Flora and Fauna</b>					
A125.	An appropriately qualified Project ecologist will be appointed prior to clearing vegetation for establishment of ancillary facilities and site compounds.	EM, CM	Establishment/ Construction	CoA D53 RMS Biodiversity Guidelines	Pre-clearance survey Manage Flora and Fauna Procedure
A126.	No-go zones to clearly delineate areas outside of construction footprint to avoid impact to vegetation in Beverly Grove Bushland containing Cooks River/Castlereagh Ironbark Forest that is not approved for clearance.  No clearance of vegetation to occur outside the approved construction footprint.	EM, CM	Establishment/ Construction	RMS D&C G36 REMM B05	Site design/ layout CAP / WP Manage Flora and Fauna Procedure Permit to clear land or vegetation
A127.	Trees will be retained around site boundaries to minimise visual impacts at neighbouring properties. Tree reports will be prepared by an arborist for any tree removal on the periphery or outside of sites in accordance with CoA B63 and submitted to the Secretary, DP&E, for approval prior to any impacts on the subject trees.	CM / EM	Establishment	CoA B63 REMM V01 REMM B02	Site design/ layout CAP / WP Tree Reports
A128.	Pre-clearing surveys will be undertaken by the Project Ecologist to identify the location of: <ul style="list-style-type: none"> <li>Threatened flora and provide guidance in accordance with the Unexpected Discovery of Threatened Species Procedure</li> <li>Threatened fauna and provide guidance on subsequent relocation if required, in accordance with the Fauna Handling Procedure</li> <li>Hollow bearing trees / nest bearing trees / habitat trees (HBT).</li> <li>Pathogens and noxious weeds and provide subsequent guidance on mitigation measures to be implemented.</li> </ul>	CM / EM/ Project Ecologist	Pre-construction/ Establishment	CoA D53 REMM B03 D&C G36 RMS Biodiversity Guidelines	Manage Flora and Fauna Procedure Permit to clear land or vegetation

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A129.	<p>Pre-clearing inspections will be conducted by the Project ecologist prior to clearing in areas where threatened species, EEC, HBT, bridges, culvert structures or derelict buildings (to be demolished) have been previously identified.</p> <p>Where applicable, results of the pre-clearing surveys will be incorporated into the Flora and Fauna Management Plan and updated in the Biodiversity Offset Package.</p>	EM/ Project Ecologist / CM	Pre-construction/ Establishment	CoA D53 REMM B03 D&C G36 RMS Biodiversity Guidelines	Manage Flora and Fauna Procedure Permit to clear land or vegetation
A130.	<p>Pre-clearing inspections will be conducted by the Environmental and Sustainability Manager prior to clearing of single trees (excluding threatened species, EEC, HBT) within the approved footprint of the ancillary facility.</p> <p>If any threatened species, populations, ecological communities, or HBT are identified during the pre-clearing inspection, the area will be delineated in accordance with the Fencing &amp; Signage Protocol and the Unexpected Discovery of Threatened Species Procedure will be implemented. Where required, - the Fauna Handling Procedure will be followed.</p>	EM/EA/CM/SS	Pre-construction/ Establishment	CoA D53 REMM B03 D&C G36 RMS Biodiversity Guidelines	Manage Flora and Fauna Procedure Permit to clear land or vegetation
A131.	<p>Clearing will be undertaken in accordance with the process described in Guide 4 of the Roads and Maritime Biodiversity Guidelines (RTA 2011). A Project specific Environmental Work Method Statement (EWMS) will be developed for clearing and grubbing activities.</p>	EM/EA	Prior to Establishment/ Establishment	REMM B04 RMS D&C G36 and G40 RMS Biodiversity Guidelines	EWMS Manage Flora and Fauna Procedure
A132.	<p>All personnel involved in clearing will be tool boxed on the requirements of the Clearing &amp; Grubbing EWMS, including their roles and responsibilities.</p>	EM/CM	Prior to Establishment/ Establishment	REMM B01 D&C G36 and G40 RMS Biodiversity Guidelines	Induction and training

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A133.	<p>Mature and HBT will be retained where possible. Dead or hazardous trees identified on the clearing boundary or with the potential to cause construction and/or operational safety concerns will be subject to an assessment for removal. If the tree is deemed unsafe to remain it will be felled following the initial clearing front in accordance with approved clearing methodologies. Compensatory habitat assessments (i.e. additional nest boxes) will be carried out by the Project Ecologist if the dead or hazardous tree(s) are confirmed to be HBTs.</p>	Project Ecologist/ EM	Prior to Establishment/ Establishment	REMM B06 D&C G36 and G40 RMS Biodiversity Guidelines	EWMS Manage Flora and Fauna Procedure
A134.	<p>A staged clearing process will be implemented in areas supporting identified fauna habitat such as HBTs and bush rock. This process will include but not be limited to:</p> <ul style="list-style-type: none"> <li>• Non-habitat trees will be removed before hollow bearing/nest bearing trees/habitat trees (HBT), allowing fauna an opportunity to move from HBTs;</li> <li>• HBTs will be retained for a minimum of two nights after initial clearing, unless the Project Ecologist determines the tree(s) can be removed one night after initial clearing; and</li> <li>• In the event that a hazardous HBT is identified (a risk to the safety of workers and/or flora and fauna), an assessment will be undertaken to identify any need for removal of the HBT prior to the minimum requirements stipulated above. This assessment will be undertaken with the Project Ecologist, the Clearing contractor, CDS-JV Environmental Manager, CDS-JV Safety Manager and the Environmental Representative. If the tree is deemed a safety hazard the following actions may be taken: <ul style="list-style-type: none"> <li>- Removal of the tree immediately (if there is low risk to injury of wildlife during felling)</li> <li>- Removal of the tree within 24hrs of initial clearing if there is a high potential for significant fauna occupation.</li> </ul> </li> </ul> <p>Establishment of an exclusion zone around the tree, and felling 48hrs after initial clearing (if there is a high potential for fauna occupation and a high risk of injury to fauna during felling).</p>	Project Ecologist/ EM	Prior to Establishment/ Establishment	REMM B03, B04, B05 D&C G36 and G40 RMS Biodiversity Guidelines Pre-clearance survey	EWMS Manage Flora and Fauna Procedure

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A135.	Felled HBT will be inspected for wildlife by the Project Ecologist or licensed wildlife handler who will provide guidance on subsequent relocation or alternative management measures if required.	Project Ecologist/ EM	Prior to Establishment/ Establishment	REMM B04 D&C G36 and G40 RMS Biodiversity Guidelines	Manage Flora and Fauna Procedure
A136.	Any threatened plants or endangered ecological communities identified immediately adjacent to the limits of clearing will be fenced and signage installed.	EM/EA	Prior to Establishment/ Establishment	REMM B05 D&C G36 and G40 RMS Biodiversity Guidelines	Manage Flora and Fauna Procedure
A137.	In the event that a newly discovered threatened species, populations or ecological communities are unexpectedly encountered during ancillary facility establishment, the Unexpected Discovery of Threatened Species Procedure will be followed.	EM/EA/SS	Establishment	REMM B08 D&C G36 and G40 RMS Biodiversity Guidelines	Manage Flora and Fauna Procedure Induction
A138.	Where feasible and reasonable, topsoil and habitat elements (such as woody debris and bush rock) will be stored and reused within the ancillary facility footprint or in adjacent bushland, if within the approved footprint.	EM/EA/ SS	Prior to Establishment/ Establishment	D&C G36 and G40 RMS Biodiversity Guidelines	Manage Flora and Fauna Procedure EWMS
A139.	Native vegetation cleared from the approved ancillary facility footprint will, where reasonable and feasible, be: <ul style="list-style-type: none"> <li>mulched and used along with retained topsoil for reuse in rehabilitation works and erosion control,</li> <li>cut for potential timber reuse for community benefit in consultation with local councils,</li> <li>mulched for potential reuse for community benefit in consultation with local councils, or</li> <li>used for environmental restoration Projects in consultation with DPI (NSW Fisheries), NSW Local Land Services or NSW Office of Water.</li> </ul>	EM/EA/SS	Prior to Establishment/ Establishment	D&C G36 and G40 RMS Biodiversity Guidelines	CAP/ WP EWMS

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A140.	<p>Mulch, topsoil and cleared vegetation material will not be stockpiled in 'no-go zones' or within the Tree Protection Zone (TPZ) (defined as the drip line) within the approved footprint of the ancillary facility.</p> <p>Mulch will be managed in accordance with RMS Guideline: Management of Tannins from Vegetation Mulch (January 2012).</p>	EM/ EA/SS	Establishment	<p>D&amp;C G36 and G40</p> <p>RMS Biodiversity Guidelines</p> <p>RMS Guideline: Management of Tannins from Vegetation Mulch</p>	<p>CAP/ WP</p> <p>EWMS</p>
A141.	<p>Topsoil retained on site for reuse that is sourced from vegetated areas of the approved ancillary facility clearing footprint will be managed to preserve the native seed bank.</p>	EM/EA	Establishment / Construction	Good Practice	EWMS
A142.	<p>Weeds management during the establishment of the ancillary facility will be in accordance with the Project Pathogen and Weed Management Strategy.</p> <p>Prior to commencement of clearing, weeds located within the approved footprint of the ancillary facility will be 'tagged' to ensure weed material is kept separated from mulch during the clearing process, potentially transferring weeds throughout the site and offsite.</p> <p>Weed material will be disposed of at an appropriately licenced waste receiving facility or managed in accordance with <i>Noxious Weeds Act 1993</i> or the local council requirements.</p>	EM/EA	Establishment	<p>D&amp;C G36 and G40</p> <p>REMM B16, B17</p> <p>RMS Biodiversity Guidelines</p> <p><i>Noxious Weeds Act 1993</i></p>	CAP/ WP
A143.	<p>Prior to commencement of establishment of ancillary facility sites, vehicles and machinery will be checked to ensure they are free from mud and vegetative material prior to entering the site to prevent the introduction of weeds to the local environment. Equipment not found in a clean state will not be permitted to be used on site.</p>	EM/EA/ SS	Establishment/ Construction	<p>D&amp;C G36 and G40</p> <p>RMS Biodiversity Guidelines</p>	<p>EWMS</p> <p>CAP / WP</p> <p>Weed and Pathogen Management Plan</p>
A144.	<p>Prior to commencement of establishment of ancillary facility sites, vehicles and machinery wheels and tracks will be sprayed with an appropriate solution prior to entering the ancillary facility site to prevent the inadvertent introduction of pathogens to the local environment.</p>	EM/EA	Prior to Establishment/ Establishment	<p>D&amp;C G36 and G40</p> <p>RMS Biodiversity Guidelines</p>	<p>EWMS</p> <p>CAP / WP</p> <p>Weed and Pathogen Management Plan</p>

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A145.	Weeds identified as adjacent to the approved ancillary facility footprint and outside the Project footprint would be managed in accordance with the project Weed and Pathogen Management Plan.	EM/EA	Establishment	D&C G36 and G40 RMS Biodiversity Guidelines	EWMS Weed and Pathogen Management Plan
A146.	Areas within the approved ancillary facility disturbed during the establishment will, where reasonable and feasible, be progressively stabilised as a temporary environmental management measure at the earliest opportunity.  Where practicable, local indigenous plant species will be utilized during temporary revegetation to maintain and enhance habitat, particularly in key habitat areas.	EM/EA	Establishment/ Construction	CoA D52, B61 REMM B07 D&C G36 and G40 RMS Biodiversity Guidelines	CAP/ WP
A147.	Prior to the commencement of establishment works for the approved ancillary facility, the requirements of the Project Nest Box Management Plan relevant to the ancillary facility will be implemented.	EM/ Project Ecologist/FM	Prior to Establishment	REMM B06	CAP/ WP
A148.	Pre-clearance surveys to include, where relevant, any existing stormwater or detention basins by an aquatic ecology specialist. The surveys would identify the potential presence of aquatic wildlife and guide the implementation of appropriate handling and release protocols prior to any basin being drained.	Project Ecologist / EM	Prior to Establishment/ Establishment	D&C G36 REMM B11, B12 RMS Biodiversity Guidelines	CAP/ WP EWMS
A149.	Any displaced or injured fauna encountered during the establishment of approved ancillary facilities, would be managed in accordance with the Fauna Handling Procedure	Project Ecologist / EM	Prior to Establishment/ Establishment	Good Practice REMM B08 and B09	Manage Flora and Fauna Procedure
A150.	Existing trees, grasses and ground cover will be retained within 15 metres of watercourses until immediately before establishment works commences in that area. Works will be programmed to minimise the extent and duration of disturbance to vegetation where possible. This will include leaving clearing (unless undertaken manually or by other means that cause minimal disturbance (i.e. felling trees and leaving the stump in-situ) and initial earthworks in intermittent and permanent watercourses until subsequent works are about to commence.	EM/EA	Prior to Establishment/ Establishment	D&C G36 REMM B11 and B12 RMS Biodiversity Guidelines	CAP/ WP

# Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A151.	Where reasonable and feasible, creek banks, riparian zones or vegetated buffers disturbed during the establishment of approved ancillary facility sites would be revegetated and stabilised.	EM/EA	Establishment/	D&C G36 REMM B11 and B12 RMS Biodiversity Guidelines	CAP/ WP EWMS
A152.	Daily checks supported by weekly environmental site inspections will be carried out for each approved ancillary facility during and post establishment and will: <ul style="list-style-type: none"> <li>• ensure protective fencing and signage is maintained in good working order;</li> <li>• monitor and maintain revegetation / rehabilitation areas;</li> <li>• identify the presence of noxious weeds and supervise the Project Weed Contractor as required; and check for potential impacts to fauna.</li> </ul>	EM/EA	Establishment	D&C G36 RMS Biodiversity Guidelines Good Practice	CAP/ WP Daily Inspection checklist
A153.	Landscaping and revegetation works will be undertaken using weed-free topsoil in accordance with the Project's urban design concept Plan.	EM/EA	Establishment/ Construction	CoA B61 REMM B18 D&C G36 RMS Biodiversity Guidelines	CAP/ WP UDLP
A154.	The Weed and Pathogen Management Plan will be implemented to prevent the spread and exacerbation of the Chytrid Fungus in accordance with Guide 7 – Pathogen Management of Roads and Maritime's Biodiversity Guidelines (RTA, 2011).	EM/EA	Establishment/ Construction	REMM B19 RMS Biodiversity Guidelines	CAP/ WP Weed and Pathogen Management Plan
<b>Soil and Water (including Flooding)</b>					

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A155.	Prior to any excavation works, acid sulfate soils investigations will be undertaken in areas identified as disturbed terrain in acid sulfate soils maps (disturbed PASS terrain is within the site) If acid sulfate soils are encountered, they will be managed in accordance with the Manage Acid Sulfate Soils Procedure	CM/EM	Establishment / Construction	REMM SW10 Acid Sulphate Soils Planning Guideline – Acid Sulphate Management Advisory Committee	CAP/ WP EWMS Manage Acid Sulfate Soils Procedure
A156.	The site layouts are to be informed by the Flood Mitigation Strategy and avoid potential flood affected areas at the site, and in particular avoid the use of these areas for stockpiling and storage.	CM/ PE	Establishment / Construction	REMM FD01, FD02 Flood Mitigation Strategy	Site layout/design CAP/ WP
A157.	During construction planning, the Project shall seek to minimise the use of potable water and to identify any potential alternate water sources, including recycled water. Clean stormwater from rooves (e.g. acoustic shed) will be captured in tanks and reused or directed offsite, reducing the potential for dirty water generation	EM/ CM/ SS	Prior to Establishment/ Establishment / Construction	CoA B30, D3 REMM WM16, SW01-03 Blue Book	CAP/ WP
A158.	Chemical storage areas would be sited away from property boundaries.	CM/EM	Establishment	Good Practice	Site layout/design
A159.	Prevent soil erosion through minimising ground disturbance and sealing ground surfaces	SS/EA	Prior to Establishment/ Establishment	CoA D3 Blue Book REMM SW03	CAP/WP ESCP
A160.	Progressive erosion and sediment control plans shall be developed and implemented for each ancillary facility for the life of each site, consistent with <i>Managing Urban Stormwater – Soils and Construction Vols 1 and 2, 4<sup>th</sup> Edition</i> (Landcom 2004). Plans will be updated where changes to site use, storage and conditions change.	CM/SS/PM	Prior to Establishment/ Establishment	CoA D3 REMM SW03 Blue Book	ESCP CAP / WP
A161.	Monitoring of weather forecasts to occur on a daily basis and contingency measures, such as relocation of stockpiles and equipment away from potential flood areas, to be implemented where feasible.	EA/SS	Establishment / Construction	Good Practice	Supervisor Site diary

# Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A162.	<p>The following measures will be in place to manage spills of contaminated fluids:</p> <ul style="list-style-type: none"> <li>• Areas would be allocated for the storage of fuels, chemicals and other hazardous materials</li> <li>• Facilities would be secured and bunded to levels dictated by Environment Protection Authority guidelines</li> <li>• Spills or contaminated runoff would be captured and treated and / or disposed of at a licensed facility</li> <li>• Re-fuelling, wash down and preparation of construction materials would be undertaken in bunded areas to mitigate risks in relation to spills or leaks of fuels / oils or other hazardous onsite construction material</li> <li>• The application of good practice in the storage and handling of dangerous and hazardous goods would provide appropriate practical responses to manage impacts on occupational health and safety and minimise the risk of a spill occurring</li> <li>• Potential discharges from construction sites would be managed through the installation of basins (primarily designed for sediment capture but with capacity to contain the nominated spill volume) constructed in accordance with The Blue Book</li> <li>• Captured contaminants resulting from spills or leaks would be treated and disposed of at a licensed facility</li> <li>• Any soil which has been contaminated with fuel, oils or other chemicals would be disposed as contaminated soil by a waste subcontractor.</li> </ul>	EA/SS/ EM/CM	Construction	REMM SW12	EWMS CAP / WP Manage Hazardous Substances Procedure

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A163.	Construction work activities within and / or adjacent to waterways would be minimised as much as feasibly possible to minimise disturbance to those waterways and waterfront land. Works should be undertaken generally in accordance with the <i>Guidelines for Controlled Activities on Waterfront Land (DPI 2012)</i> .	EA/SS/ EM/CM	Establishment / Construction	REMM SW13 CoA B21	CAP / WP
A164.	All watercourse crossings, including temporary work platforms and coffer dams will be consistent, where feasible and reasonable, with the following guidelines: <ul style="list-style-type: none"> <li>NSW Guidelines for Controlled Activities Watercourse Crossings (DPI, 2012),</li> <li>Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (Fairfull and Witheridge, 2003),</li> <li>Policy and Guidelines for Fish Friendly Waterway Crossings (NSW Fisheries February, 2004), and</li> <li>Policy and Guidelines for Fish Habitat Conservation and Management (DPI Fisheries, 2013).</li> </ul>	EM/CM/PM	Establishment / Construction	CoA B22	Detailed design CAP / WP
A165.	Existing transverse drainage structures would be left in place during construction where transverse drainage structures are to be upgraded or replaced. If this is not feasible, temporary drainage would be adopted.	EA/SS/ EM/CM	Establishment / Construction	REMM FD12	CAP / WP
A166.	Immediately notify DPI (Water) of any groundwater bores removed or damaged due to the project. Any bores removed or damaged must be repaired/replaced.	EM/CM	Establishment / Construction	CoA D5	CAP / WP
<b>Contamination</b>					
A167.	Potentially contaminated areas directly affected by the Project will be investigated and managed in accordance with the requirements of guidance endorsed under section 105 of the CLM Act. This includes further investigations in areas of moderate to high risk of contamination identified in the construction footprint. Soil contamination reports will be prepared for any areas identified as having a moderate to high risk of contamination.	EA/SS/ EM/CM	Establishment / Construction	CoA B31 REMM CM03	CAP / WP Manage Contaminated Land Procedure Soil Contamination Reports

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A168.	An unexpected finds and hazardous materials procedure would be implemented to manage any potentially contaminated materials that may be encountered during site preparation and / or construction works.	EA/SS/ EM/CM	Establishment / Construction	CoA D54 REMM CM04	CAP / WP Manage Contaminated Land Procedure
A169.	Construction Contamination Management Plans will be prepared for the project and will include management measures for the handling, treatment and management of potentially contaminated spoil, and undertaking waste assessment and classification for off-site disposal to appropriately licenced waste facilities.	EA/SS/ EM/CM	Establishment / Construction	CoA D54 REMM CM05	CAP / WP Construction Contamination Management Plans
A170.	Appropriate mitigation measures to minimise sediment mobilisation as a result of construction activities at the location of the new stormwater infrastructure at Alexandra Canal will be detailed in the relevant Construction Contamination Management Plan in accordance with the requirements of the Remediation Order in consultation with NSW EPA and Sydney Water.	EA/SS/ EM/CM	Establishment / Construction	CoA D54 REMM CM11	CAP / WP Construction Contamination Management Plans
A171.	Site specific asbestos management plans will be incorporated into the Construction Contamination Management Plans where relevant.	EA/SS/ EM/CM	Establishment / Construction	REMM CM06	CAP / WP Construction Contamination Management Plans Manage Works with Asbestos Procedure
A172.	A hazardous materials assessment will be carried out prior to and during the demolition of buildings. Demolition works would be undertaken in accordance with the relevant Australian Standards and relevant NSW WorkCover Codes of Practice, including the Work Health and Safety Regulation 2011.	EA/SS/ EM/CM	Establishment / Construction	REMM CM07	CAP / WP Construction Contamination Management Plans Manage Hazardous Substances Procedure
A173.	A dangerous goods search of the WorkCover NSW records for licenced dangerous goods will be undertaken prior to construction.	EA/SS/ EM/CM	Establishment / Construction	REMM CM08	CAP / WP
A174.	An explosive ordnance due diligence assessment would be completed at the identified former ammunition site (Project area 3), located between Flatrock Road, Bexley Road and Wolli Creek.	EA/SS/ EM/CM	Establishment / Construction	REMM CM09	CAP / WP

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A175.	In the event of encountering unexpected finds of contamination (i.e. the observation of offensive odours, soil discoloration, buried waste or potential asbestos containing materials) during construction, work in the area will cease until an appropriately qualified environmental consultant can advise on the need for further assessment, remediation or other action, as deemed appropriate. Further assessment and management of contamination, if required, would be undertaken in accordance with the Unexpected Contamination Finds Procedure and section 105 of the CLM Act.	EA/SS/ EM/CM	Establishment / Construction	REMM CM10 CoA D54	CAP / WP Manage Contaminated Land Procedure
A176.	The Flood Mitigation Strategy, including appropriate mitigation measures, will be implemented for the project prior to works in flood prone areas to guide the detailed design of temporary ancillary facilities, including construction compounds, to minimise the potential impacts of flooding on the Project.	EM/PE/CM	Establishment / Construction	CoA B23 REMM FD07	Section 7.9
<b>Heritage</b>					
A177.	Training will be provided to relevant Project personnel, including relevant subcontractors on the location of known Aboriginal and non-Aboriginal heritage items, areas of archaeological sensitivity and artefacts (including photographs where available) along with key requirements from this Plan through the Project induction.  Toolboxes and targeted training would also be employed where appropriate, to sites where there is a high risk of direct impacts to heritage.	All personal and subcontractors	Prior to Establishment/ Establishment	Good practice REMM NAH02	CAP/ WP Training and induction
A178.	If any unexpected heritage items (including human remains) are encountered, works potentially affecting the find would cease immediately and the Roads and Maritime Standard Management Procedure – Unexpected Heritage Items (August 2013) would be followed.	All personal and subcontractors	Prior to Establishment/ Establishment	CoA D40 Unexpected Heritage Finds Procedure	CAP/ WP Manage Cultural Heritage Procedure
A179.	Prior to the establishment of ancillary facilities, any known heritage items within immediate vicinity of ancillary facilities will be fenced and signposted in accordance with the Manage Cultural Heritage Procedure.	SS/CM/EA	Prior to Establishment	Good Practice	CAP/ WP Manage Cultural Heritage Procedure SEP

# Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A180.	Exclusion fencing or No Go Zones will be maintained to protect heritage items within the immediate vicinity of the construction work zones as required.	SS/CM/EA	Establishment	Good Practice	CAP/ WP SEP Manage Cultural Heritage Procedure
A181.	No damage or any impact to heritage items is to occur outside the project footprint. Project boundaries and no-go zones are to be clearly delineated as required to protect all heritage items outside the project footprint or otherwise to be retained.	SS/CM/EA	Establishment	CoA B33	CAP/ WP Manage Cultural Heritage Procedure
A182.	Where ancillary facilities are sited in or adjacent to a Conservation Area, the following management measures will be undertaken as relevant: <ul style="list-style-type: none"> <li>– Surface works would adhere to safe working distances</li> <li>– An existing condition survey report and programme of monitoring would be undertaken as required by the CNVIS.</li> </ul>	SS/CM/EA	Establishment	CoA D22 REMM NAH13 to NAH15	CAP/ WP Manage Cultural Heritage Procedure
A183.	Vibration monitoring would be carried out as required by the CNVIS for vibration intensive works in proximity to SR-OVRH-1.	PE/CM/EM	Establishment	REMM AH2	Monitoring and Reporting – Section 9.1 Manage Cultural Heritage Procedure CAP/WP
A184.	A baseline condition assessment would be completed by a qualified structural engineer for Aboriginal site SR-OVRH-1 before commencement of any works with potential to impact on the site, followed by a condition assessment immediately following significant vibration and with recommendations for remediation measures if required.	PE/CM/EM	Establishment/ Construction	REMM AH3	Manage Cultural Heritage Procedure CAP/ WP

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A185.	<p>If an Aboriginal object(s) is discovered during construction it would be managed in accordance with the Standard Management Procedure: Unexpected Heritage Items (Roads and Maritime Services, 2015), including:</p> <ul style="list-style-type: none"> <li>• Ceasing works in the vicinity of the object(s), where there is the potential to directly or indirectly impact on the object(s)</li> <li>• Notifying the construction Environmental Representative and OEH of the discovery</li> <li>• Engaging a qualified archaeologist to determine the nature, extent and scientific significance of the object(s)</li> <li>• Developing management recommendations in consultation with the qualified archaeologist, OEH and RAPs.</li> </ul>	PE/CM/EM	Establishment/ Construction	CoA D44 REMM AH4	Manage Cultural Heritage Procedure
A186.	<p>If human remains are discovered during construction would be managed in accordance with the Standard Management Procedure: Unexpected Heritage Items (Roads and Maritime Services, 2015), including:</p> <ul style="list-style-type: none"> <li>• Ceasing works in the vicinity of the remains, with the potential to directly or indirectly impact on the remains</li> <li>• Notifying the construction Environmental Representative, OEH and NSW Police of the discovery</li> <li>• Following directions from the NSW Police and / or OEH, as relevant, depending on the nature of the remains and the outcomes of forensic investigations.</li> </ul>	PE/CM/EM	Establishment/ Construction	CoA D44 REMM AH4	Manage Cultural Heritage Procedure
<b>Dust and Air Quality</b>					
A187.	During establishment of each ancillary site, air quality measures (as relevant) will need to be tailored for each individual site depending on surrounding existing environment and sensitive receivers.	CM/EM/EA/SS	Establishment/ Construction	REMM AQ05- AQ16	CAP/WP
A188.	Minimise dust generating activities on high wind days and use a water cart to control dust as required.	EA/SS	Establishment/ Construction	Good Practice	CAP/WP Site Diary and site inspection

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A189.	<p>Implement the community consultation measures for notification of works prior to commencement. Dust monitoring will be undertaken in response to complaints if considered necessary by the EM.</p> <p>Regular communication with other high risk construction ancillary facilities within 500 metres of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised.</p>	CRM/EM	Establishment/ Construction	Good Practice Manage Air Quality Procedure REMM AQ03	Section 3
A190.	Training will be provided to relevant Project personnel, including relevant subcontractors on air quality control practices and the requirements from this Plan through inductions, toolboxes and targeted training	EM/EA/SS	Prior to Establishment/ Establishment	Good Practice	Section 1.5
A191.	Air quality control measures from this Plan will be included in relevant Environmental Work Method Statements (EWMS) and/or Progressive Erosion and Sediment Control Plans (ESCP).	EM/EA/SS	Prior to Establishment/ Establishment	Good Practice	CAP/WP EWMS ESCP
A192.	Construction activities will be modified, reduced or controlled during high or unfavourable wind conditions if they have a potential to increase the generation or emission of dust.	EM/EA/SS/ CM	Establishment/ Construction	Good Practice	CAP/WP
A193.	Control measures including water carts, sprinklers, sprays, dust screens or the application of geo-binding agents will be utilised where applicable to control dust emissions. The frequency of use will be modified to accommodate prevailing conditions.	EM/EA/SS	Establishment/ Construction	Good Practice	CAP/WP
A194.	Dust suppression will be used during demolition as required.	EM/EA/SS	Establishment	Good Practice	CAP/WP
A195.	The application of pesticides will be modified, reduced or controlled during high or unfavourable wind conditions where wind can carry pesticides outside of the defined treatment area.	EM/EA/SS	Establishment	Good Practice Weed and Pathogen Management Plan	CAP/WP
A196.	Disturbed areas will be stabilised as soon as practicable in accordance with Managing Urban Stormwater – Soils and Construction Vols 1 and 2, 4th Edition to prevent or minimise windblown dust.	EM/EA/SS	Establishment	Good Practice D&C G36	CAP/WP

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A197.	Should regular inspections or monitoring identify air quality issues, mitigation measures being implemented are to be reviewed and revised to ensure that the most appropriate measure or combination of measures is employed.		Establishment	Good Practice	CAP/WP
A198.	Plan site layout so that machinery and dust causing activities are located away from receivers, as far as is possible.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ05	CAP/WP
A199.	Erect solid screens or barriers around dusty activities or the site boundary.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ06	CAP/WP
A200.	Ensure, where reasonable and feasible, that appropriate control methods are implemented to minimise dust emissions from the Project site.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ07	CAP/WP
A201.	Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site, cover as soon as practicable.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ08	CAP/WP
A202.	Impose and signpost a maximum-speed-limit of 20 km/h on surfaced and unsurfaced haul roads and in work areas.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ09	CAP/WP
A203.	Where practicable, only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, (e.g. suitable local exhaust ventilation systems).	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ11	CAP/WP
A204.	Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ12	CAP/WP
A205.	Where possible, use enclosed chutes and conveyors and covered skips.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ13	CAP/WP
A206.	Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ14	CAP/WP
A207.	Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using appropriate cleaning methods.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ15	CAP/WP

# Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A208.	Avoid scabbling (roughening of concrete surfaces) if possible.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ16	CAP/WP
<b>Waste/ Hazardous Materials</b>					
A209.	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).	EM/EA/SS/ CM	Establishment/ Construction	CoA D55 EPL PoEO Act	EWMS Site layout/design
A210.	Installation of segregated bins for recyclable materials and provision of this material to be recycled and reused where possible	EM/EA/SS/ CM	Establishment/ Construction	Good Practice	Site layout/design
A211.	A spill kit will be retained at each ancillary facility site that contains chemical or fuel storage facilities.	EM/EA/SS/ CM	Establishment/ Construction	PoEO Act	Site layout/design
A212.	Equipment storage, stockpiling of resources and vehicle access would be restricted to designated areas, where practicable.	EM/EA/SS/ CM	Establishment/ Construction	Good Practice	Site layout/design
A213.	Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as permitted by a licence or waste exemption under the Protection of the Environment Operations Act 1997.	EM/EA/SS/ CM	Establishment/ Construction	CoA B52	Manage Waste Procedure CAP / WP
A214.	Notices under section 143(3A) of the POEO Act ("s.143 Notice") must be submitted to the RMS Representative prior to transporting any waste to a place that is not owned by RMS and is not a licensed waste facility.	EM/EA/SS/ CM	Establishment/ Construction	RMS D&C G36	Manage Waste Procedure
A215.	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.	EM/EA/SS/ CM	Establishment/ Construction	CoA B53	CAP / WP

## Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
A216.	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.	EM/EA/SS/ CM	Establishment/ Construction	CoA B54 REMM CM05	Manage Waste Procedure CAP / WP
A217.	All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.	EM/EA/SS/ CM	Establishment/ Construction	CoA B55 REMM CM05	Manage Waste Procedure CAP / WP
<b>Stockpile Management</b>					
A218.	Stockpiles would be located outside riparian areas, overland flow paths, and where left exposed and undisturbed for longer than 28 days, would be finished and contoured to minimise loss of material in flood or rainfall events. Materials which require stockpiling for longer than 28 days would be stabilised by compaction, covering with anchored fabrics, or seeded with sterile grass where appropriate.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ17, B15	Site layout/design CAP/ WP
A219.	Where a stockpile, e.g. sand or fine aggregate, has the potential to generate dust, control measures would be implemented. These would include wetting the stockpile, covering the stockpile or contouring the stockpile.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ18	Site layout/design CAP/ WP
A220.	Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ19	Site layout/design CAP/ WP
A221.	For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ20	Site layout/design CAP/ WP
A222.	Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ21	Site layout/design CAP/ WP
A223.	Avoid dry sweeping of large areas.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ22	Site layout/design CAP/ WP
A224.	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ23	Site layout/design CAP/ WP

# Ancillary Facilities Management Plan



No.	Mitigation and Management Measures	Responsibility	Timing	Source	Where addressed
<b>A225.</b>	Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ24	Site layout/design CAP/ WP
<b>A226.</b>	Record all inspections of haul routes and any subsequent action in a site log book.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ25	Site layout/design CAP/ WP
<b>A227.</b>	Where reasonable and feasible, haul roads will be maintained with water carts and graders, and the condition of the roads will be monitored.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ26	Site layout/design CAP/ WP
<b>A228.</b>	Implement site exit controls (e.g. wheel washing system and rumble grids) to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable.	EM/EA/SS/ CM	Establishment/ Construction	REMM AQ27	Site layout/design CAP/ WP



## Appendix C: Arncliffe Construction Compound Sub-plan

# Arncliffe Construction Compound Sub-Plan

Project Name: WestConnex New M5

<b>Project number:</b>	15.7020.2597
<b>Document number:</b>	M5N-ES-PLN-ARN-0001
<b>Revision date:</b>	02/06/2016
<b>Revision:</b>	02

## Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
00	29/04/16	CDS-JV				
01	20/05/16	CDS-JV				
02	02/06/16	CDS-JV				
Signature:						

# Arncliffe Construction Compound Sub-Plan



## Details of Revision Amendments

### Document Control

The Project Director is responsible for ensuring that this Plan is reviewed and approved. The Support Services Director (SSD) is responsible for updating this Plan to reflect changes to the Project, legal and other requirements, as required.

### Amendments

Any revisions or amendments must be approved by the Project Director before being distributed or implemented.

### Revision Details

Revision	Details
00	Prepared for consultation.
01	Updated following consultation with Dr Arthur White & OEH. Issued for approval.
02	Updated with DP&E comments.

# Arncliffe Construction Compound Sub-Plan



## Contents

<b>1. Introduction.....</b>	<b>4</b>
1.1 Purpose, scope and objective.....	4
1.2 Roles and Responsibilities .....	4
<b>2. Environmental Planning Requirements.....</b>	<b>7</b>
2.1 Conditions of Approval .....	7
2.2 Green and Golden Bell Frog Plan of Management.....	8
<b>3. Management Measures .....</b>	<b>13</b>
3.1 Defining the construction clearing areas.....	14
3.2 Establishing Frog Exclusion Zone .....	14
3.3 Pre-clearance and salvaging activities .....	14
3.4 Site specific induction and training .....	15
3.5 Green and Golden Bell Frog Stop Work Flowchart.....	15
3.6 Erosion and Sediment Control Plan.....	15
3.7 Light spill management.....	15
3.8 Air quality management.....	16
3.9 Contaminated land management.....	16
3.10 Acid Sulfate Soils management.....	16
3.11 Use of herbicides and other chemicals.....	16
3.12 Habitat Creation and Captive Breeding Plan .....	17
3.13 Arncliffe Compound Frog Hygiene Flowchart .....	17
<b>Appendix A Decommissioning of Ponds Flowchart.....</b>	<b>18</b>
<b>Appendix B Arncliffe Establishment Layout.....</b>	<b>20</b>
<b>Appendix C Arncliffe Frog Hygiene Management Flowchart.....</b>	<b>22</b>
<b>Appendix D Green and Golden Bell Frog Stop Work Flowchart .....</b>	<b>24</b>
<b>Appendix E Arncliffe Erosion and Sediment Control Plan .....</b>	<b>26</b>
<b>Appendix F Arncliffe Acid Sulfate Soils Management Flowchart.....</b>	<b>30</b>
<b>Appendix E Consultation with SMC Herpetologist and Nominated RMS Herpetologist</b>	<b>Error! Bookmark not defined.</b>

# Arncliffe Construction Compound Sub-Plan



## 1. Introduction

### 1.1 Purpose, scope and objective

The purpose of this document is to outline the specific management measures CPB Contractors, Dragados and Samsung C&T Joint Venture (CDS-JV) will undertake at the Arncliffe Construction Compound during activities detailed in the Ancillary Facilities Management Plan (AFMP). These include:

- The installation of the Frog and Security Fences;
- The decommissioning of the existing ponds at the Kogarah Golf Course which are located within the CDS-JV construction boundaries;
- Installation of erosion and sediment controls;
- Dust suppression and management;
- Acid sulfate soil management; and
- Biosecurity

The objective of these management measures is to mitigate impacts on the Green and Golden Bell Frog which is listed as Endangered under the NSW *Threatened Species Conservation Act 1995* and as vulnerable under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*.

This Plan was developed in consultation with the NSW Office of Environment and Heritage and under the Infrastructure Approval SSI 6788, Condition of Approval (CoA) D58(f). The AFMP contains further detail on the key work activities, potential impacts and controls that will be completed at the Arncliffe Construction Compound.

### 1.2 Roles and Responsibilities

Table 1 Roles and Responsibilities

Role	Responsibilities
<b>CDS-JV Project Director</b>	The environmental responsibilities of the CDS-JV Project Director include, but are not limited to: <ul style="list-style-type: none"> <li>• Be an emergency contact and available to be contacted by EPA and RMS Representative on a 24 hour basis;</li> <li>• Endorse and support the project's Environmental Policy and plans; and</li> <li>• Provide environmental leadership and ensure adequate resources are provided to effectively implement this construction environmental management plan.</li> </ul>
<b>CDS-JV Support Services Director</b>	The environmental responsibilities of the CDS-JV Support Services Director include, but are not limited to: <ul style="list-style-type: none"> <li>• Provide environmental oversight, direction and leadership regarding the environmental management of the project.</li> </ul>
<b>CDS-JV Construction / Project Managers</b>	The environmental responsibilities of the CDS-JV Construction Project Managers include, but are not limited to: <ul style="list-style-type: none"> <li>• Ensure work is planned and executed to ensure compliance with environmental requirements.</li> </ul>
<b>CDS-JV Project / Site Engineers</b>	The environmental responsibilities of the CDS-JV Project/Site Engineers include, but are not limited to: <ul style="list-style-type: none"> <li>• Ensure appropriate mitigation and management measures are implemented and maintained on site; and</li> <li>• Implement corrective or preventative actions as required to fulfil the requirements of this plan.</li> </ul>
<b>CDS-JV Foremen / Supervisors</b>	The environmental responsibilities of the CDS-JV Foremen/Supervisors include, but are not limited to: <ul style="list-style-type: none"> <li>• Ensure appropriate mitigation and management measures are implemented and maintained on site;</li> </ul>

# Arncliffe Construction Compound Sub-Plan



Role	Responsibilities
	<ul style="list-style-type: none"> <li>Ensure regular inspections and monitoring requirements are undertaken to check effectiveness of environmental controls;</li> <li>Report environmental incidents and complaints immediately.</li> </ul>
<b>CDS-JV Environment and Sustainability Manager</b>	<p>The environmental responsibilities of the CDS-JV Environment and Sustainability Manager include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Be an emergency contact and available to be contacted by EPA and RMS Representative on a 24 hour basis;</li> <li>Notify WCX M5 Pty Ltd, Environmental Representative and agencies as required in response to environmental incidents and potential incidents;</li> <li>Act as the main point of contact for the Environmental Representative, RMS Environmental Representative and approval authorities.</li> <li>Identify and maintain a register of relevant legal, CDS-JV EMS requirements and other requirements;</li> <li>Obtain all necessary approvals prior to commencing relevant works;</li> <li>Ensure the project induction includes appropriate training;</li> <li>Ensure identified risks are analysed and evaluated according to agreed criteria.</li> <li>Regularly review identified risks and controls and maintain a risk register;</li> <li>Ensure regular inspections, observations, monitoring and audits are conducted to check the effectiveness of controls and that compliance is maintained;</li> <li>Identify, assess and leverage opportunities to achieve sustainability outcomes;</li> <li>Review subcontractors' performance and compliance with CDS-JV environmental requirements;</li> <li>Enter and close out all incidents in the HSE Reporting System (Synergy);</li> <li>Identify and implement corrective and preventative actions after incidents and share lessons learned within the CDS-JV team or other projects, as applicable; and</li> <li>Provide input to the monthly project progress report.</li> </ul>
<b>CDS-JV Environment Advisor</b>	<p>The environmental responsibilities of the CDS-JV Environment Advisor include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Act as the first source of environmental advice and information for the CDS-JV design and construction teams;</li> <li>Conduct regular inspections and monitoring in accordance with this CEMP and sub-plans;</li> <li>Respond to incidents and manage investigations as directed by the Environment and Sustainability Manager;</li> <li>Assist in the development and/or delivery of environmental training and awareness, e.g. project inductions, toolbox talks, pre-start, etc.;</li> <li>Undertake inspections, observations, monitoring and audits as required; and</li> <li>Maintain regular communication with the Environment and Sustainability Manager regarding environmental performance and conformance.</li> </ul> <p>The CDS-JV Environmental Advisor is also known as the Environmental Representative in the Unanticipated Finds Procedure (Annex A in the GGBF Plan of Management).</p>
<b>Environmental Representative</b>	<p>The Environmental Representative acts independently of the Project Company, RMS, CDS-JV and any CDS-JV subcontractors. CDS-JV will nominate an Environmental Representative for the approval of the Secretary prior to commencement of construction. The environmental responsibilities of the Environmental Representative include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Advise RMS and the Project Company upon achievement of the outcomes contemplated in the Infrastructure Approval;</li> <li>Advise RMS on the Project Company's and CDS-JV's compliance with the Infrastructure Approval;</li> <li>Approve minor changes to the CEMP;</li> <li>Review / endorse Consistency Assessments;</li> <li>Approve minor changes to previously approved ancillary facilities;</li> <li>Approve new minor ancillary facilities;</li> <li>Communicate regularly (monthly reports) with the Secretary regarding actions and decisions on matter specified in condition D1 for the preceding month; and</li> </ul>

# Arncliffe Construction Compound Sub-Plan



Role	Responsibilities
	<ul style="list-style-type: none"> <li>Report to the Secretary at the Environmental Representative's discretion and/or at the request of the Secretary.</li> </ul> <p>Principally, in accordance with CoA D1, the ER shall:</p> <ul style="list-style-type: none"> <li>Be the principal point of advice in relation to the environmental performance of the project;</li> <li>Monitor the implementation of environmental management plans and monitoring programs required under this approval and advise the Proponent upon the achievement of these plans/programs;</li> <li>Have responsibility for considering and advising the Proponent on matters specified in the conditions of this approval, and other licences and approvals related to the environmental performance and impacts of the project;</li> <li>Ensure that environmental auditing is undertaken in accordance with the Proponent's Environmental Management System(s);</li> <li>Be given the authority to approve/reject minor amendments to the Construction Environmental Management Plan. What constitutes a 'minor' amendment shall be clearly explained in the Construction Environmental Management Plan</li> <li>Be given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts; and</li> <li>Be consulted in responding to the community concerning the environmental performance of the project where the resolution of points of conflict between the Proponent and the community is required.</li> </ul>
<b>Community Relations Manager</b>	<ul style="list-style-type: none"> <li>Ensure environmental complaints and enquiries regarding the establishment of ancillary facilities are recorded and responded to appropriately.</li> <li>Identify residential and/or commercial stakeholders who are adjacent to or adjoin the ancillary facilities and consult them prior to ancillary facilities establishment.</li> </ul>
<b>RMS Herpetologist</b>	<p>The RMS Herpetologist will be appointed by RMS for the duration of the New M5 Main Works to provide expert advice regarding GGBF management including the development of this Sub-Plan (see <b>Error! Reference source not found.</b>). All reasonable assistance and access to the Construction Site will be provided to the RMS Herpetologist in relation to the GGBF habitat management infrastructure and inspections and monitoring.</p> <p>Prior to the commencement of pre-construction activities for the New M5 Main Works at Kogarah Golf Course, the RMS Herpetologist must provide written advice that the Construction Site in this area is sufficiently clear of GGBF and exclusion controls and other mitigation measures are adequately installed.</p> <p>Prior to commissioning the GGBF habitat management infrastructure, RMS Herpetologist must provide written certification that the GGBF habitat management infrastructure has been constructed in accordance with the relevant requirements.</p>
<b>Project Herpetologist</b>	<p>Appointed by SMC, the Project Herpetologist will provide expert advice regarding GGBF management throughout the project including the development of this Sub-Plan (see <b>Error! Reference source not found.</b>). The Project Herpetologist prepared the habitat creation and captive breeding plan and will assist with implementation.</p> <p>Specific activities of the Project Herpetologist include: the provision of training and information on GGBF; GGBF survey and salvage during the preconstruction phase; facilitation of the salvage of GGBF (unexpected finds) from the construction area and transfer of the GGBF as appropriate; ongoing survey, monitoring and reporting of the Arncliffe population of GGBF. All GGBF encountered during preconstruction and construction phases will be referred to the Project Herpetologist</p> <p>The Project Herpetologist is also known as the Project Ecologist in the Unanticipated Finds Procedure (Annex A in the GGBF Plan of Management).</p>
<b>Project Ecologist</b>	<p>Appointed by CDS-JV, the project ecologist will provide expert advice for flora and fauna issues generally. The Project Ecologist is responsible for completing pre-clearing surveys and salvage of fauna (apart from GGBF).</p>

# Arncliffe Construction Compound Sub-Plan



## 2. Environmental Planning Requirements

### 2.1 Conditions of Approval

Table 2 below is an extract of conditions D58 and D59 of the Infrastructure Approval SSI 6788. A reference to the relevant section of this plan is provided.

Table 2 Extract from CoA

Reference	Relevant Condition	Where addressed
D58	The Ancillary Facilities Management Plan must include an Arncliffe Construction Compound Sub-plan, prepared in consultation with OEH, which includes the following:	Section 2.2
	(a) The management measures as specified in rows 4-12 of Table 1 of the Green and Golden Bell Frog Plan of Management presented in Appendix K of Appendix S, Volume 2H of the document referred to in condition A2(b) and any additional measures included in the updated management plan required by condition B14;	
	(b) Procedures for decommissioning of the surface water bodies within the construction compound; and	Section 3.2 and 3.3
	(c) A stop-work procedure in the event that a Green and Golden Bell Frogs are identified on site.	Section 3.5
	The management measures should specifically describe:	Section 3.4
	(a) What information would be included in the site inductions, who would be inducted and the timing and responsibilities for inductions;	
	(b) The location and type of erosion and sediment controls to be implemented;	Section 3.6
	(c) The methods for dust suppression;	Section 3.8
	(d) Acid sulfate soil management procedures; and	Section 3.10
(e) Hygiene protocol to minimize the potential for the introduction and spread of Chytrid Fungus by plant, equipment, construction vehicles, construction works and materials.	Section 3.13	
	The Proponent is not required to consult with the relevant council on the Arncliffe Construction Compound Sub-plan.	Section 1.1

# Arncliffe Construction Compound Sub-Plan



Reference	Relevant Condition	Where addressed
<b>D59</b>	Prior to the establishing the Arncliffe construction compound (C7), the Proponent must implement the following management measures as specified in the first three rows of Table 1 of the Green and Golden Bell Frog Plan of Management presented in Appendix K of Appendix S, Volume 2H of the document referred to in condition A2(b):	Section 3.1
	(a) Define the construction clearing area;	
	(b) Establish a frog exclusion zone; and	Section 3.2
	(c) Undertake pre-clearance survey and salvage activities (i.e. frog collection).	Section 3.3
	The Proponent must also establish a procedure for the collection of Green and Golden Bell Frogs tadpoles from the existing surface waterbodies at the Kogarah Golf Course that will be impacted by the Arncliffe construction compound, and implement the procedure if tadpoles are present prior to decommissioning of waterbodies. Any salvaged frogs and tadpoles must be either relocated to the RTA ponds or an appropriate holding facility which is staffed by appropriately trained and experience frog specialists.	Section 3.2 and 3.3
	No site establishment or construction –related activities or works are permitted at the proposed Arncliffe construction compound site until such time that the above management measures have been implemented and written notice to this effect has been provided to the Secretary by a suitably qualified and experienced frog specialist.	Section 3.2 and 3.3
	The management measures specified in (a) to (c) and above and tadpole collection may be undertaken prior to the Proponent implementing any actions that are required by the conditions set out in Parts B, C, D and E of this approval.	N/A

## 2.2 Green and Golden Bell Frog Plan of Management

Table 3 below is an extract of rows 1 – 12 of Table 2 of the Green and Golden Bell Frog Plan of Management (Revision 17, 13/05/2016). The measures contained in rows R1 to R3 must be undertaken prior to the commencement of establishment works at the Arncliffe Construction Compound. The measures contained in rows R3 to R12 must be undertaken as part of establishment activities at the site.

Table 4 provides a description of how this Sub-plan will comply with each mitigation measure and refers to the specific section in this Sub-plan where the mitigation measures are addressed.

# Arncliffe Construction Compound Sub-Plan



Table 3 Extract from the Green and Golden Bell Frog Plan of Management

Reference to Row #	Mitigation Measures	Description
R1	<b>Define the construction clearing areas</b>	<p>Clear delineation of the construction boundary. Areas to be cleared be marked and checked with surveyor pegs and equipment to ensure that the minimum area of take is adopted.</p> <p>Clearing should only occur within these areas. Once areas are cleared, the area of take should be calculated to ensure that no additional areas have been cleared.</p> <p>The distance between the RTA ponds and the edge of the clearing required for construction zone is expected to be at least 32 metres.</p>
R2	<b>Establish a Frog Exclusion Zone</b>	<p>Establishment of the physical barrier, using frog exclusion fencing between all construction works, existing RTA Ponds and remainder of the Golf Course.</p> <p>This frog fencing should be designed in consultation with a person who has had at least five years' experience in the management of Green and Golden Bell Frogs.</p> <p>There should be a section of fence directly adjacent to the RTA ponds which will:</p> <ul style="list-style-type: none"> <li>• Reduce sound and dust</li> <li>• Not exclude daylight</li> <li>• Exclude frogs</li> <li>• Exclude construction activities to clearly separate frog habitat to be retained from construction zone.</li> </ul> <p>This section of fence is to be inspected daily. Any breaches of the fence are to be raised with the Contractor for remediation.</p> <p>The remainder of the construction zone should be fenced to clearly separate frog habitat from the construction zone (marked in Figure 1 as frog exclusion fence and black dots). The frog noise wall will be constructed between the RTA pond site and the adjoining works compound. The wall is intended to reduce the amount of noise and dust that might otherwise reach the RTA ponds. To be effective the wall needs to be 4 metres high and 28 metres long. Because the wall is so high and is located on the NW side of the RTA ponds, it risks overshadowing the ponds. To alleviate this, the top 2m of the wall will be constructed of transparent plastic. The noise wall will be continuous with perimeter frog fences and will form part of the barrier between the RTA ponds and the frog habitat in the Frog Enhancement Area and the work site.</p> <p>This fence should:</p> <ul style="list-style-type: none"> <li>• Exclude humans from entering the construction zone</li> <li>• Exclude frogs from the construction zone</li> </ul> <p>The remaining section of fence is to be inspected weekly. Any breaches of the fence are to be raised</p>

# Arncliffe Construction Compound Sub-Plan



Reference to Row #	Mitigation Measures	Description
R3	<b>Undertake pre-clearance survey and salvage activities</b>	<p>with the Contractor for remediation.</p> <p>Conduct a pre-clearance survey within the construction zone immediately prior to construction works being undertaken.</p> <p>An ecologist with a minimum of five years' experience in the management of frogs is to conduct the pre-clearing survey.</p> <p>The survey should include two diurnal and two nocturnal surveys, with the last nocturnal survey conducted the night prior to works being undertaken.</p> <p><b>Winter to spring encounters:</b></p> <p>If Green and Golden Bell Frogs are encountered sheltering underneath rock, rubble or wood they need to be assessed for an over wintering position or torpor. Then the frogs are to be collected in accordance with the following protocol:</p> <ul style="list-style-type: none"> <li>• Place in a clean, plastic holding container with a small amount of purified water</li> <li>• Frogs should be micro-chipped if not already tagged</li> <li>• Adult frogs should be sexed, snout-vent length measured, weight recorded, condition of frog, date and location of collection</li> <li>• Transported to a suitable over-winter location in consultation with the project ecologist and based on the advice of an independent expert</li> <li>• If frogs are injured, they are to be taken to a vet or suitably experienced frog keeper and euthanised</li> <li>• If frogs are not in torpor, the procedure for spring to autumn encounters applies.</li> </ul> <p><b>Spring to autumn encounters:</b></p> <p>If active frogs are encountered during the pre-clearance surveys or daily checks, then they are to be collected in accordance with the following protocol:</p> <ul style="list-style-type: none"> <li>• Place in a clean, plastic holding container with a small amount of purified water</li> <li>• Frogs should be micro-chipped if not already tagged</li> <li>• Adult frogs should be sexed, snout-vent length measured, weight recorded, condition of frog, date and location of collection</li> <li>• Relocate to Taronga Zoo, the artificial habitat created at Marsh Street or the RTA ponds based on the advice of the Project Ecologist</li> </ul> <p>Prior to works commencing, a number of water bodies within the construction zone will need to be decommissioned. Dam decommissioning needs to be done in the presence of a suitably qualified and experienced ecologist. Any frogs encountered will need to be collected as per above.</p> <p>Pre-clearance surveys should include searching for</p>

# Arncliffe Construction Compound Sub-Plan



Reference to Row #	Mitigation Measures	Description
		<p>tadpoles. Tadpoles should be netted and then identified using Anstis (2013). Green and Golden Bell Frog tadpoles should be collected and handled as above, apart from tagging. Tadpoles encountered between autumn and spring should not be released but should be kept in a suitable over-wintering facility. Tadpoles encountered from spring to autumn should be released into the RTA Ponds, artificial habitat at Marsh Street or relocated to Symbio, based on the advice of the Project Ecologist.</p> <p>If tadpoles are not Green and Golden Bell Frogs, these should be released into ponds other than the RTA Ponds on the golf course.</p>
R4	<b>Site Inductions</b>	<p>Site inductions should contain a relevant section on the Green and Golden Bell Frog. The induction should incorporate:</p> <ul style="list-style-type: none"> <li>• What to do in the event of unexpected finds of frogs within the construction zone.</li> <li>• Highlighting the enhance frog habitat area and why this is a 'no-go' zone.</li> </ul>
R5	<b>Stop work procedure</b>	<p>Implement a stop work or unanticipated find procedure for when Green and Golden Bell Frogs are observed within the construction zone (Appendix A). The procedure will include a process to notify the construction environmental manager and suitably qualified ecologist, a relocation procedure and when it is okay to re-commence works.</p>
R6	<b>Sediment and erosion control</b>	<p>Establish appropriate sediment and erosion control to prevent silt, sediments, spills and other contaminants from reducing water quality in frog habitat. These controls should be regularly inspected, particularly after heavy rain events.</p>
R7	<b>Light spill management</b>	<p>Directional lighting should be used in the vicinity of the transparent frog exclusion fence. Directional lighting should aim to reduce night time light spill onto the RTA ponds.</p>
R8	<b>Dust suppression</b>	<p>Dust from heavy vehicle haulage, dumping and storing of spoil and general vehicle movements will need to be minimized. Dust may reduce water quality in the RTA ponds.</p> <p>Bulk water carriers and sprayers should apply town water only to reduce dust. Slurry run-off should be managed in accordance with the sediment and erosion control measures.</p>
R9	<b>Contaminated lands management</b>	<p>Develop appropriate procedures to manage contaminated fill that may occur in the surround soils during the construction works and any habitat enhancement, if applicable.</p>
R10	<b>Acid Sulfate Soils management</b>	<p>Develop appropriate procedures to manage acid sulfate soils during construction and operation if applicable. Management of acid sulfate soils should be carried out in accordance with the Roads and Maritime guideline or approved procedure. Relevant</p>

# Arncliffe Construction Compound Sub-Plan



Reference to Row #	Mitigation Measures	Description
		documents include: <ul style="list-style-type: none"> <li>• RMS Guidelines for the Management of Acid Sulfate Materials, April 2005</li> <li>• NSW Acid Sulfate Soils Manual (ASSMC, 1998)</li> <li>• NSW EPA publication "Assessing and Managing Acid Sulfate Soils"</li> </ul>
<b>R11</b>	<b>Use of herbicides and other chemicals</b>	Herbicides should not be used near the RTA ponds and within the enhanced frog habitat area. If herbicides are to be used with in the construction zone, spray drift must not be able to reach aquatic habitat. This applies to herbicides in solution in surface water run-off.
<b>R12</b>	<b>Habitat re-instatement</b>	Re-instate all habitat that was temporarily impacted from construction activities within the Arncliffe surface works area. Habitat reinstatement should be conducted in accordance with relevant guidelines and policies and be conducted in consultation with the Kogarah Golf Course and the Rockdale City Council.

### 3. Management Measures

Table 4 identifies the management measures described in the Green and Golden Bell Frog Plan of Management (refer to Table 3) and outlines the specific mitigation measures to be implemented to address CoA D58 and D59 (refer to Table 2).

Table 4 CDS-JV Management Measures Matrix

Management Measures GGBF PoM Reference (Table 2)	CDS-JV Mitigation Measures	Document Number	Associated Procedures*	Procedure Document Number	CoA Reference (Table 1)	Relevant Section of this document
<b>R1 - Define the construction clearing areas</b>	Vegetation Clearing Flowchart	M5N-ES-FLC-PWD-0011	Manage Flora and Fauna	M5N-ES-PRC-PWD-0042	D59	Section 3.1
<b>R2 - Establish a Frog Exclusion Zone</b>	Arncliffe Establishment Layout Decommissioning of Ponds Flowchart	Appendix B M5N-ES-FLC-ARN-0001	Manage Flora and Fauna	M5N-ES-PRC-PWD-0042		Section 3.2
<b>R3 - Undertake pre-clearance survey and salvage activities</b>	Decommissioning of Ponds Flowchart Permit to Clear Land and Vegetation	M5N-ES-FLC-ARN-0001 MSID-4-363	Manage Flora and Fauna	M5N-ES-PRC-PWD-0042		Section 3.3
<b>R4 - Site Inductions</b>	Induction and training as outlined in the Ancillary Facilities Management Plan	M5N-ES-PLN-PWD-0026	N/A	N/A	D58	Section 3.4
<b>R5 - Stop work procedure</b>	GGBF Stop Work Flowchart	M5N-ES-FLC-ARN-0002	Manage Flora and Fauna	M5N-ES-PRC-PWD-0042		Section 3.5
<b>R6 - Sediment and erosion control</b>	Erosion and Sediment Control Plan	Appendix E	Manage Soil and Water	M5N-ES-PRC-PWD-0035		Section 3.6
<b>R7 - Light spill management</b>	Out of Hours Work Approval Form	M5N-ES-FRM-PWD-0008	Management of Environmental Noise Issues	M5N-ES-PRC-PWD-0043		Section 3.7
<b>R8 - Dust suppression</b>	Air Quality Flowchart	M5N-ES-FLC-PWD-0010	Manage Air Quality	M5N-ES-PRC-PWD-0040		Section 3.8
<b>R9 - Contaminated lands management</b>	Arncliffe Soil Contamination Report	N/A	Manage Contaminated Land	M5N-ES-PRC-PWD-0036		Section 3.9
<b>R10 - Acid Sulfate Soils management</b>	Arncliffe ASS Flowchart	M5N-ES-FLC-ARN-0003	Manage Acid Sulfate Soils	M5N-ES-PRC-PWD-0038		Section 3.10
<b>R11 - Use of herbicides and other chemicals</b>	Spill Response Flowchart	M5N-ES-FLC-PWD-0003	Manage Hazardous Substances	M5N-ES-PRC-PWD-0041		Section 3.11
<b>R12 - Habitat re-instatement</b>	Habitat Creation and Captive Breeding Plan	N/A	N/A	N/A		Section 3.12
<b>Other</b>	Arncliffe Compound Frog Hygiene Flowchart	M5N-ES-FLC-ARN-0004	Manage Flora and Fauna	M5N-ES-PRC-PWD-0042		Section 3.13

\*all procedures were sent with to DP&E on the 4/05/16.

### 3.1 Defining the construction clearing areas

The construction clearing boundary will be defined by ATF fencing which will be installed inside the frog fence. All clearing activities will occur within this boundary and these activities cannot commence until a written and signed GGBF Clearance Certificate from the RMS Herpetologist has been issued to the Secretary of the Department of Planning and Environment. This notice must outline that the mitigation measures detailed in Sections 3.1, 3.2 and 3.3.

When clearing activities have authorisation to take place, the CDS-JV Manage Flora and Fauna Procedure, including the Vegetation Clearing Flowchart will be followed. This procedure includes two Hold Points:

1. Approval for a Permit to Clear Land or Vegetation,
2. Completion of the Pre-clearing Checklist.

The first Hold Point is the Permit to Clear Land or Vegetation, which describes the details of the clearing activity, provides permit conditions and requires sign off from the Environmental Advisor or Manager, the Client Representative and Area Supervisor. Equipment Operators are also required to understand the permit conditions and sign on to the Permit. A copy of the GGBF Clearance Certificate from the RMS Herpetologist will also be attached to this Permit. Once completed, communicated and approval has been issued, this Hold Point is released and permit conditions can be implemented on site.

The second Hold Point is the Pre-clearing Checklist which must be completed two hours prior to the commencement of clearing activities. This Checklist requires the inspection of controls installed as per the Permit to Clear Land or Vegetation and needs to be signed off by the Environmental Advisor or Manager. The Permit to Clear Land or Vegetation and the Pre-clearing Checklist are found in the CDS-JV Manage Flora and Fauna Procedure.

### 3.2 Establishing Frog Exclusion Zone

Prior to any activities on site, CDS-JV will establish a Frog Exclusion Zone through the installation of a Frog Fence. This is outlined in the Decommissioning of Ponds Flowchart (Appendix A). The frog fence and No-Go Zone around the RTA Ponds are also illustrated in the Arncliffe Establishment Layout (Appendix B).

Throughout the duration of the Project, the frog fence will be inspected daily by a nominated person who has attended the Frog Induction and where required, repaired immediately. All areas outside the Arncliffe Construction Compound boundary will be identified as "No-Go Zones". Access to No-Go Zones is restricted and entry (for inspection of frog fencing, or as required during noise wall construction etc.) will be controlled through a permit system. On the Arncliffe Establishment Layout, the RTA Ponds and State Heritage listed SWSOOS are illustrated as a "No-Go Zone" to highlight their location and significance. The noise wall in the location between the compound and the RTA ponds will be designed to the specifications described in Table 3 (or better). The final design will also incorporate input from the acoustic report and the CDS-JV design team to ensure broader conditions (e.g. noise mitigation for other sensitive receivers) are also addressed.

### 3.3 Pre-clearance and salvaging activities

Pre-clearance and salvaging activities for the Green and Golden Bell Frog will commence at the completion of establishing the frog exclusion zone (i.e. following installation of the frog fence). The Project Herpetologist and where required, the nominated RMS Herpetologist will undertake pre-clearance and salvaging activities by conducting surveys outlined in Table 3.

Pond decommissioning and survey and salvage for other fauna may be undertaken concurrently with GGBF survey and salvaging activities, in consultation with the Project and RMS herpetologists. Final GGBF survey and salvage will need to be completed prior to further activities being undertaken within the frog exclusion area (i.e. a GGBF clearance certificate from the RMS herpetologist is required prior to conducting further site establishment activities including vegetation clearing).

Pre-construction activities, which include vegetation clearing, cannot commence until a written and signed GGBF Clearance Certificate from the RMS Herpetologist has been issued to the Secretary of the Department of Planning and Environment. This GGBF Clearance Certificate must outline that the mitigation measures detailed in Sections 3.1, 3.2 and 3.3 have been implemented on site.

# Arncliffe Construction Compound Sub-Plan



## 3.4 Site specific induction and training

CDS-JV will ensure that Project personnel can competently perform their duties and meet environmental obligations. Toolbox /pre-start talks are to include limits of clearing, clearing procedures, weed identification and control measures and fauna handling protocols where relevant. All personnel present on site during pre-construction activities will undertake the Green and Golden Bell Frog Induction which will be facilitated by the Project Herpetologist. CDS-JV will ensure all Supervisors and Foreman on site have attended the GGBF Induction.

All personnel, including employees, contractors and sub-contractors, are required to complete a project induction containing relevant environmental information before they are authorised to work on the Project. Site specific inductions will be undertaken for all personnel working at the Arncliffe Construction Compound and will be presented by the Arncliffe site management team or nominated delegates. Information regarding the GGBF and the Green and Golden Bell Frog Stop Work Flowchart (Appendix D) will be detailed in this induction. In addition to GGBF information, this induction will include relevant aspects such as (but not limited to) contamination, flora and fauna, erosion and sediment control, Aboriginal and non-Aboriginal heritage, sensitive noise, vibration and air quality receivers (refer to the Ancillary Facilities Management Plan for management measures related to inductions and training):

## 3.5 Green and Golden Bell Frog Stop Work Flowchart

In the event that a GGBF is found in the Arncliffe Construction Compound, the Green and Golden Bell Frog Stop Work Flowchart (Appendix D) must be followed. This Flowchart features a Hold Point which can only be released once:

- The Environmental Advisor or Manager has been contacted,
- The Project Herpetologist has been notified, and
- The GGBF has been removed by Environmental Advisor or nominated person (who has attended the GGBF Induction) in accordance with the instructions listed in the Flowchart.

This flowchart will be applied as soon as the RMS Herpetologist has provided the clearance certificate and will apply during general fauna salvage and all other activities. The Project Herpetologist will be responsible for the identification, assessment and appropriate release or relocation of any/all frogs salvaged. All frogs will be relocated by the Project Herpetologist to the designated release area (RTA ponds for GGBF).

## 3.6 Erosion and Sediment Control Plan

The Arncliffe Erosion and Sediment Control Plan (Appendix E) was developed by the Project's Soil Conservationist for initial site establishment works. This Plan will be updated regularly as works progress to ensure that the controls deployed are appropriate for the works taking place. All controls will be progressively installed and will be inspected weekly or after heavy rainfall events. The soil conservationist will also undertake inspections, particularly during site establishment activities and active surface works.

## 3.7 Light spill management

General site lighting will be oriented away from the existing RMS frog ponds to minimise light spill to this sensitive area. Light spill will be assessed during the installation period of any new lighting to minimise light spill toward the frog ponds. Temporary lighting will be assessed through the Out of Hours Work Approval Form (refer to CDS-JV Manage Environmental Noise Issues Procedure), which features a section on the management of light when conducting works outside of normal construction hours. Mitigation measures include:

- Lighting to be minimised if safe to do so,
- Orienting light sources away from any nearby residences, and
- Orienting lighting away from adjacent vegetation.

The completion and sign-off of this form is a Hold Point prior to night works. Sign-off includes the approval from the Environmental Advisor or Manager, the Community Representative and the Project Manager.

# Arncliffe Construction Compound Sub-Plan



## 3.8 Air quality management

Inspections will be undertaken regularly to ensure that dust suppression and management is being appropriately implemented in accordance with the CDS-JV Manage Air Quality Procedure.

In the event that visible dust is leaving site, works must cease to prevent dust leaving site and implement further controls as appropriate. The Hold Point can only be released when:

- An Environmental Inspection has been conducted,
- Mitigation measures will be actioned and will be implemented by the Site Supervisor.

The effectiveness of these mitigation measures will be monitored and where deemed unsatisfactory, the construction team will be consulted and measures reviewed.

## 3.9 Contaminated land management

CDS-JV has conducted a Phase Two Contamination Survey and all activities will be undertaken in accordance with the Contamination Report produced from the analysis of this assessment. Refer to the Ancillary Facilities Management Plan for further information relating to contamination management on site. This includes references to Manage Contaminated Land Procedure.

## 3.10 Acid Sulfate Soils management

A Phase 2 Contamination Survey was undertaken at the Arncliffe Construction Compound in April 2016. Preliminary results indicate the construction compound contains soils that are classified as Potential Acid Sulfate Soils (PASS) or Actual Acid Sulfate Soils (ASS).

The areas of site that will generate PASS/ASS materials are detailed in Table 5.

Table 5 Estimated excavation volumes

Excavation activities	Approximate volume (m <sup>3</sup> )*
<b>Pre-construction</b>	
Excavation of soils for the installation of hoarding and fence posts	320
General site roads and pads that require topsoil stripping	450
<b>Construction</b>	
Excavation of shaft (including materials from diaphragm wall construction)	1600
Excavation of the decline	8400
<b>Total estimated volume</b>	<b>10770</b>

\*volumes are based on detailed designs

The expected PASS/ASS volumes to be generated are up to approximately 100t/day during pre-construction activities and up to 400t/day during construction activities. The majority of the material to be excavated is likely to be saturated due to the water table being approximately 1m below surface level. As material will be water logged, it is unlikely the excavated material will rapidly oxidise.

The Arncliffe Acid Sulfate Soils Management Flowchart (Appendix F) details how CDS-JV will manage PASS/ASS. For additional information refer to the CDS-JV Acid Sulfate Soils Management Sub-plan (M5N-ES-PLN-PWD-0031) and the CDS-JV Manage Acid Sulfate Soils Procedure.

## 3.11 Use of herbicides and other chemicals

Before the use of any herbicides or chemicals which have the potential to travel off site, the Project Herpetologist will be consulted. In the event a spill occurs on site, the Spill Response Flowchart (M5N-ES-FLC-PWD-0003) will be implemented. The controls outlined in the Flowchart will minimise the spread of chemicals on site and the subsequent risk of residue run-off into frog habitat areas. This document is located in the CDS-JV Manage Hazardous Substances Procedure.

# Arncliffe Construction Compound Sub-Plan



All fuels and chemicals will be stored securely within bunded areas in accordance with Australian Standards and the Manage Hazardous Substances Procedure. Detailed design of site layout, including flood modelling, will minimise potential risks from bunded storage areas during flood events.

### 3.12 Habitat Creation and Captive Breeding Plan

As outlined in B15 of the CoA, a Habitat Creation and Captive Breeding Plan will be developed by Sydney Motorway Corporation (SMC) in consultation with OEH. This Plan will be submitted to DP&E and implemented by CDS-JV within 12 months of the commencement of construction, unless other wised agreed by the Secretary.

### 3.13 Arncliffe Compound Frog Hygiene Flowchart

The Arncliffe Frog Hygiene Flowchart is a document designed to inform CDS-JV Staff, Workforce and Sub-contractors on the impacts of Chytrid Fungus on frog populations (in particular the Green and Golden Bell Frog) and the mitigation measures CDS-JV will have in place to reduce the spread of the fungus at the Arncliffe Construction Compound.

These mitigation measures will be implemented by:

- The CDS-JV Environmental Advisor is to inspect quarries to identify wet areas and assess the potential risk for transfer of Chytrid Fungus to site.
- Subcontractors must clean earthmoving machinery and equipment prior to it coming to site and provide a completed hygiene Certificate/s at the Arncliffe Construction Compound entrance.
- Progressively installing erosion and sediment controls and permanent drainage to direct run-off water away from frog habitats.
- Ensuring boots and gumboots are clean and disinfected before undertaking inspections on the frog fences.
- Making it a contractual requirement that the Project Ecologist will follow the *Hygiene protocols for the control of disease in Australian frogs* when salvaging fauna from the ponds.

Refer to the CDS-JV Manage Flora and Fauna Procedure for further detail.

---

# Arncliffe Construction Compound Sub-Plan



## Appendix A Decommissioning of Ponds Flowchart

# Decommissioning of Ponds Flowchart



Pre-clearance surveys for the Green Golden Bell Frog (GGBF) will be undertaken by the Project Herpetologist (PH) and where required, the RMS Herpetologist (RH). These surveys will include two diurnal, two nocturnal surveys and a third and final nocturnal survey the night before the written GGBF Clearance Certificate is issued by the RH. The GGBF Clearance Certificate will confirm the Frog Exclusion Zone is free of GGBF and must be submitted to the Secretary before further activities can take place. This process may be undertaken progressively with frog exclusion fence delineating 'GGBF cleared sections' and sign off required from the RH for each section.

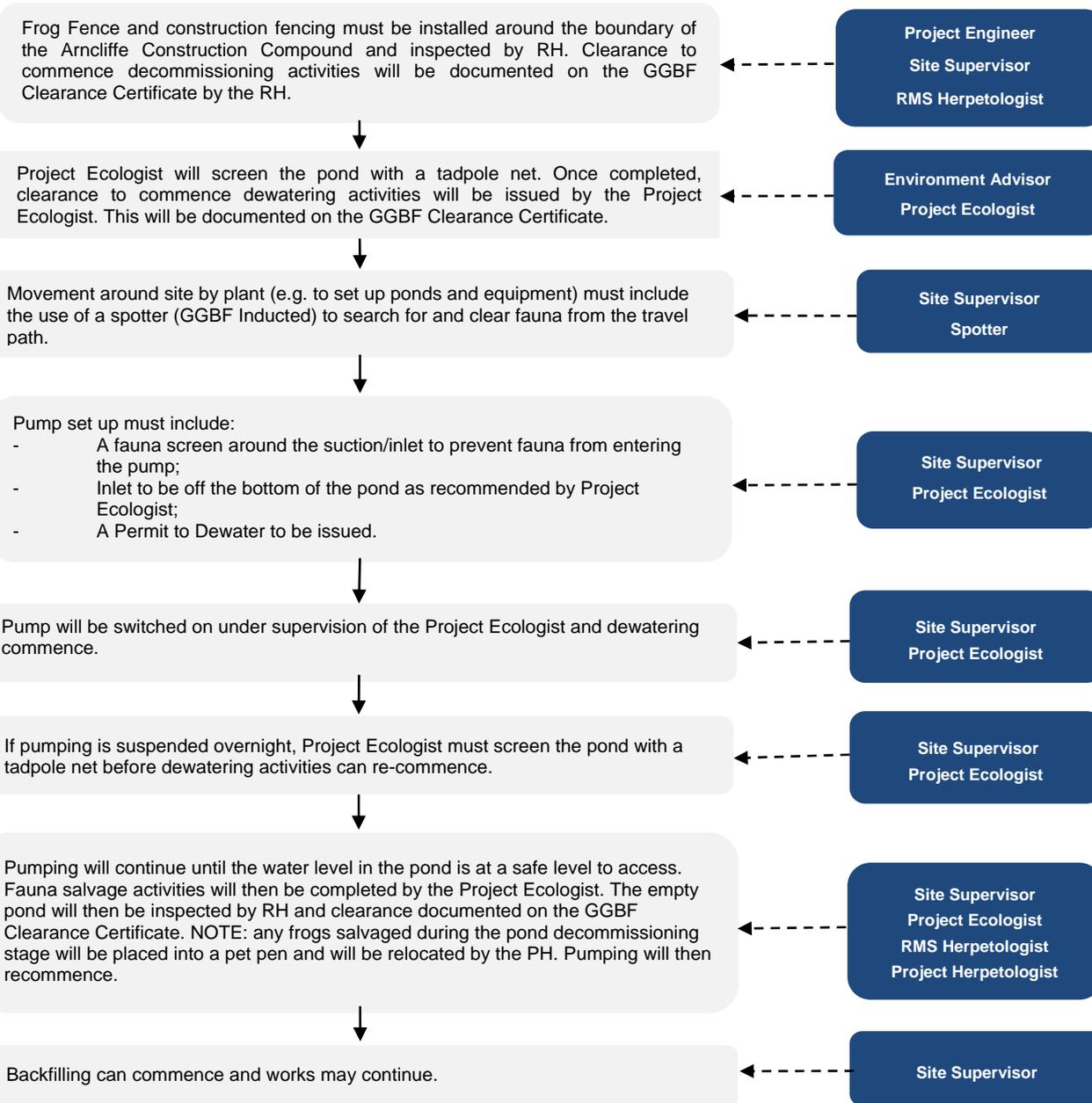
The decommissioning of the ponds at the Arncliffe Construction Compound will be undertaken progressively. Pond decommissioning and survey and salvage for other fauna may be undertaken concurrently with GGBF survey and salvaging activities, in consultation with the PH and RH. Where appropriate, the GGBF Clearance Certificate may record details on the current status of:

- Pond decommissioning;
- Dewatering activities; and
- Pond backfilling activities.

NOTE: the Ancillary Facilities Management Plan and associated reports must be approved by the Secretary prior to the commencement of further activities.

## MANAGEMENT

## RESPONSIBILITY



NOTE: All fauna (excluding frogs) salvaged during the decommissioning of the ponds will be relocated by Jacobs and Bio-analysis in accordance with their Fisheries Permit. All frogs salvaged during the pond decommissioning stage will be placed into a pet pen and will be relocated by the PH.

---

# Arncliffe Construction Compound Sub-Plan



## Appendix B Arncliffe Establishment Layout

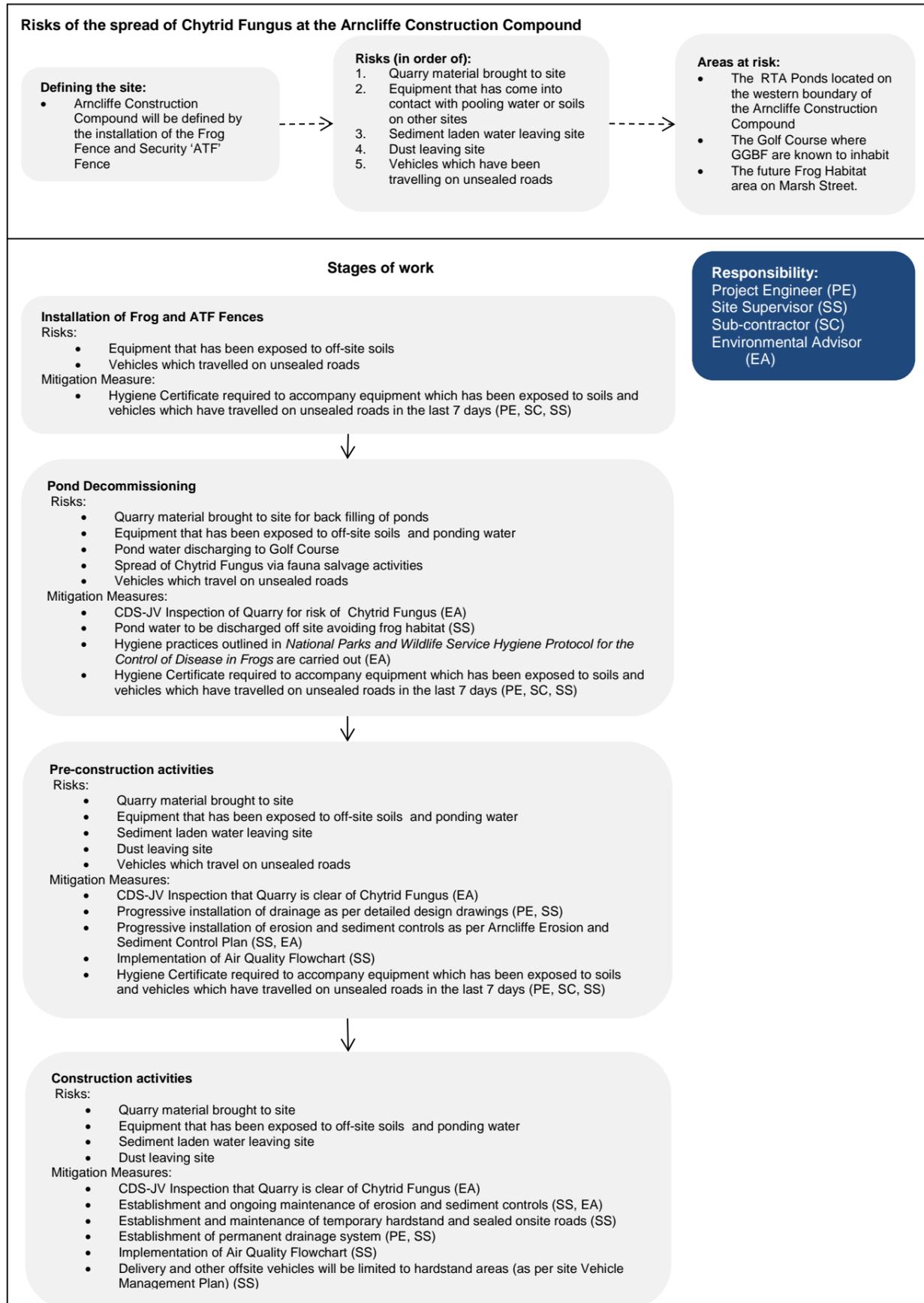


	Watercourse		Temporary Access
	3m Noise Wall		Stabilised Site Access
	5m Noise Barrier		Temp. Laydown & Stockpile
	Hoardings		Site Office
	Frog Fence		Ponds
	RTA Frog Habitat		Heritage Item - LEP
	No Go Zone		State Heritage Act
	EIS NCA Boundary		Premise Boundary

Arncliffe Establishment Layout



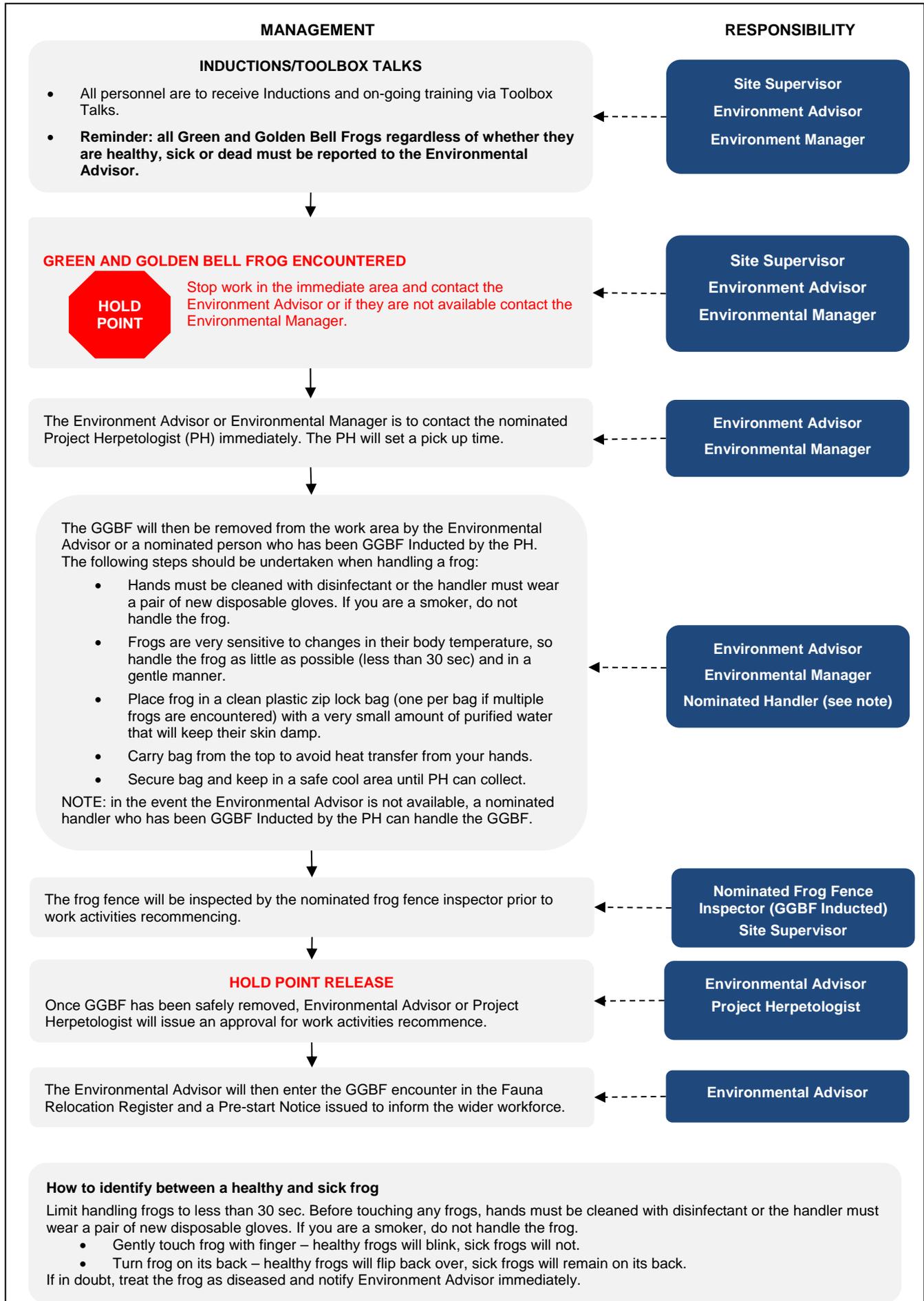
## Appendix C Arncliffe Frog Hygiene Management Flowchart





## Appendix D Green and Golden Bell Frog Stop Work Flowchart

# Green and Golden Bell Frog Stop Work Flowchart



---

# Arncliffe Construction Compound Sub-Plan



## Appendix E Arncliffe Erosion and Sediment Control Plan

# INSTRUCTIONS

## BACKGROUND

This Erosion and Sediment Control Plan (ESCP) has been prepared in accordance with best-practice principles, generally following the guidelines contained in the Blue Book Volumes 1 and 2D (Landcom, 2004 and DECC, 2008).

Erosion Hazard Assessment:

RUSLE = R x K x LS x P x C

- R = Rainfall factor (3,430)
- K = Soil erodibility factor (0.02 for Warriewood Soil Landscape) x See SOILS section below.
- LS = Slope length and gradient factor (0.41, using 2% and 80m)
- P = Conservation practices (1.3; hard and compacted)
- C = Ground cover (1.0, no cover).

At this site, RUSLE gives 36 t/ha/yr (Soil Loss Class 1; very low erosion hazard).

## SOILS

The site is mapped as Disturbed Terrain in Chapman and Murphy (1989) but is derived from sediments of the adjacent Warriewood Soil Landscape. Soils were observed to be consistent with the Warriewood Soil Landscape and, as such, K-factors consistent with that Soil Landscape have been adopted. Soils were observed to be relatively sandy Acid Peats, Podsoles and Siliceous Sands, with a sandy loam topsoil as a result of golf course improvements. Soils are unlikely to be dispersible at this site. Soils have high natural infiltration although relatively shallow groundwater presents a limiting layer for infiltrating larger storms.

## OTHER DESIGN ASSUMPTIONS

The overall disturbance footprint is approximately 6.3ha. As such, under clause 6.3.2 (d) in Landcom (2004) (The Blue Book), a sediment basin (or basins) should be installed. However, sediment basins are not feasible at this site because it is near-level and has no natural outlet due to it sitting as the lowest point in the local landscape. However, as a result of this, water will naturally accumulate in the work area and this water will be managed in a similar manner to a sediment basin.

## INSTRUCTIONS

Works are to be staged in the following order with the relevant erosion and sediment controls implemented prior to and during each section of works as specified.

1. Install barrier flagging (or alternative measures). Refer to the 'Access Control' notes below.
2. Establish a stabilised site entry/exit point (Standard Drawing SD 6-14) in the location shown. Refer to the 'Site Entry and Exit Points' notes below. This might need to occur progressively to allow for backfilling of ponds.
3. Install sediment fencing in the locations shown and following Standard Drawing SD 6-8. Refer to the 'Sediment Fencing' notes below.
4. De-water ponds within the worksite in accordance with the Site Water Management and Dewatering Procedure.
5. Commence backfilling of ponds.
6. As part of clearing, grubbing and stripping operations, create a low earth bund around the entire perimeter. This should be approximately 250mm to 300mm high and can be made from onsite topsoil material if desired. The earth bund must be stabilised by covering it in geofabric, spraying it with polymer (e.g. Vifal Stonewall) or vegetating it (e.g. hydromulch). Bunds can be made of mulch but not in the section identified in point 8, nor along the interface boundary with VBAJV. sandbags can be used instead of earth bund in any location desired. the hoarding can also act as the bund once it's in place.
7. If discharge into the golf course drainage system is permissible and feasible (i.e. if ground levels permit), create stable, rock-lined outlets through the perimeter earth bund at low point(s) (i.e. spillways). Gravel filter bags or coir logs can be used as alternatives to rock filters.
8. There is a risk of site works leading to ponding of water outside the hoarding. Drainage options are to be investigated.

The following requirements apply at all times after works have commenced:

- Stockpile areas are to be as specified by the site manager and in accordance with the 'Stockpiling' notes below.
- Dust suppression to be carried out as required.
- Treatment of dirty water is to be carried out as necessary in accordance with the 'Dirty Water Treatment and Discharge Requirements' notes below. Note that the site might accumulate significant volumes of water unless discharge point(s) can be identified.
- Monitoring, maintenance and inspections are to be carried out regularly as required, in accordance with the 'Site Inspection and Monitoring' notes below.
- Undertake progressive stabilisation of lands (e.g. hardstand, concrete, landscaping) as final earthworks are complete in each area (rather than waiting until the completion of all works).

## ACCESS CONTROL

- Install barrier fences, flagging, tape or other administrative controls to define the project works and clearing limits.
- Barrier and/or sediment fencing are to be used to ensure the only vehicle entry and egress points are as designated.
- Barrier fencing is to be used to delineate all 'no-go' areas.

## SITE ENTRY AND EXIT POINTS

- Establish stabilised site access points anywhere where construction vehicles enter or exit a work area from a sealed, public road. Refer to Standard Drawing SD 6-14 from Landcom (2004). Note that a stabilised access might be required at the interface of this site with Marsh St works being conducted by VBAJV.
- Ensure that all vehicles entering and leaving work areas pass over a stable access point to minimise bogginess in these areas and to minimise mud tracking onto public roads.
- Sediment or rocks tracked from the site will be removed from public roads as soon as possible (e.g. with street sweepers).

## STOCKPILING

- Ideally, strip topsoil when it is moist, not too wet or too dry. This preserves topsoil structure.
- Stockpile areas are to be established as specified by the site manager. They must:
  - Be within the catchment area for the sediment sumps;
  - Be at least 5m away from possible concentrated flows of water (including street gutters);
  - Be at least 2m from the driplines of retained native vegetation;
  - Be at least 40m away from natural waterways (unless this is not feasible).
- Wherever possible, stockpiles are to be established and maintained in accordance with Standard Drawing SD 4-1 (Landcom, 2004).
- As much as is feasible, mulched vegetation, topsoil and spoil are to be stockpiled separately.
- Sediment fencing is to be installed around the lower edge of stockpiles as per Standard Drawing SD 4-1, unless the stockpile is immediately adjacent to a suitable alternative control such as a sediment basin.
- Inactive stockpile faces are to be provided with at least 60% cover (i.e. RUSLE C-factor of 0.1) within 10 days of formation. This can be achieved with geofabric, hydromulch or soil binder such as Vital Stonewall.
- If high winds or heavy rainfall is forecast, stockpiles are to be covered to at least 60% (see above) regardless of the time they have been in place.
- Stockpiles of topsoil or mulch should be constructed to no more than 2 meters in height wherever possible (note this only applies to topsoil and mulch).
- Stockpiles should be formed to be no steeper than 2:1 (H:V) wherever possible.

## SEDIMENT FENCING

- Install all sediment fencing in accordance with Standard Drawing SD 6-8.
- Sediment fences must be firmly trenched into the ground for their entire length.
- Sediment fences must include small 'returns' at maximum 20m intervals (see Standard Drawing 6-8) to minimise the risk of water flowing along them rather than through them. Returns can be made from sandbags (3 high, hard up against fence) where space is limited.
- Mulch filter berms/bunds can be used instead of sediment fences but only on slopes less than 10% and in locations where flooding is not likely. They are to be at least 0.5m high and include returns as per the above instruction.

## DIRTY WATER TREATMENT AND DISCHARGE REQUIREMENTS

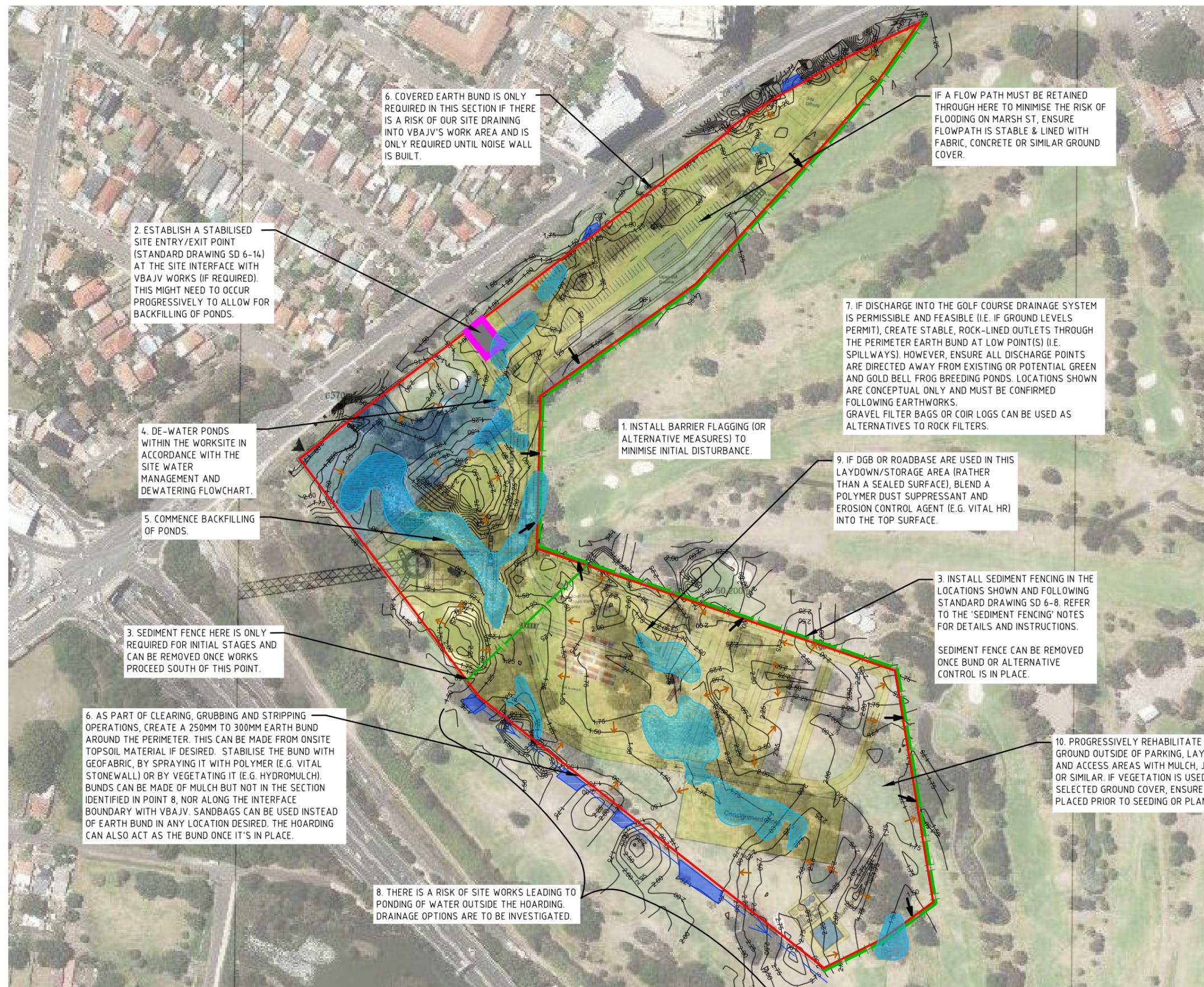
- Water accumulating in sumps, excavations or in any other low points onsite can either be:
  - Pumped into a tank, truck or other holding area for later treatment; or
  - Treated (if required) and tested in situ, then released off site once it meets the required water quality discharge criteria (see below); or
  - Spread out and infiltrated onto well vegetated lands within the site boundary at least 50m away from any waterway, swale or drainage line. Ensure water is applied slowly and in a manner to avoid concentrated surface runoff and/or erosion.
- Any active discharge of water from the project (i.e. where water is moved offsite via direct action such as pumping rather than flowing off the project as a result of heavy rainfall) is to achieve:
  - 50mg/L or less TSS (Total Suspended Sediment); and
  - pH 6.5 to 8.5; and
  - <10mg/L oil and grease and no visible trace.
- Adequate water quality can be achieved by using gypsum at a rate of approximately 30kg per 100m<sup>3</sup> of stormwater. Alternative flocculating agents can only be used if the regulating authority has granted approval. Refer to manufacturer's guidelines and the project EPL for dosage details.
- Spread and mix the treatment agent thoroughly with detained water.
- These de-watering requirements apply to dirty water accumulating in any sort of excavation, sump, or other ponded water body on the project.

## SITE INSPECTION, MONITORING AND MAINTENANCE

- Prior to forecast rainfall of 5mm or more over 24 hours the site environment manager (or their representative) is to inspect the condition of all erosion and sediment controls and action any urgent repair, maintenance or improvement works. They are to keep a record all findings (including details of actions and their close outs).
- Regular site inspections are to be conducted by the site environment manager (or their representative):
  - At least weekly during normal construction hours; and
  - Prior to forecast rainfall (see above); and
  - Daily during rain events (if safe to do so); and
  - Within 24 hours of the cessation of a rain event that causes runoff.
- Additional erosion and sediment controls will be installed as necessary to ensure satisfactory outcomes in keeping with project conditions and best-practice Blue Book guidelines.
- This ESCP will be updated and/or additional ESCPs prepared as required.
- Sediment or rocks tracked from the site will be removed from public roads as soon as possible (e.g. with street sweepers).
- After rainfall, sediment accumulated in trapping devices (e.g. sumps, sediment fence) will be removed to a secure location where it can't wash or blow offsite (preferably to an active stockpile).
- Weather conditions will be monitored onsite and daily rainfall will be recorded. A rainfall gauge will be installed at the site compound.
- Safe storage areas for wastes, fuels, excess concrete and other potential contaminants are to be delineated by the site manager.
- Adequate supplies of erosion control measures (e.g. geofabric rolls, jute matting, hydraulic soil binders or similar) are to be maintained in the site compound for rapid deployment as required.
- If required, water treatment chemical(s) and equipment are to be maintained onsite.
- Dust suppression is to be undertaken as required to minimise the risk of offsite dust impacts. Existing site water of any kind cannot be re-used on site for dust suppression. Town water must be used for dust suppression in all cases.

REV	DATE	DES.	DRN.	APP.	REVISION DETAILS	DRAWING STATUS		North	CLIENT	 PO.Box 1098, Bowral, NSW, 2576 Suites 7 & 8, 68-70 Station Street Bowral NSW 2576. (f) 02 4862 1633 (f) 02 4862 3088 email: reception@seec.com.au WWW.SEEC.COM.AU	PROJECT TITLE <b>WESTCONNEX STAGE 2 ARNCLIFFE SITE</b>	DRAWING TITLE <b>EROSION AND SEDIMENT CONTROL PLAN GENERAL NOTES AND BACKGROUND DATA</b>			
					DESIGN BY	A.M.	SCALE: (on A3 Original) N/A					PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
						DRAWN BY	N.L.					15000367	P04	ESCP01	01
01	19/05/16	N.L.	N.L.	A.B.	FINAL - MINOR AMENDMENTS	FINAL APPROVAL	A.M.								
00	28/04/16	A.M.	N.L.	A.M.	FINAL REVISION										
B	22/03/16	A.M.	N.L.	A.M.	MINOR AMENDMENTS										
A	15/03/16	A.M.	N.L.	A.M.	DRAFT ISSUE - FOR CONSULTATION										

REFER TO THE INSTRUCTIONS ON THE PRECEDING PAGE PRIOR TO IMPLEMENTING THIS ESCP.



### LEGEND

-  SEDIMENT FENCE (SD 6-8)
-  EARTH BUND
-  STABILISED SITE ACCESS (6-14)
-  LOW POINTS (TBC)
-  POTENTIAL OFF-SITE WATER PONDING AND PROPOSED LOCAL DRAINAGE
-  PONDS (APPROXIMATE)
-  WATER FLOW DIRECTION

6. COVERED EARTH BUND IS ONLY REQUIRED IN THIS SECTION IF THERE IS A RISK OF OUR SITE DRAINING INTO VBAJV'S WORK AREA AND IS ONLY REQUIRED UNTIL NOISE WALL IS BUILT.

IF A FLOW PATH MUST BE RETAINED THROUGH HERE TO MINIMISE THE RISK OF FLOODING ON MARSH ST, ENSURE FLOWPATH IS STABLE & LINED WITH FABRIC, CONCRETE OR SIMILAR GROUND COVER.

2. ESTABLISH A STABILISED SITE ENTRY/EXIT POINT (STANDARD DRAWING SD 6-14) AT THE SITE INTERFACE WITH VBAJV WORKS (IF REQUIRED). THIS MIGHT NEED TO OCCUR PROGRESSIVELY TO ALLOW FOR BACKFILLING OF PONDS.

7. IF DISCHARGE INTO THE GOLF COURSE DRAINAGE SYSTEM IS PERMISSIBLE AND FEASIBLE (I.E. IF GROUND LEVELS PERMIT), CREATE STABLE, ROCK-LINED OUTLETS THROUGH THE PERIMETER EARTH BUND AT LOW POINT(S) (I.E. SPILLWAYS). HOWEVER, ENSURE ALL DISCHARGE POINTS ARE DIRECTED AWAY FROM EXISTING OR POTENTIAL GREEN AND GOLD BELL FROG BREEDING PONDS. LOCATIONS SHOWN ARE CONCEPTUAL ONLY AND MUST BE CONFIRMED FOLLOWING EARTHWORKS. GRAVEL FILTER BAGS OR COIR LOGS CAN BE USED AS ALTERNATIVES TO ROCK FILTERS.

4. DE-WATER PONDS WITHIN THE WORKSITE IN ACCORDANCE WITH THE SITE WATER MANAGEMENT AND DEWATERING FLOWCHART.

1. INSTALL BARRIER FLAGGING (OR ALTERNATIVE MEASURES) TO MINIMISE INITIAL DISTURBANCE.

9. IF DGB OR ROADBASE ARE USED IN THIS LAYDOWN/STORAGE AREA (RATHER THAN A SEALED SURFACE), BLEND A POLYMER DUST SUPPRESSANT AND EROSION CONTROL AGENT (E.G. VITAL HR) INTO THE TOP SURFACE.

5. COMMENCE BACKFILLING OF PONDS.

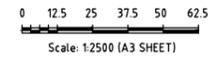
3. INSTALL SEDIMENT FENCING IN THE LOCATIONS SHOWN AND FOLLOWING STANDARD DRAWING SD 6-8. REFER TO THE 'SEDIMENT FENCING' NOTES FOR DETAILS AND INSTRUCTIONS. SEDIMENT FENCE CAN BE REMOVED ONCE BUND OR ALTERNATIVE CONTROL IS IN PLACE.

3. SEDIMENT FENCE HERE IS ONLY REQUIRED FOR INITIAL STAGES AND CAN BE REMOVED ONCE WORKS PROCEED SOUTH OF THIS POINT.

6. AS PART OF CLEARING, GRUBBING AND STRIPPING OPERATIONS, CREATE A 250MM TO 300MM EARTH BUND AROUND THE PERIMETER. THIS CAN BE MADE FROM ONSITE TOPSOIL MATERIAL IF DESIRED. STABILISE THE BUND WITH GEOFABRIC, BY SPRAYING IT WITH POLYMER (E.G. VITAL STONEWALL) OR BY VEGETATING IT (E.G. HYDROMULCH). BUNDS CAN BE MADE OF MULCH BUT NOT IN THE SECTION IDENTIFIED IN POINT 8, NOR ALONG THE INTERFACE BOUNDARY WITH VBAJV. SANDBAGS CAN BE USED INSTEAD OF EARTH BUND IN ANY LOCATION DESIRED. THE HOARDING CAN ALSO ACT AS THE BUND ONCE IT'S IN PLACE.

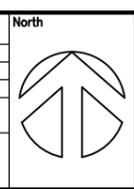
8. THERE IS A RISK OF SITE WORKS LEADING TO PONDING OF WATER OUTSIDE THE HOARDING. DRAINAGE OPTIONS ARE TO BE INVESTIGATED.

10. PROGRESSIVELY REHABILITATE ALL DISTURBED GROUND OUTSIDE OF PARKING, LAYDOWN, STORAGE AND ACCESS AREAS WITH MULCH, JUTEMAT, TURF OR SIMILAR. IF VEGETATION IS USED AS THE SELECTED GROUND COVER, ENSURE TOPSOIL IS PLACED PRIOR TO SEEDING OR PLANTING.



REV	DATE	DES.	DRN.	APP.	REVISION DETAILS
01	19/05/16	N.L.	N.L.	A.B.	FINAL - MINOR AMENDMENTS
00	28/04/16	A.M.	N.L.	A.M.	FINAL REVISION
B	22/03/16	A.M.	N.L.	A.M.	MINOR AMENDMENTS
A	15/03/16	A.M.	N.L.	A.M.	DRAFT ISSUE - FOR CONSULTATION

DRAWING STATUS	
DESIGN BY	A.M.
DRAWN BY	N.L.
FINAL APPROVAL	A.M.
SCALE:	1 : 2500
(on A3 Original)	
<b>FINAL</b>	



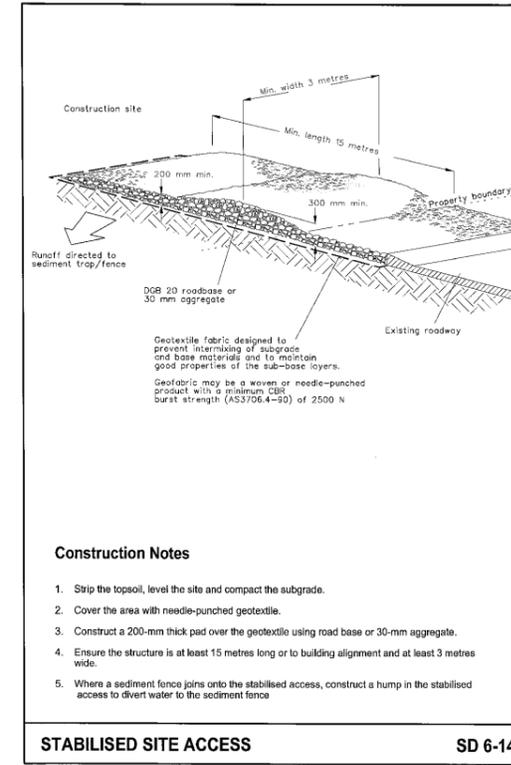
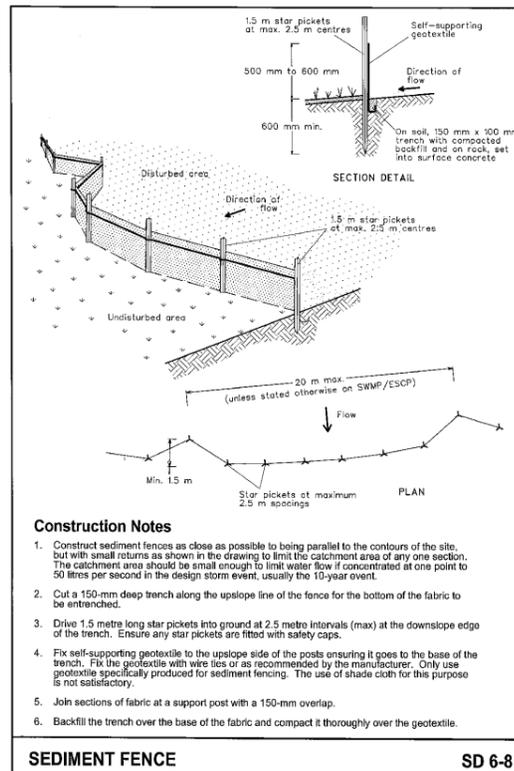
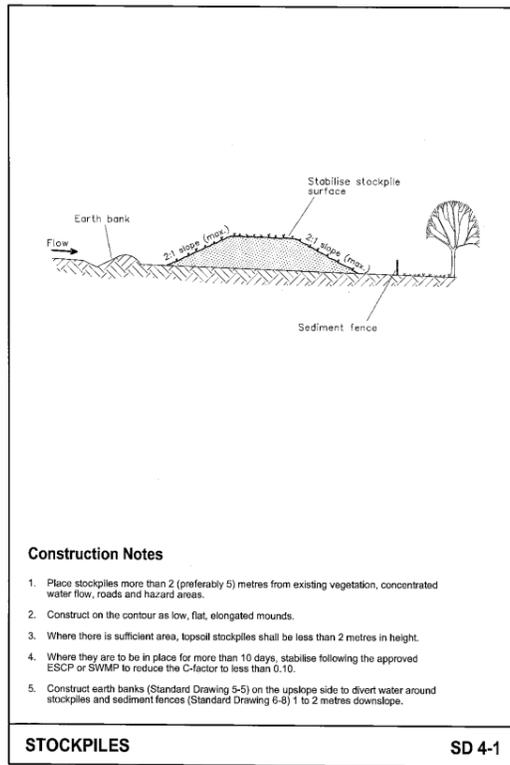
CLIENT



PO Box 1098, Bowral, NSW, 2576  
Suites 7 & 8, 68-70 Station Street  
Bowral NSW 2576.  
(t) 02 4862 1633  
(f) 02 4862 3088  
email: reception@seec.com.au  
WWW.SEEC.COM.AU

PROJECT TITLE  
**WESTCONNEX STAGE 2  
ARNCLIFFE SITE**  
**M5N-ES-ESP-ARN-0001-01**

DRAWING TITLE			
<b>EROSION AND SEDIMENT CONTROL PLAN SITE LAYOUT</b>			
PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
15000367	P04	ESCP02	01



**STANDARD DRAWINGS SD 4-1, 6-8, 6-12 AND 6-14 ARE FROM LANDCOM (2004).**

REV	DATE	DES.	DRN.	APP.	REVISION DETAILS
01	19/05/16	N.L.	N.L.	A.B.	FINAL - MINOR AMENDMENTS
00	28/04/16	A.M.	N.L.	A.M.	FINAL REVISION
B	22/03/16	A.M.	N.L.	A.M.	MINOR AMENDMENTS
A	15/03/16	A.M.	N.L.	A.M.	DRAFT ISSUE - FOR CONSULTATION

DRAWING STATUS	
DESIGN BY	A.M.
DRAWN BY	N.L.
FINAL APPROVAL	A.M.
SCALE:	N.T.S.
(on A3 Original)	
<b>FINAL</b>	

North

CLIENT

PO Box 1098, Bowral, NSW, 2576  
Suites 7 & 8, 68-70 Station Street  
Bowral NSW 2576.  
(f) 02 4862 1633  
(f) 02 4862 3088  
email: reception@seec.com.au  
WWW.SEEC.COM.AU

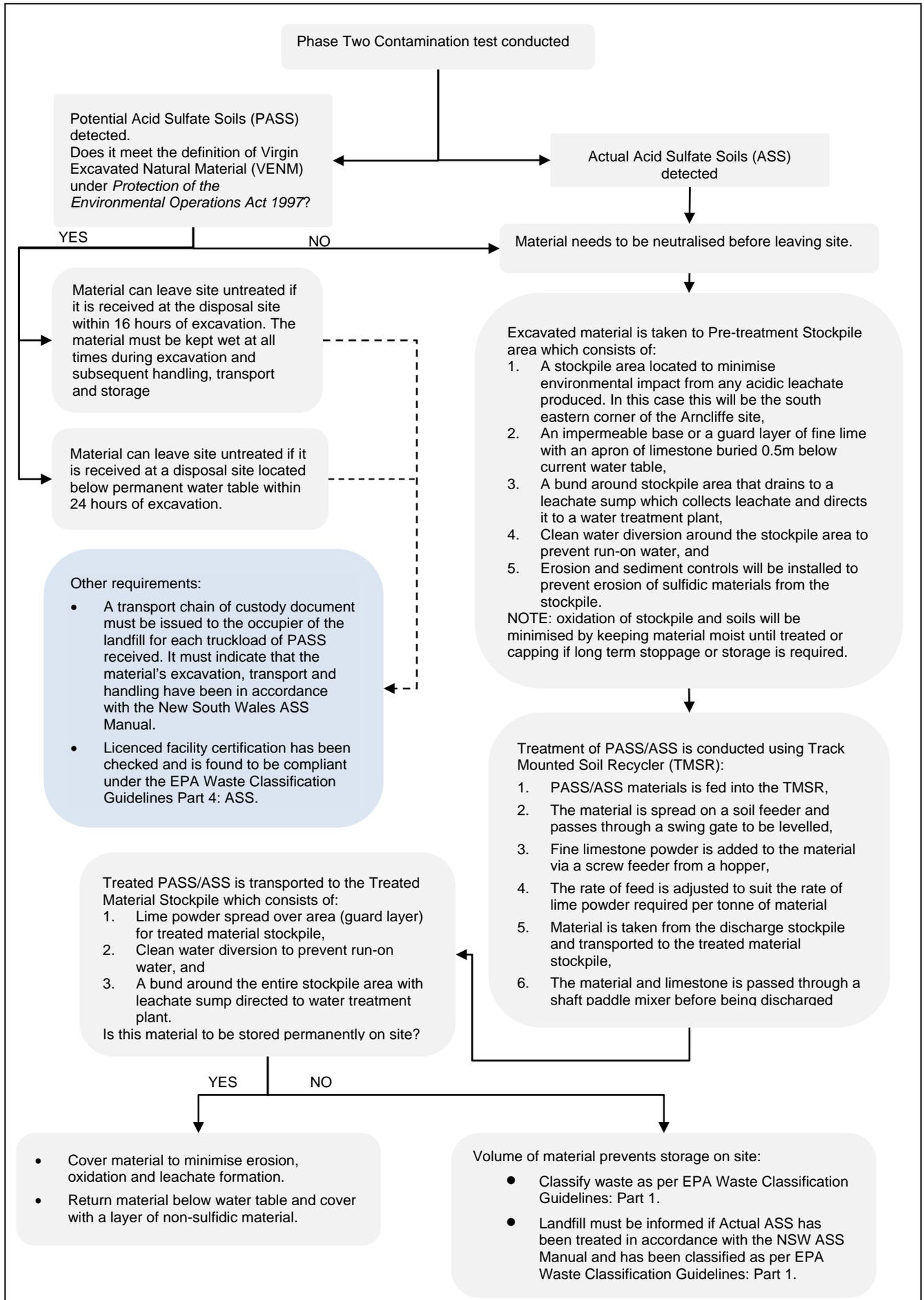
PROJECT TITLE  
**WESTCONNEX STAGE 2  
ARNCLIFFE SITE  
M5N-ES-ESP-ARN-0001-01**

DRAWING TITLE			
<b>EROSION AND SEDIMENT CONTROL PLAN STANDARD DRAWINGS</b>			
PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
15000367	P04	ESCP03	01



## Appendix F Arncliffe Acid Sulfate Soils Management Flowchart

# Arncliffe Acid Sulfate Soils Management Flowchart





## Appendix D: Ancillary Facility Application

Step 1 – Ancillary facilities information			
Site location (attach map for reference):			
Date works to commence:		Date works to finish:	
Proposed activities (select all that apply):			
Office and amenities		Construction compound	
Laydown area		Parking	
Batch Plant		Materials storage compound	
Maintenance workshop		Material stockpile area	
Other _____		Other _____	
Please provide details regarding the proposed ancillary facility.			
Is the proposed facility within the approved construction footprint?			
Distance to the nearest waterway?			
Proposed access route?			
Do heavy vehicles need to travel through residential areas?			
Is the proposed site on relatively level ground?			
Distance to nearest residential receiver?			
Is vegetation clearance or trimming required? If so, what is the area in hectares?			
Will the facility impact heritage?			
Will the facility affect the land use of adjacent properties?			
Is the facility above the 20 ARI flood level?			
Will out of hours works be required to establish facility? During operation of the facility?			
Potential noise and vibration impacts?			
Potential dust or odour impacts?			
Potential visual or light spill impacts?			
Potential waste management impacts?			
Potential soil and water impacts?			



## Step 2 – Environmental and Sustainability Manager Review

Is additional assessment required (e.g. noise, biodiversity, heritage)?	
Is the proposed facility compliant with CoA D62 criteria?	
Is the ancillary facility included in the EIS?	
Does the ancillary facility have minimal amenity impacts to surrounding residences?	
Does the ancillary facility have minimal environmental impact?	
Can potential impacts be managed through existing controls identified in the CEMP?	

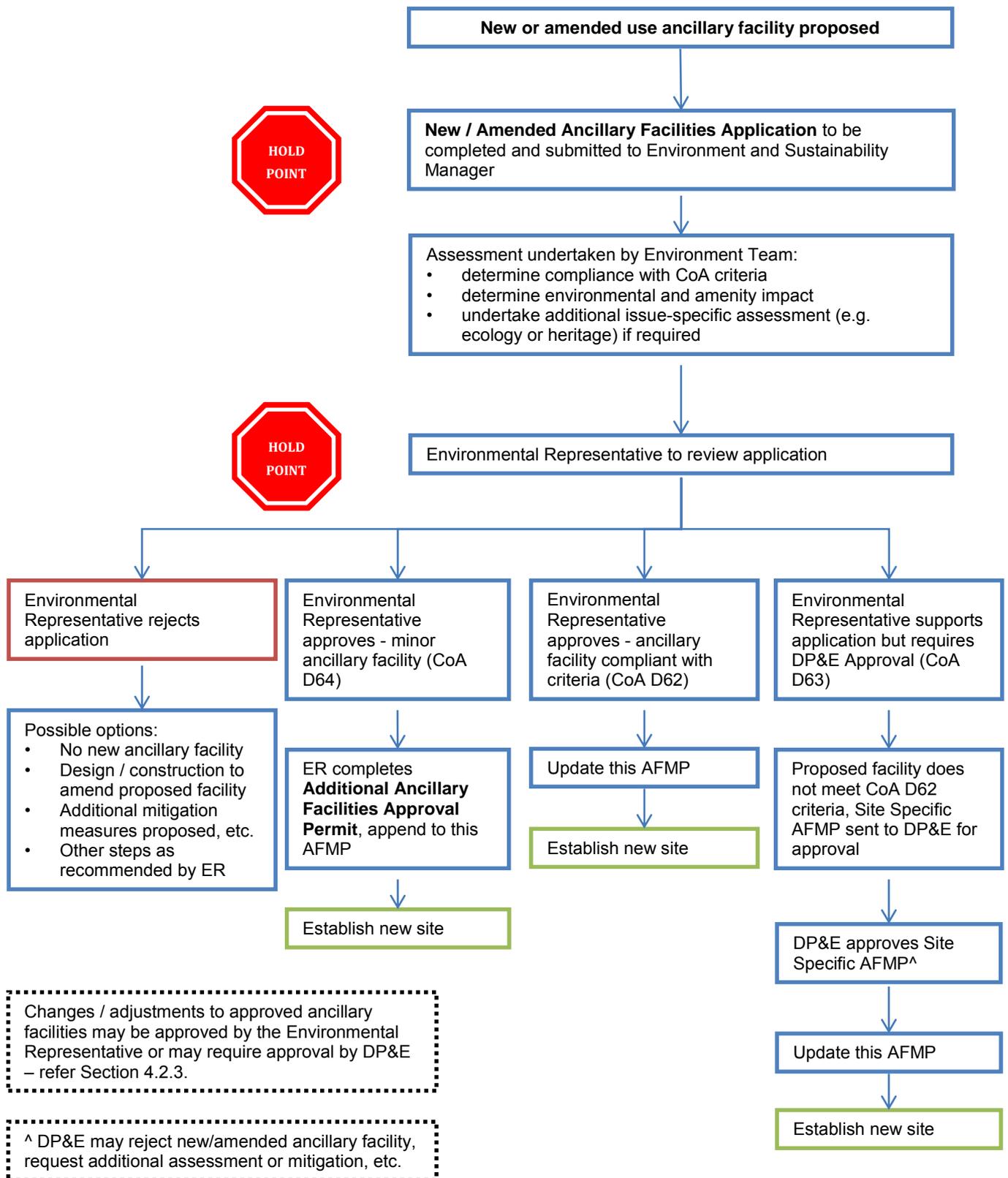
## Step 3 – Sign off

<b>Surface Works / Tunnel / M&amp;E D&amp;C Director</b>		
Name:	Signature:	Date:
<b>Community Relations Manager</b>		
Name:	Signature:	Date:
<b>Environmental and Sustainability Manager</b>		
Name:	Signature:	Date:

## Step 4 – Environmental Representative sign off

Is this a minor ancillary facility (CoA D64)?	
Does this ancillary facility require DP&E approval?	
Does the AFMP need to be updated?	
Name:	Signature: <span style="float: right;">Date:</span>

## Appendix E: Ancillary Facility Flow Chart



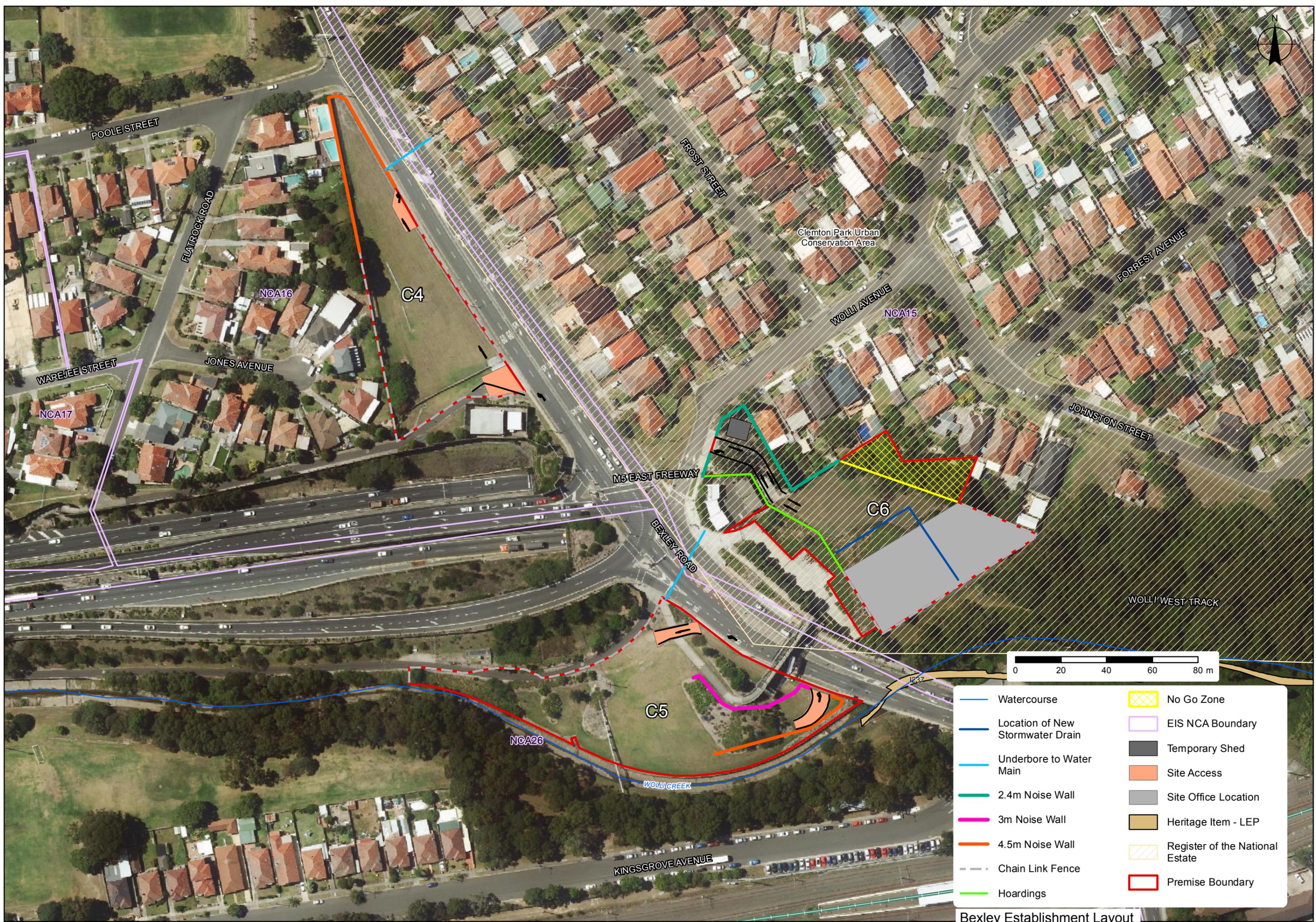


## Appendix F: Site Establishment Layouts



	Watercourse		Sediment Pond
	Heavy Vehicle Access		Stockpile Area
	Location of New Stormwater Drain		Noise Mound
	4.5m Noise Wall		Crib Huts
	Chain Link Fence		Site Office
	No Go Zone		Register of the National Estate
	EIS NCA Boundary		Castlereagh Ironbark Forest
	Premise Boundary		Premise Boundary

Kingsgrove Establishment Layout



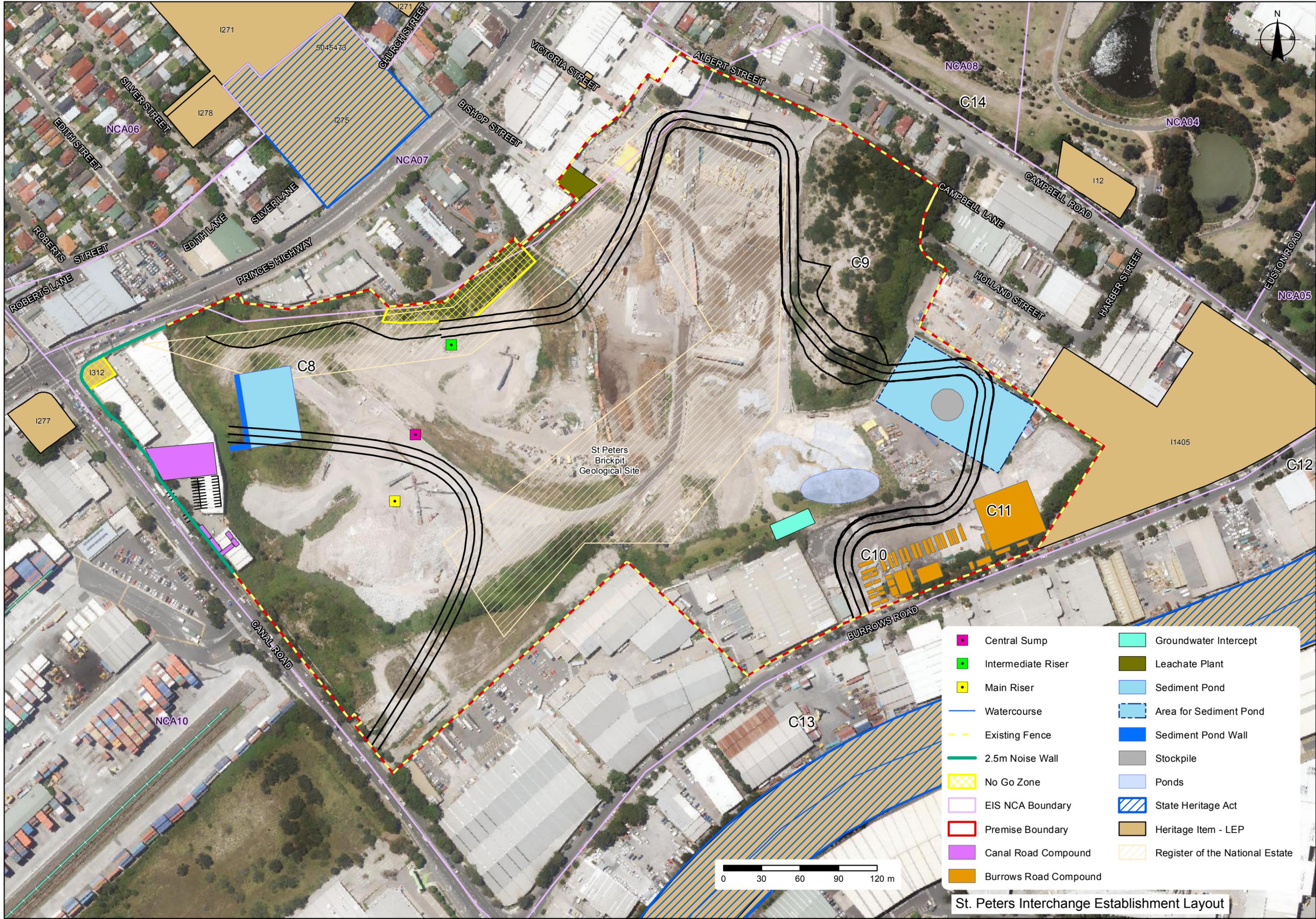
- |                                  |                                 |
|----------------------------------|---------------------------------|
| Watercourse                      | No Go Zone                      |
| Location of New Stormwater Drain | EIS NCA Boundary                |
| Underbore to Water Main          | Temporary Shed                  |
| 2.4m Noise Wall                  | Site Access                     |
| 3m Noise Wall                    | Site Office Location            |
| 4.5m Noise Wall                  | Heritage Item - LEP             |
| Chain Link Fence                 | Register of the National Estate |
| Hoardings                        | Premise Boundary                |

Bexley Establishment Layout



	Watercourse		Temporary Access
	3m Noise Wall		Stabilised Site Access
	5m Noise Barrier		Temp. Laydown & Stockpile
	Hoardings		Site Office
	Frog Fence		Ponds
	RTA Frog Habitat		Heritage Item - LEP
	No Go Zone		State Heritage Act
	EIS NCA Boundary		Premise Boundary

Arncliffe Establishment Layout



- |                       |                                 |
|-----------------------|---------------------------------|
| Central Sump          | Sediment Pond                   |
| Intermediate Riser    | Leachate Plant                  |
| Main Riser            | Area for Sediment Pond          |
| Watercourse           | Sediment Pond Wall              |
| Existing Fence        | Stockpile                       |
| 2.5m Noise Wall       | Ponds                           |
| No Go Zone            | State Heritage Act              |
| EIS NCA Boundary      | Heritage Item - LEP             |
| Premise Boundary      | Register of the National Estate |
| Canal Road Compound   |                                 |
| Burrows Road Compound |                                 |

St. Peters Interchange Establishment Layout

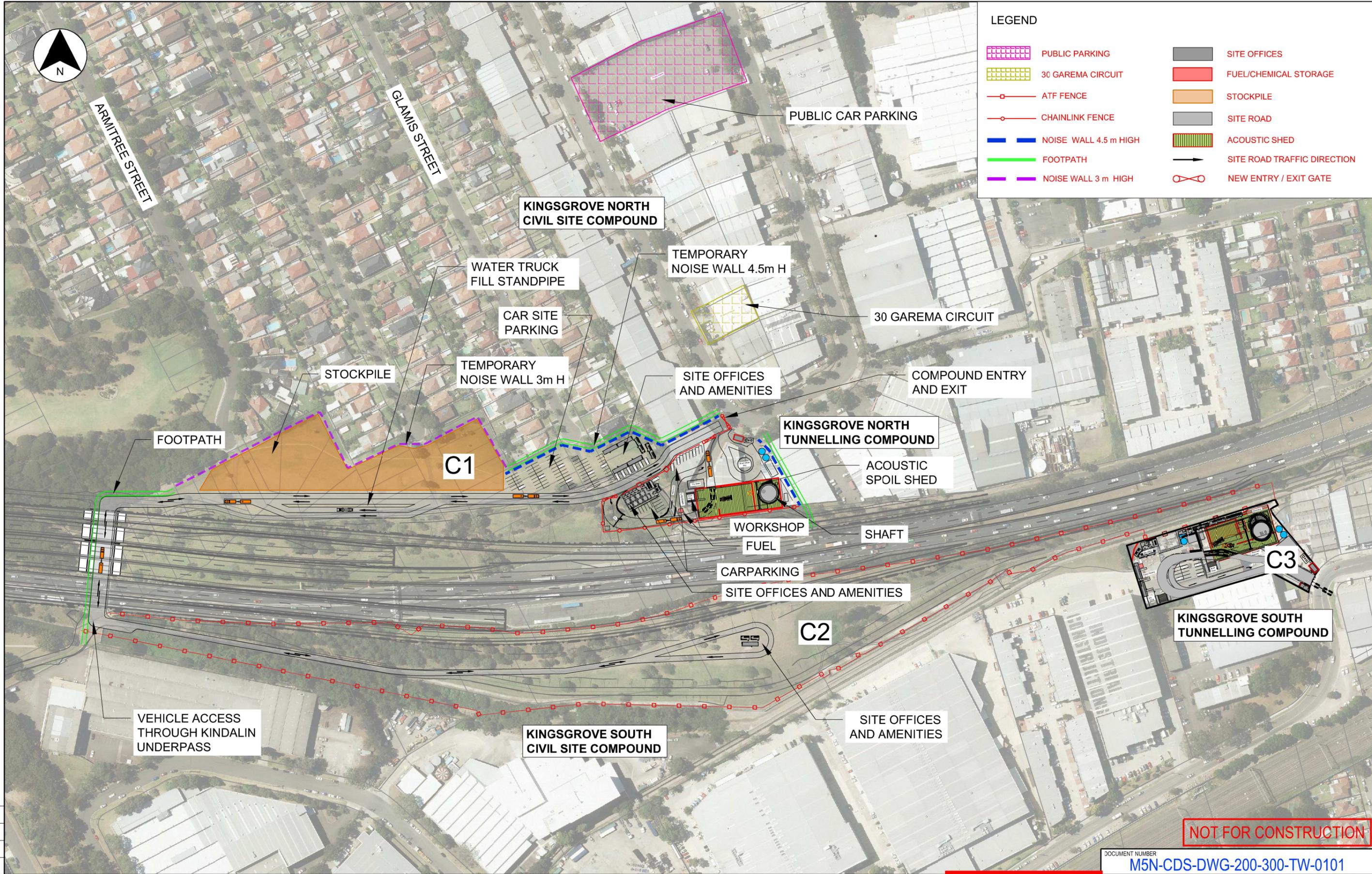


## Appendix G: Construction Compound Layouts



**LEGEND**

- PUBLIC PARKING
- 30 GAREMA CIRCUIT
- ATF FENCE
- CHAINLINK FENCE
- NOISE WALL 4.5 m HIGH
- FOOTPATH
- NOISE WALL 3 m HIGH
- SITE OFFICES
- FUEL/CHEMICAL STORAGE
- STOCKPILE
- SITE ROAD
- ACOUSTIC SHED
- SITE ROAD TRAFFIC DIRECTION
- NEW ENTRY / EXIT GATE



NOT FOR CONSTRUCTION

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED  
150mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION \ NAME L:\ED Engineering and Design\ED03 Design Management\CAD\02. CAD Project Deliverable s\01 Drawings\0300\0100\M5N-CDS-DWG-200-3-00-TW-0101.dwg			
DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	REV	DATE	AMENDMENT / REVISION DESCRIPTION
	REV IN PROGRESS		

PROJECT BREAKDOWN STRUCTURE	
SCALES ON A3 SIZE DRAWING	
CO-ORDINATE SYSTEM MGA ZONE 56	HEIGHT DATUM AHD

WestConnex New M5

AURECON JACOBS NEW M5 JOINT VENTURE      HASSELL

PLOT DATE / TIME 11/04/2016 10:06:52 AM		PLOT BY asilio	
TITLE	NAME	DATE	
DRAWN	A.SILIO	07.04.2016	
DRG CHECK			
DESIGN			
DESIGN CHECK			
DESIGN MNGR			
PROJECT MNGR			

CHECK PRINT			
Plot Date: 11 Apr 2016, - 10:06:52			
PRELIMINARY <input type="checkbox"/>	FINAL <input type="checkbox"/>	INITIAL	DATE
DISCIPLINE			
DISCIPLINE			
DISCIPLINE			
BACKDRAFTED/CORRECTED			
CONFIRMED			

DOCUMENT NUMBER  
**M5N-CDS-DWG-200-300-TW-0101**

WESTCONNEX NEW M5

WESTERN INTERCHANGE AND PORTALS  
KINGSGROVE NORTH AND SOUTH  
SITE COMPOUND

SHEET 1 OF 1

RMS REGISTRATION No.  
ISSUE STATUS  
FOR DETAIL DESIGN

EDMS No.  
SHEET No.  
TW-0101

REV  
A

REV IN PROGRESS

© Roads and Maritime Services



THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED  
150mm ON A3 SIZE ORIGINAL

NOT FOR CONSTRUCTION

DRAWING FILE LOCATION \ NAME L:\ED Engineering and Design\ED03 Design Management\CAD\02_CAD Project Deliverables\02 Sketches\900\M5N-CDS-SKT-300-900-TW-9900-9906.dwg			
DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	REV	DATE	AMENDMENT / REVISION DESCRIPTION
			REV IN PROGRESS

PROJECT BREAKDOWN STRUCTURE
SCALES ON A3 SIZE DRAWING
SCALE 1:1500 15m 0 15m 30m AT A3
CO-ORDINATE SYSTEM MGA ZONE 56
HEIGHT DATUM AHD

**WestConnex New M5**

**CPB**  
CONTRACTORS

**DRAGADOS**

**SAMSUNG**  
SAMSUNG C&T

**AJJV**  
AURECON JACOBS NEW M5 JOINT VENTURE

**Golder Associates**

**HASSELL**

PLOT DATE / TIME	21/03/2016 11:25:48 AM	
PLOT BY	tomarsha	
TITLE	NAME	DATE
DRAWN	T.MARSHALL	17-03-16
DRG CHECK		
DESIGN		
DESIGN CHECK		
DESIGN MNGR		
PROJECT MNGR		

CHECK PRINT			
Plot Date: 21 Mar 2016, - 11:25:49			
PRELIMINARY	<input type="checkbox"/>	FINAL	<input type="checkbox"/>
DISCIPLINE	<input type="checkbox"/>	INITIAL	<input type="checkbox"/>
DISCIPLINE	<input type="checkbox"/>	DATE	<input type="checkbox"/>
DISCIPLINE	<input type="checkbox"/>	DATE	<input type="checkbox"/>
BACKDRAFTED/CORRECTED	<input type="checkbox"/>	DATE	<input type="checkbox"/>
CONFIRMED	<input type="checkbox"/>	DATE	<input type="checkbox"/>

DOCUMENT NUMBER  
**M5N-CDS-SKT-300-900-TW-9900**

WESTCONNEX NEW M5

BEXLEY ROAD TUNNELLING SITES  
TEMPORARY WORKS  
TUNNELLING SITE COMPOUND  
BEXLEY ROAD - OVERALL SITES ARRANGEMENT

SHEET 1 OF 7

RMS REGISTRATION No.

ISSUE STATUS  
PRELIMINARY ISSUE

EDMS No. SHEET No. REV

REV IN PROGRESS

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED  
150mm ON A3 SIZE ORIGINAL



NOT FOR CONSTRUCTION

DRAWING FILE LOCATION \ NAME L:\ED Engineering and Design\ED03 Design Management\CAD\02. CAD Project Deliverables\02 Sketches\900\M5N-CDS-SKT-300-900-TW-9800-9805.dwg			
DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	REV	DATE	AMENDMENT / REVISION DESCRIPTION
			REV IN PROGRESS

PROJECT BREAKDOWN STRUCTURE
SCALES ON A3 SIZE DRAWING
SCALE 1:1500 15m 0 15m 30m AT A3
CO-ORDINATE SYSTEM MGA ZONE 56
HEIGHT DATUM AHD

**WestConnex New M5**

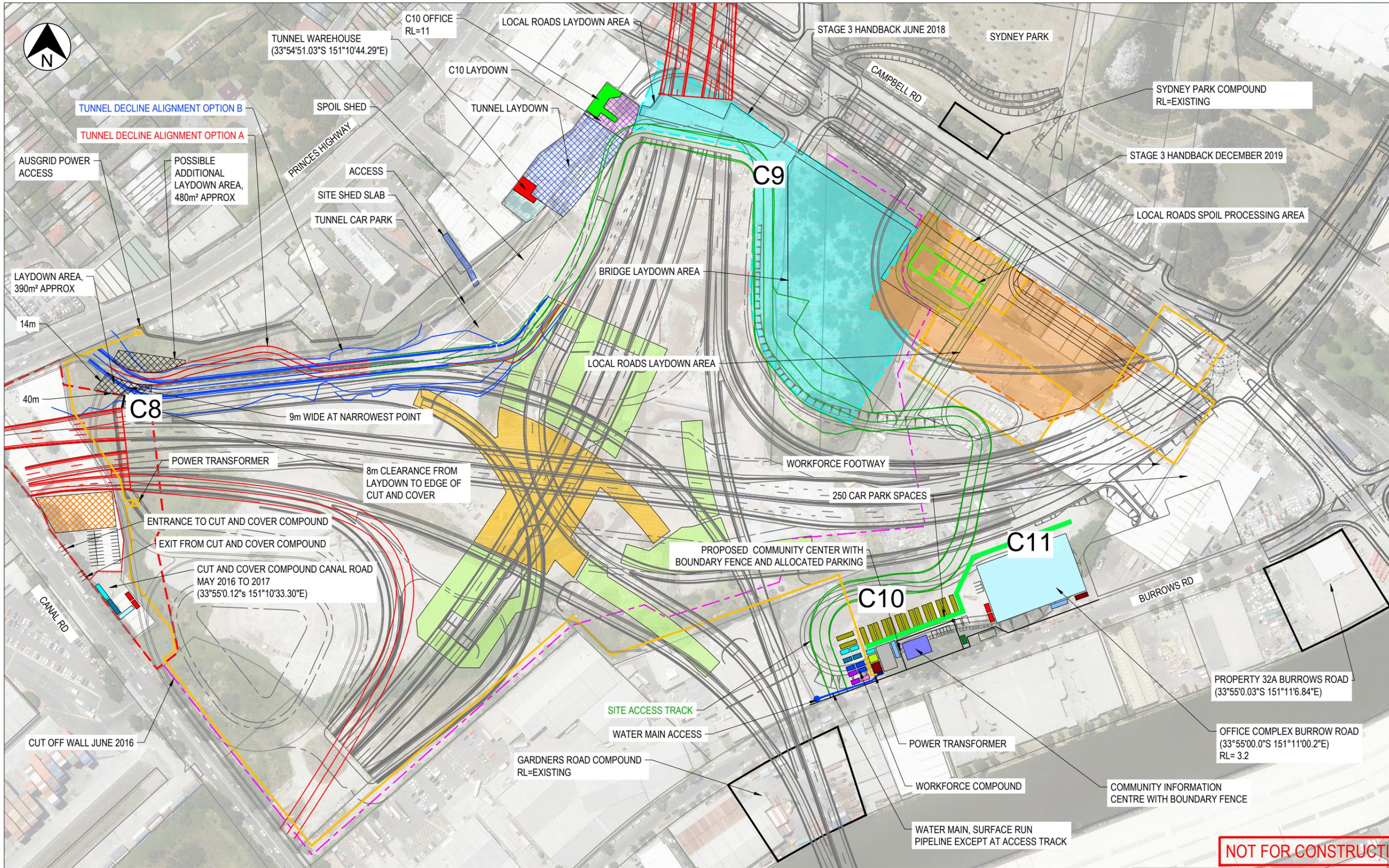
AURECON JACOBS NEW M5 JOINT VENTURE		HASSELL

PLOT DATE / TIME	22/04/2016 11:32:58 AM	
PLOT BY	tomarsha	
TITLE	NAME	DATE
DRAWN	T.MARSHALL	17-03-16
DRG CHECK		
DESIGN		
DESIGN CHECK		
DESIGN MNGR		
PROJECT MNGR		

CHECK PRINT			
Plot Date: 22 Apr 2016, - 11:32:58			
PRELIMINARY	FINAL	INITIAL	DATE
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DISCIPLINE			
DISCIPLINE			
DISCIPLINE			
BACKDRAFTED/CORRECTED			
CONFIRMED			

DOCUMENT NUMBER	M5N-CDS-SKT-300-900-TW-9800		
	A3		
WESTCONNEX NEW M5			
ARNCLIFFE TUNNELLING SITE			
TEMPORARY WORKS			
TUNNELLING SITE COMPOUND			
OVERALL SITE ARRANGEMENT			
RMS REGISTRATION No.			
ISSUE STATUS	EDMS No.	SHEET No.	REV
PRELIMINARY ISSUE			REV IN PROGRESS

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED



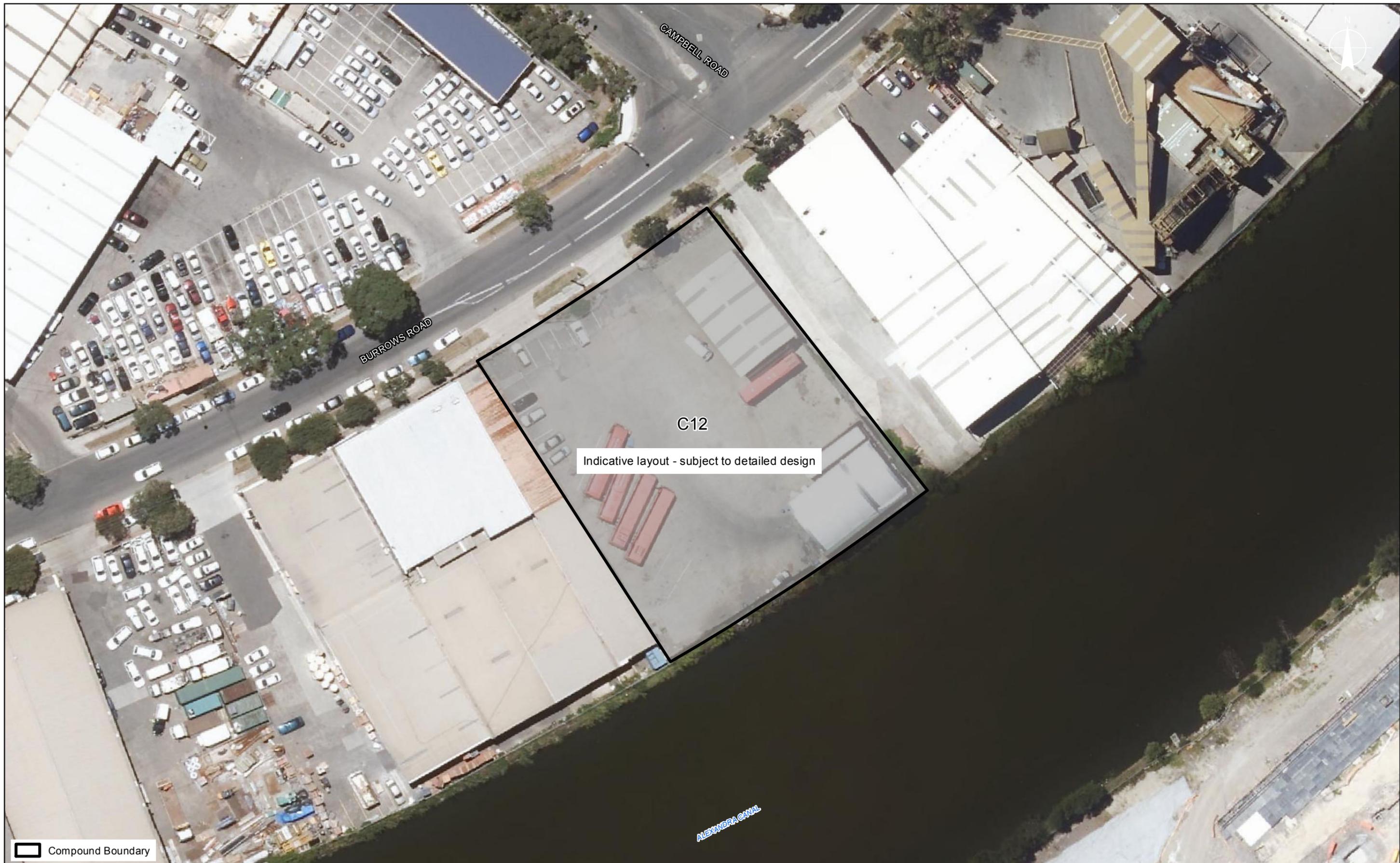
NOT FOR CONSTRUCTION

150mm ON A3 SIZE ORIGINAL

DRAWING FILE LOCATION \ NAME L:\ED Engineering and Design\ED03 Design Management\CAD\02_CAD Project Deliverables\02 Sketches\300\M5N-LDS-SKT-700-300-TW-0025.dwg		PROJECT BREAKDOWN STRUCTURE M5-LDS-SKT-700-300-TW-0013				PLOT DATE / TIME 8/04/2016 2:16:35 PM		PLOT BY npianu		<div style="border: 2px solid red; padding: 2px; font-weight: bold; color: red;">CHECK PRINT</div> <small>Plot Date: 08 Apr 2016, - 14:16:35</small>		DOCUMENT NUMBER <b>M5N-CDS-SKT-700-300-TW-0025</b>	
DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING		SCALES ON A3 SIZE DRAWING				TITLE DRAWN		NAME N. L. PIANU		DATE		WESTCONNEX NEW M5	
REV		DATE		APPROVAL		DRG CHECK		DISCIPLINE		INITIAL		DATE	
AMENDMENT / REVISION DESCRIPTION		SCALE 1:2500		CO-ORDINATE SYSTEM MGA ZONE 56		HEIGHT DATUM AHD		DESIGN		CONFIRMED		SHEET 1 OF 1	
RMS REGISTRATION No.		EDMS No.		SHEET No.		REV		FOR INFORMATION		A		© Roads and Maritime Services	

REV IN PROGRESS

REV IN PROGRESS



 Compound Boundary

Rev	Description	Date	Approved
A	Preliminary Issue	03/05/2016	

Scales



0 20 m  
1:600

Client

**WestConnex**

Imagery © Land and Property Information 2015

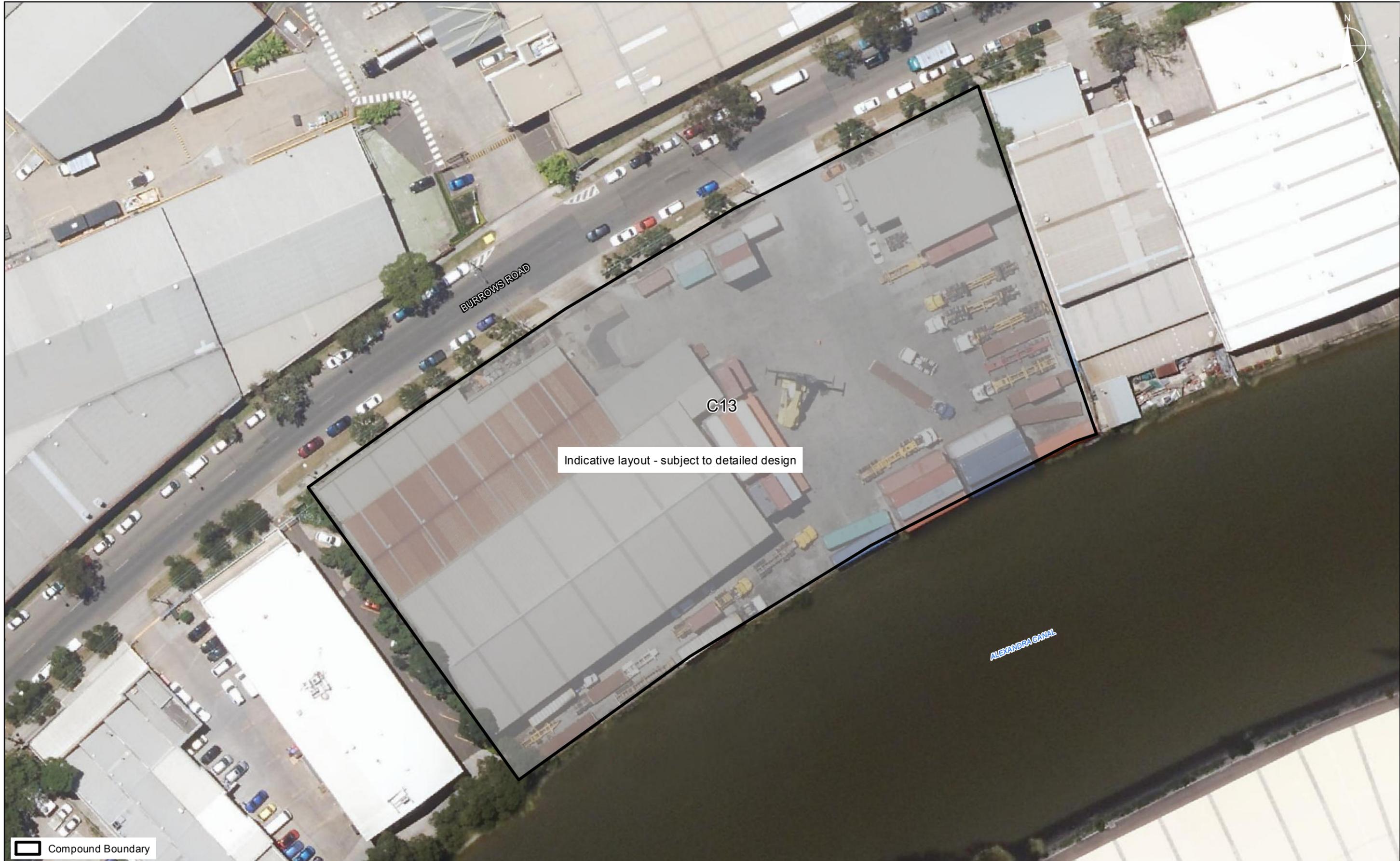
Status For Information Only - NOT FOR CONSTRUCTION			
Original Size	A3	Drawn	DC
Coordinate System	MGA ZONE 56	Requested by	CG
Height Datum	AHD	Date Printed	3/05/2016
Filename:	SPL_Compound_12.mxd		

WestConnex New M5



**WESTCONNEX New M5**

St Peters Interchange  
Compound 12  
Indicative layout - subject to detailed design



 Compound Boundary

A	Preliminary Issue	03/05/2016	
Rev	Description	Date	Approved

Scales



0 20 m  
1:600

Imagery © Land and Property Information 2015

Client



Status  
For Information Only - NOT FOR CONSTRUCTION

Original Size	A3	Drawn	DC
Coordinate System	MGA ZONE 56	Requested by	CG
Height Datum	AHD	Date Printed	3/05/2016
Filename:	SPI_Compound_13.mxd		

WestConnex New M5



**WESTCONNEX New M5**

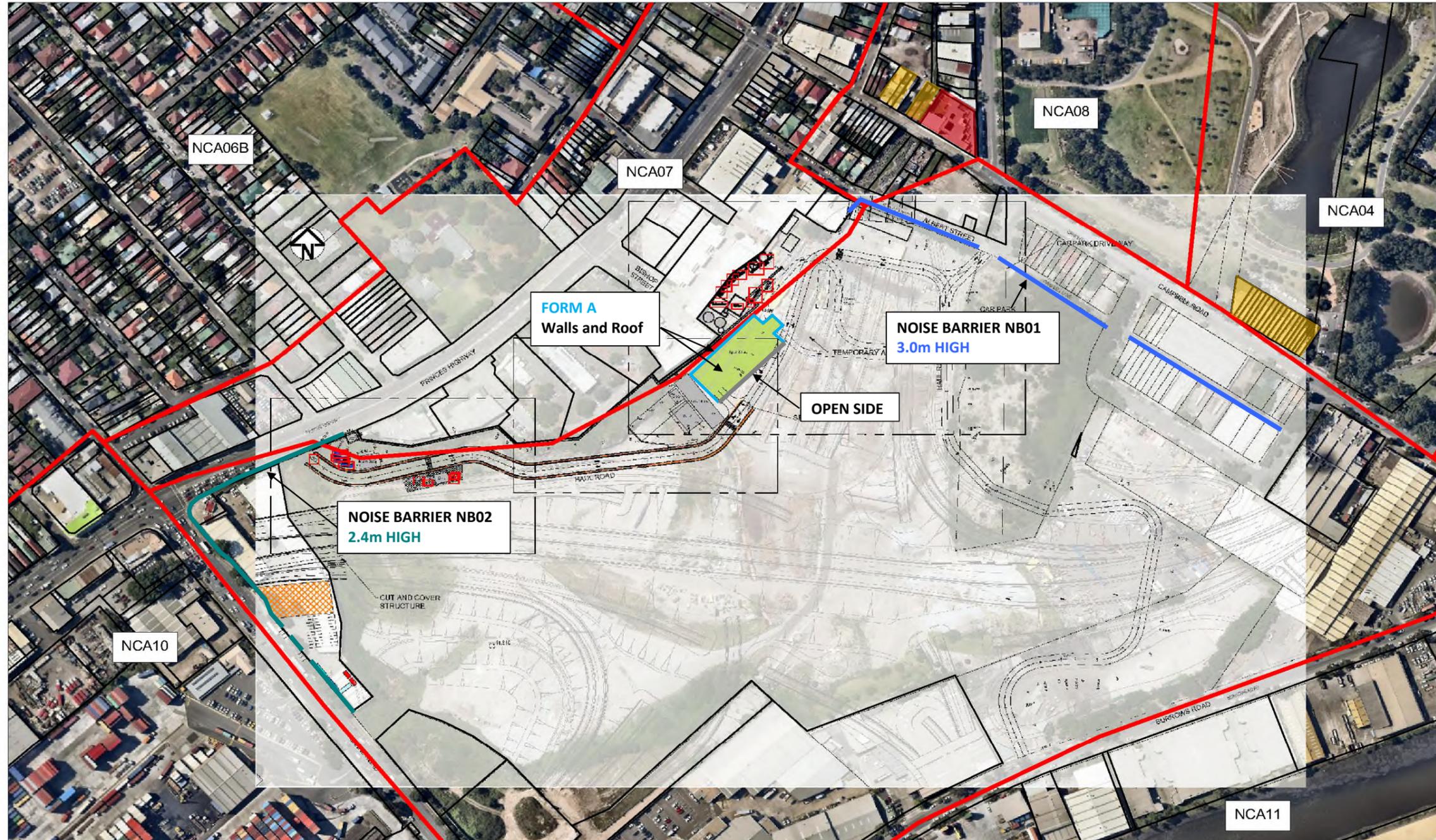
St Peters Interchange  
Compound 13  
Indicative layout - subject to detailed design



## Appendix H: Construction Noise Barrier Specifications for Ancillary Facilities

Figure B1: Site general arrangement showing noise mitigation

St Peters Interchange Tunnel Support Works



<p>At-Property Treatment</p> <p><b>TYPE 1 TREATMENT</b></p> <p><b>TYPE 2 TREATMENT</b></p>	<p>Barrier Height (m)</p> <ul style="list-style-type: none"> <li>&gt;= 0.0</li> <li>&gt;= 1.2</li> <li>&gt;= 1.8</li> <li>&gt;= 2.4</li> <li>&gt;= 3.0</li> <li>&gt;= 3.6</li> <li>&gt;= 4.2</li> <li>&gt;= 4.8</li> <li>&gt;= 5.4</li> </ul>	<p>Consultant:</p> <p><b>RENZO TONIN &amp; ASSOCIATES</b> <i>inspired to achieve</i></p> <p>Acoustics, Vibration &amp; Structural Dynamics Sydney Melbourne Brisbane Gold Coast Kuwait 1/418A Elizabeth Street, SURRY HILLS NSW 2010 P: 02 8218 0500 F: 02 8218 0501</p>	<p>Client:</p> <p><b>WestConnex New M5</b></p> <p><b>CPB CONTRACTORS</b>   <b>DRAGADOS</b>   <b>SAMSUNG SAMSUNG C&amp;T</b></p>	<p>Project:</p> <p><b>WESTCONNEX STAGE 2 NEW M5</b></p> <p>Noise levels are approximate due to interpolation of contours and should be used for reference only. For information only and not for construction. This information is protected by copyright.</p>	<p>Description:</p> <p><b>ST PETERS INTERCHANGE SITE ACOUSTIC SHED AND BARRIER DESIGN</b></p> <p>Project No.: TH014-06 Created by: jg Fig Ref: TH014-01 5 5 3 1 (r13) WXC2 M5 Tunnel Support &amp; Civil Works SPI Date: 2016.08.10 Scale: 1: 2695 A3</p>
--	---	--	---	--	---

**Table C3: Noise Barrier Design Specifications****St Peters Interchange Tunnel Support Works**

Noise barrier reference	Location	Noise barrier height	Required Rw	Proposed Construction	Acoustic Rating of Construction*
NB01	Campbell Road Compound Northeast boundary between 36 Albert St and large earth mound	3m	Rw 15-20 Medium	17 mm plywood hoarding	Rw 24
NB02	Campbell Road Compound Northeast boundary from south of large earth mound to 47-49 Campbell Rd	3m	Rw 15-20 Medium	17 mm plywood hoarding	Rw 24
NB03	Canal Road Compound From west of 310 Princes Highway, to south of 1 Canal Rd, with openings for vehicle access	2.4m	Rw 15-20 Medium	17 mm plywood hoarding	Rw 24

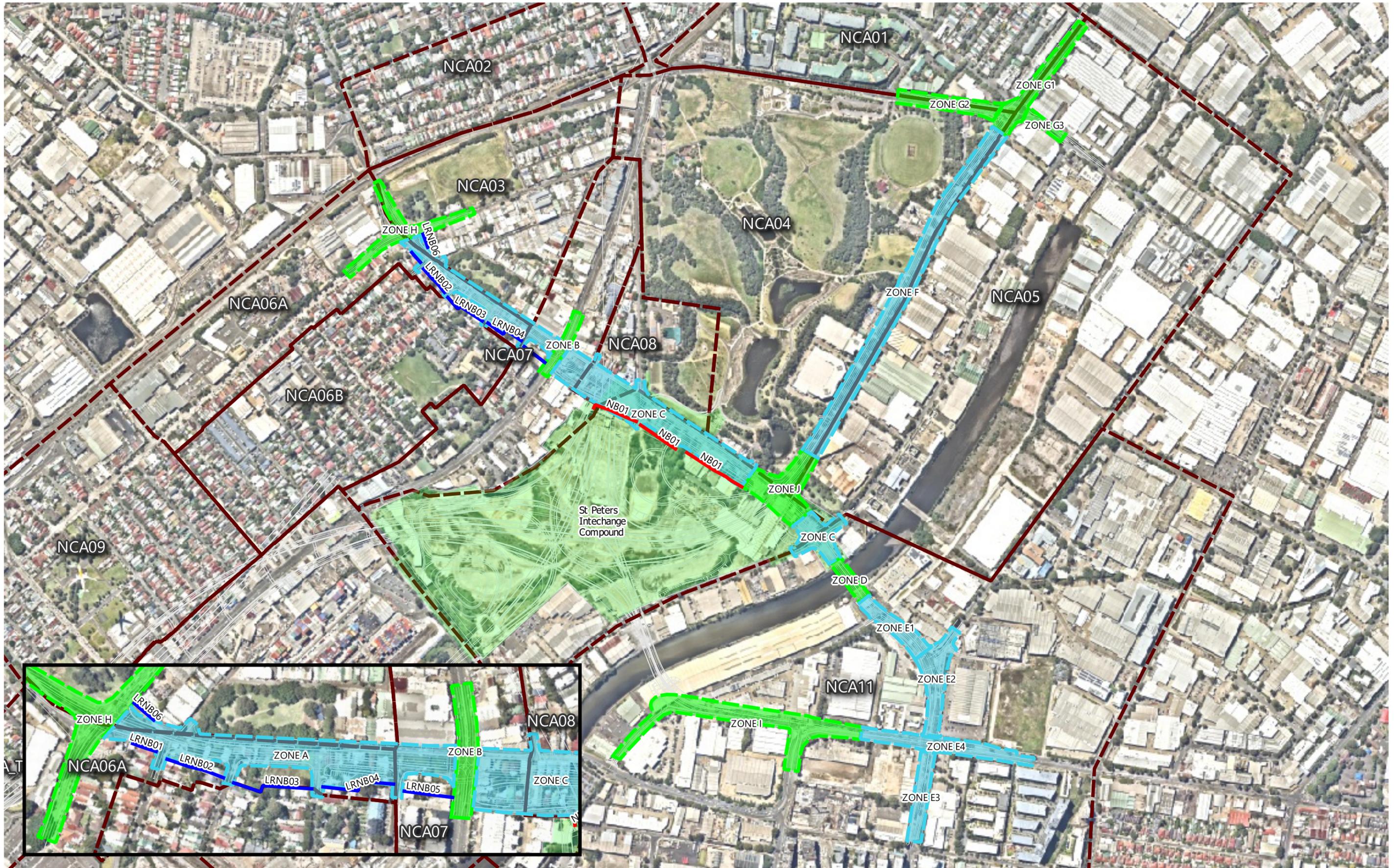
## Notes:

Noise barrier performance: Low - Rw 10-15; Medium - Rw 15-220; Medium-High - Rw 20-25; High - Rw 25; Very High - Rw 30

\* estimated by calculations and/or reference to other similar barrier type data

## GENERAL

- The specified 'required rating' must be achieved by the product selected.
- By way of explanation, the Sound Insulation Rating Rw is a measure of the noise reduction property of the assembly, a higher rating implying a higher sound reduction performance.
- Note that the Rw rating of systems measured as built on site (R'w Field Test) may be up to 5 points lower than the laboratory result.
- The sealing of all gaps is critical in a sound rated construction. Use only sealer approved by the acoustic consultant.
- Check design of all junction details with acoustic consultant prior to construction.
- Check the necessity for HOLD POINTS with the acoustic consultant to ensure that all building details have been correctly interpreted and constructed.
- The information provided in this table is subject to modification and review without notice.
- The advice provided here is in respect of acoustics only. Supplementary professional advice may need to be sought in respect of fire ratings, structural design, buildability, fitness for purpose and the like.



- Building Type**
- Compound site
  - NCAs
  - Road works
  - Road tie-in works
  - St Peter's Local Road Works - Temporary 3m Noise Barriers
  - St Peter's Civil Works - Temporary 3m Noise Barrier

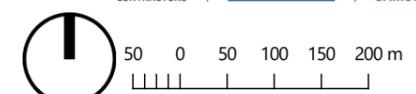
Client: **WestConnex** New M5

Project: **WestConnex Stage 2 M5**

Description: **St Peter Intersection Local road works**



Noise Levels are approximate due to interpolation of contours and should be used for reference only. For information only and not for construction. This information is protected by copyright.



**RENZO TONIN & ASSOCIATES**  
inspired to achieve

Created by: THW  
Figure No: TH014-05 6 0 1 025 (r2)  
Date: 10.11.2016  
Scale: 1:7,500 @ A3

1/418A Elizabeth Street, SURRY HILLS NSW 2010  
P: 02 8218 0500 F: 02 8218 0501

**Table C4: Noise Barrier Design Specifications**

**SPI - Local Road Upgrades**

Noise barrier reference	Location	Noise barrier height	Required Rw	Proposed Construction	Acoustic Rating of Construction*
LRNB01	Campbell Road - southern side of road Between Southern Cross Hotel and Brown Street	3.0m	Rw 15-20	17 mm plywood hoarding; OR	Rw 24
			Medium	Perspex 8mm; OR	Rw 29
				LEXAN MARGARD® Soundglaze SC Sheet 8mm; OR	Rw 31
				PALGLAS 15mm	Rw 32
LRNB02	Campbell Road - southern side of road Between Brown Street and Florence Street	3.0m	Rw 15-20	17 mm plywood hoarding; OR	Rw 24
			Medium	Perspex 8mm; OR	Rw 29
				LEXAN MARGARD® Soundglaze SC Sheet 8mm; OR	Rw 31
				PALGLAS 15mm	Rw 32
LRNB03	Campbell Road - southern side of road Between Florence Street and St Peters Street	3.0m	Rw 15-20	17 mm plywood hoarding; OR	Rw 24
			Medium	Perspex 8mm; OR	Rw 29
				LEXAN MARGARD® Soundglaze SC Sheet 8mm; OR	Rw 31
				PALGLAS 15mm	Rw 32
LRNB04	Campbell Road - southern side of road Between St Peters Street and Church Street	3.0m	Rw 15-20	17 mm plywood hoarding; OR	Rw 24
			Medium	Perspex 8mm; OR	Rw 29
				LEXAN MARGARD® Soundglaze SC Sheet 8mm; OR	Rw 31
				PALGLAS 15mm	Rw 32
LRNB05	Campbell Road - southern side of road Between Church Street and Princes Highway	3.0m	Rw 15-20	17 mm plywood hoarding; OR	Rw 24
			Medium	Perspex 8mm; OR	Rw 29
				LEXAN MARGARD® Soundglaze SC Sheet 8mm; OR	Rw 31
				PALGLAS 15mm	Rw 32
LRNB06	Campbell Road - northern side of road Between May Street and Hutchison Street	3.0m	Rw 15-20	17 mm plywood hoarding; OR	Rw 24
			Medium	Perspex 8mm; OR	Rw 29
				LEXAN MARGARD® Soundglaze SC Sheet 8mm; OR	Rw 31
				PALGLAS 15mm	Rw 32

Notes:

Noise barrier performance: Low - Rw 10-15; Medium - Rw 15-220; Medium-High - Rw 20-25; High - Rw 25; Very High - Rw 30

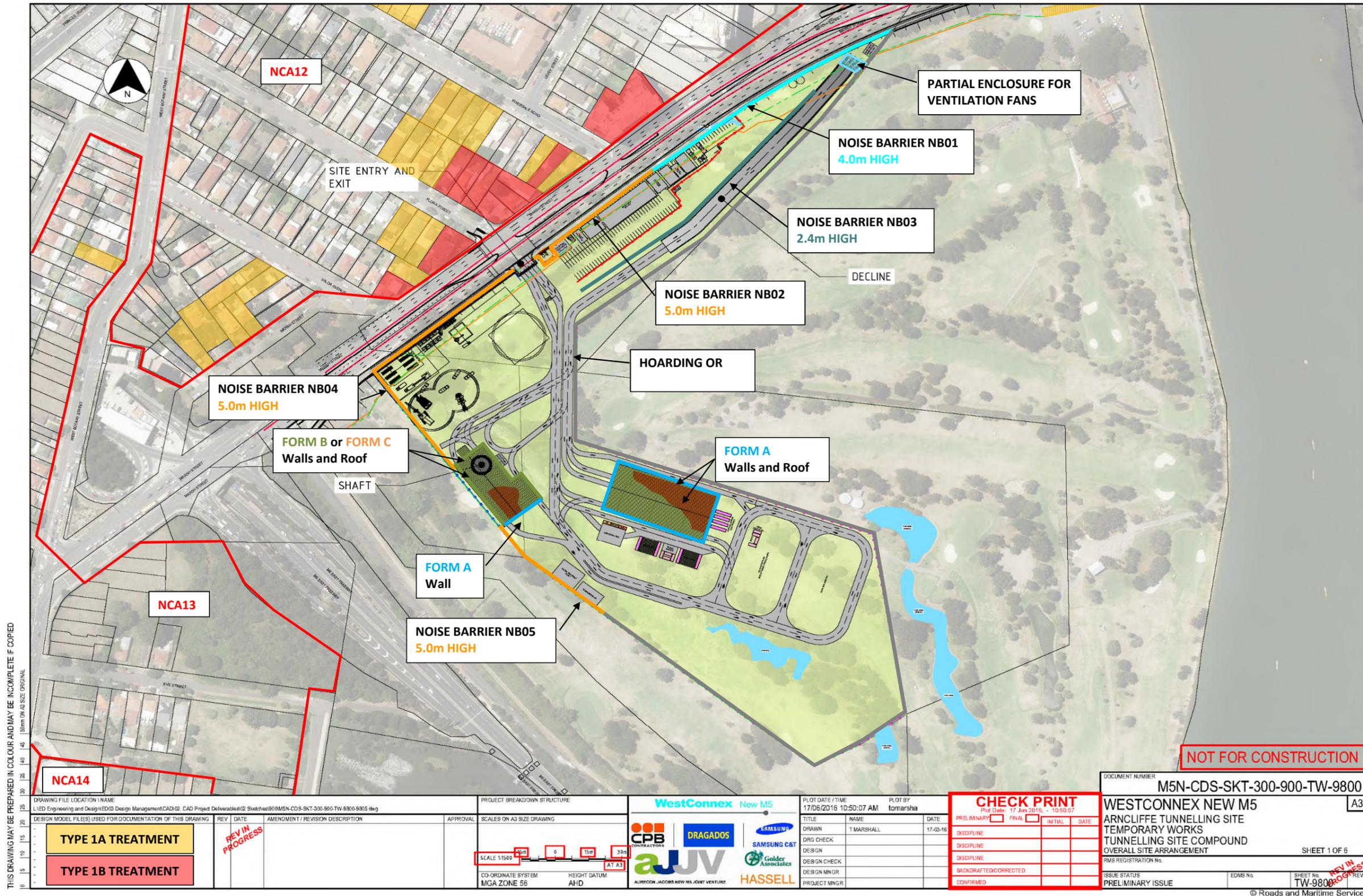
\* estimated by calculations and/or reference to other similar barrier type data

GENERAL

- The specified 'required rating' must be achieved by the product selected.
- By way of explanation, the Sound Insulation Rating Rw is a measure of the noise reduction property of the assembly, a higher rating implying a higher sound reduction performance.
- Note that the Rw rating of systems measured as built on site (R'w Field Test) may be up to 5 points lower than the laboratory result.
- The sealing of all gaps is critical in a sound rated construction. Use only sealer approved by the acoustic consultant.
- Check design of all junction details with acoustic consultant prior to construction.
- Check the necessity for HOLD POINTS with the acoustic consultant to ensure that all building details have been correctly interpreted and constructed.
- The information provided in this table is subject to modification and review without notice.
- The advice provided here is in respect of acoustics only. Supplementary professional advice may need to be sought in respect of fire ratings, structural design, buildability, fitness for purpose and the like.

Figure C1: Site layout showing mitigation

Arncliffe Tunnel Support



**Table C3: Noise barrier design specifications**

					<b>Arncliffe Tunnel Support</b>
<b>Noise barrier reference</b>	<b>Location</b>	<b>Noise barrier height</b>	<b>Required Rw</b>	<b>Proposed Construction</b>	<b>Acoustic Rating of Construction*</b>
NB01	Northern perimeter Marsh St from Innesdale Rd to northern boundary	4m	<b>Rw 15-20 Medium</b>	17 mm plywood hoarding	Rw 24
NB02	Northern perimeter Marsh St from entry gate to Innesdale Rd	5m	<b>Rw 25 High</b>	Sandwich construction of 17mm plywood on either side of 45mm frame (45mm air gap between plywood sheets); <u>QR</u>	Rw 28
				Speedwall panel; <u>QR</u>	Rw 41
				150mm Hebel	Rw 40
NB03	Adjacent to decline and truck route	2.4m	<b>Rw 15-20 Medium</b>	17 mm plywood hoarding	Rw 24
NB04	Southern & western perimeter From Marsh St boundary western corner of the shaft spoil shed	5m	<b>Rw 25 High</b>	Sandwich construction of 17mm plywood on either side of 45mm frame (45mm air gap between plywood sheets); <u>QR</u>	Rw 28
				Speedwall panel; <u>QR</u>	Rw 41
				150mm Hebel; <u>QR</u>	Rw 40
				'Frog' noise wall - requirement for top 3m of NB03 to be transparent plastic extends 28 m south east from Marsh St boundary	Rw 29
				Perspex 8mm; <u>QR</u>	Rw 31
LEXAN MARGARD® Soundglaze SC Sheet 8mm; <u>QR</u>	Rw 32				
NB05	Southern perimeter From southern corner of the shaft spoil shed to the past the air compressors	5m	<b>Rw 25 High</b>	Sandwich construction of 17mm plywood on either side of 45mm frame (45mm air gap between plywood sheets); <u>QR</u>	Rw 28
				Speedwall panel; <u>QR</u>	Rw 41
				150mm Hebel; <u>QR</u>	Rw 40

Notes:

Noise barrier performance: Low - Rw 10-15; Medium - Rw 15-220; Medium-High - Rw 20-25; High - Rw 25; Very High - Rw 30

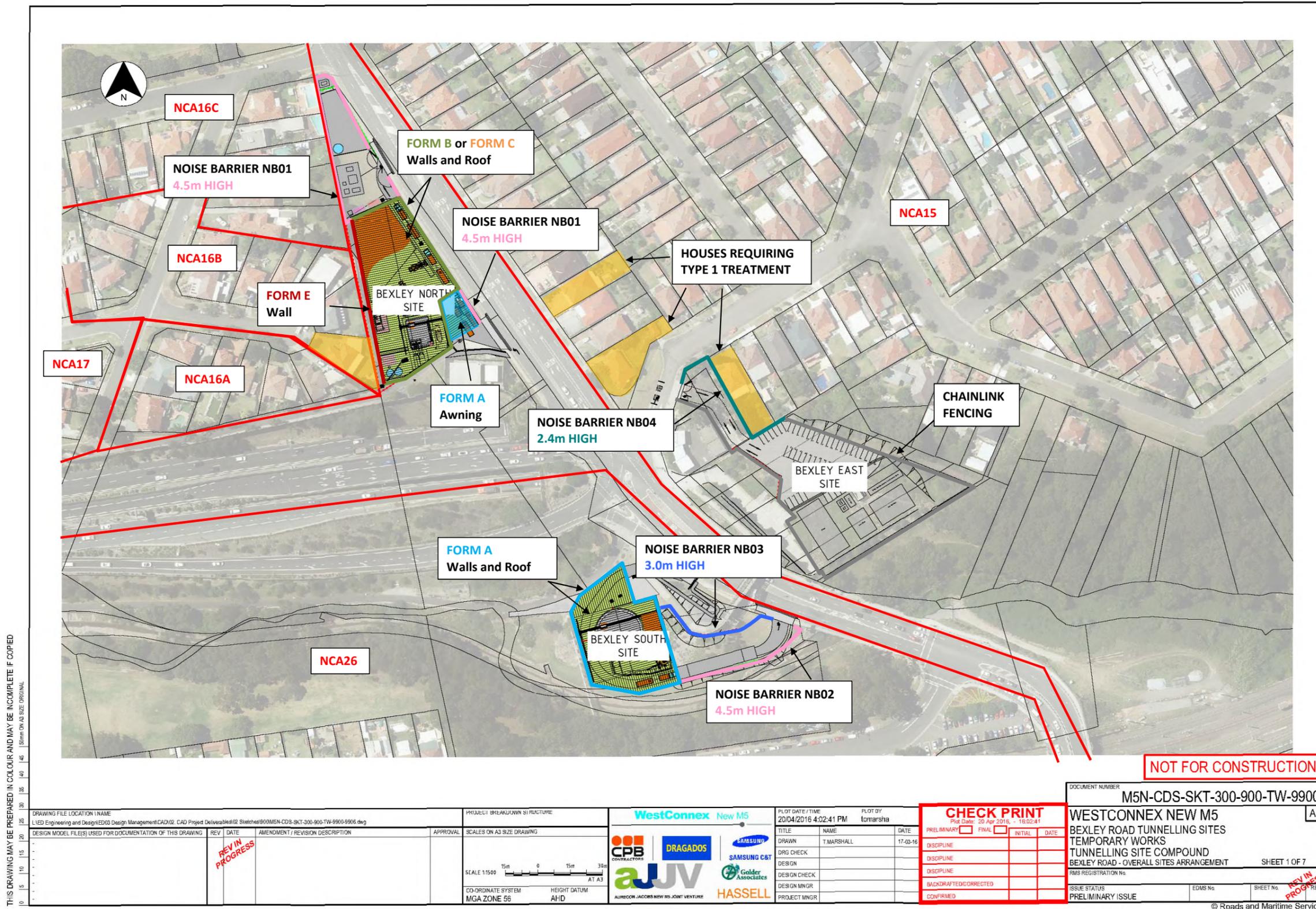
\* estimated by calculations and/or reference to other similar barrier type data

GENERAL

- The specified 'required rating' must be achieved by the product selected.
- By way of explanation, the Sound Insulation Rating Rw is a measure of the noise reduction property of the assembly, a higher rating implying a higher sound reduction performance.
- Note that the Rw rating of systems measured as built on site (R'w Field Test) may be up to 5 points lower than the laboratory result.
- The sealing of all gaps is critical in a sound rated construction. Use only sealer approved by the acoustic consultant.
- Check design of all junction details with acoustic consultant prior to construction.
- Check the necessity for HOLD POINTS with the acoustic consultant to ensure that all building details have been correctly interpreted and constructed.
- The information provided in this table is subject to modification and review without notice.
- The advice provided here is in respect of acoustics only. Supplementary professional advice may need to be sought in respect of fire ratings, structural design, buildability, fitness for purpose and the like.

Figure C1: Site layout showing mitigation

Bexley Road Tunnel Support



THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED FROM AN A3 SIZE ORIGINAL

DRAWING FILE LOCATION 1 NAME L:\ED Engineering and Design\ED03 Design Management\CAD\02 CAD Project Deliverables\02 Sketches\900M5N-CDS-SKT-300-900-TW-9900-9900.dwg		PROJECT: BEXLEY TUNNELLING SITES	
DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	REV	DATE	AMENDMENT / REVISION DESCRIPTION
			REV IN PROGRESS

APPROVAL	SCALES ON A3 SIZE DRAWING
	SCALE 1:1500 15m 0 15m 30m AT A3
COORDINATE SYSTEM MGA ZONE 56	HEIGHT DATUM AHD

**WestConnex New M5**

CPB DRAGADOS SAMSUNG  
CONTRACTORS

SAMSUNG C&T  
Golder Associates  
HASSALL

PLOT DATE / TIME 20/04/2016 4:02:41 PM		PLOT BY tomasha	
TITLE	NAME	DATE	
DRAWN	T.MARSHALL	17-03-16	
DRG CHECK			
DESIGN			
DESIGN CHECK			
DESIGN MNGR			
PROJECT MNGR			

<b>CHECK PRINT</b> Plot Date: 20 Apr 2016, 16:02:41			
PRELIMINARY	FINAL	INITIAL	DATE
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DISCIPLINE			
DISCIPLINE			
DISCIPLINE			
BACKDRAFTED/CORRECTED			
CONFIRMED			

DOCUMENT NUMBER M5N-CDS-SKT-300-900-TW-9900	A3
<b>WESTCONNEX NEW M5</b>	
BEXLEY ROAD TUNNELLING SITES	
TEMPORARY WORKS	
TUNNELLING SITE COMPOUND	
BEXLEY ROAD - OVERALL SITES ARRANGEMENT	
RMS REGISTRATION No.	SHEET 1 OF 7
ISSUE STATUS PRELIMINARY ISSUE	EDMS No. SHEET No. REV IN PROGRESS

© Roads and Maritime Services

**Table C3: Noise barrier design specifications****Bexley Road Tunnel Support**

Noise barrier reference	Location	Noise barrier height	Required Rw	Proposed Construction	Acoustic Rating of Construction*
NB01	Bexley North (C4)	4.5m	Rw 25	Sandwich construction of 17mm plywood on either side of 45mm frame (45mm air gap between plywood sheets); <u>OR</u> Speedwall panel; <u>OR</u> 150mm Hebel	Rw 28
	As shown on B1 Site Layout		High		Rw 41
					Rw 40
NB02	Bexley South (C5)	4.5m	Rw 25	Sandwich construction of 17mm plywood on either side of 45mm frame (45mm air gap between plywood sheets); <u>OR</u> Speedwall panel; <u>OR</u> 150mm Hebel	Rw 28
	South side of spoil shed exit ramp		High		Rw 41
					Rw 40
NB03	Bexley South (C5)	3m	Rw 15-20	17 mm plywood hoarding	Rw 24
	As shown on B1 Site Layout		Medium		
NB04	Bexley East (C6)	2.4m	Rw 15-20	17 mm plywood hoarding	Rw 24
	North and east boundaries		Medium		

## Notes:

Noise barrier performance: Low - Rw 10-15; Medium - Rw 15-220; Medium-High - Rw 20-25; High - Rw 25; Very High - Rw 30

\* estimated by calculations and/or reference to other similar barrier type data

## GENERAL

- The specified 'required rating' must be achieved by the product selected.
- By way of explanation, the Sound Insulation Rating Rw is a measure of the noise reduction property of the assembly, a higher rating implying a higher sound reduction performance.
- Note that the Rw rating of systems measured as built on site (R'w Field Test) may be up to 5 points lower than the laboratory result.
- The sealing of all gaps is critical in a sound rated construction. Use only sealer approved by the acoustic consultant.
- Check design of all junction details with acoustic consultant prior to construction.
- Check the necessity for HOLD POINTS with the acoustic consultant to ensure that all building details have been correctly interpreted and constructed.
- The information provided in this table is subject to modification and review without notice.
- The advice provided here is in respect of acoustics only. Supplementary professional advice may need to be sought in respect of fire ratings, structural design, buildability, fitness for purpose and the like.



Building Type		Legend	
Education	Hotel	Church	Compound Sites
Under construction	Fire Station	Aged care	Permanent Noise Barriers
Residential	Empty Lot	Heritage	Temporary Noise Barriers
Mixed Use	Community Centre	NCA	
Industrial	Commercial		

Client: **WestConnex New M5**

Project: **WestConnex Stage 2 M5**

CPB CONTRACTORS | DRAGADOS | SAMSUNG SAMSUNG C&T

Scale: 1:3,000 @ A3

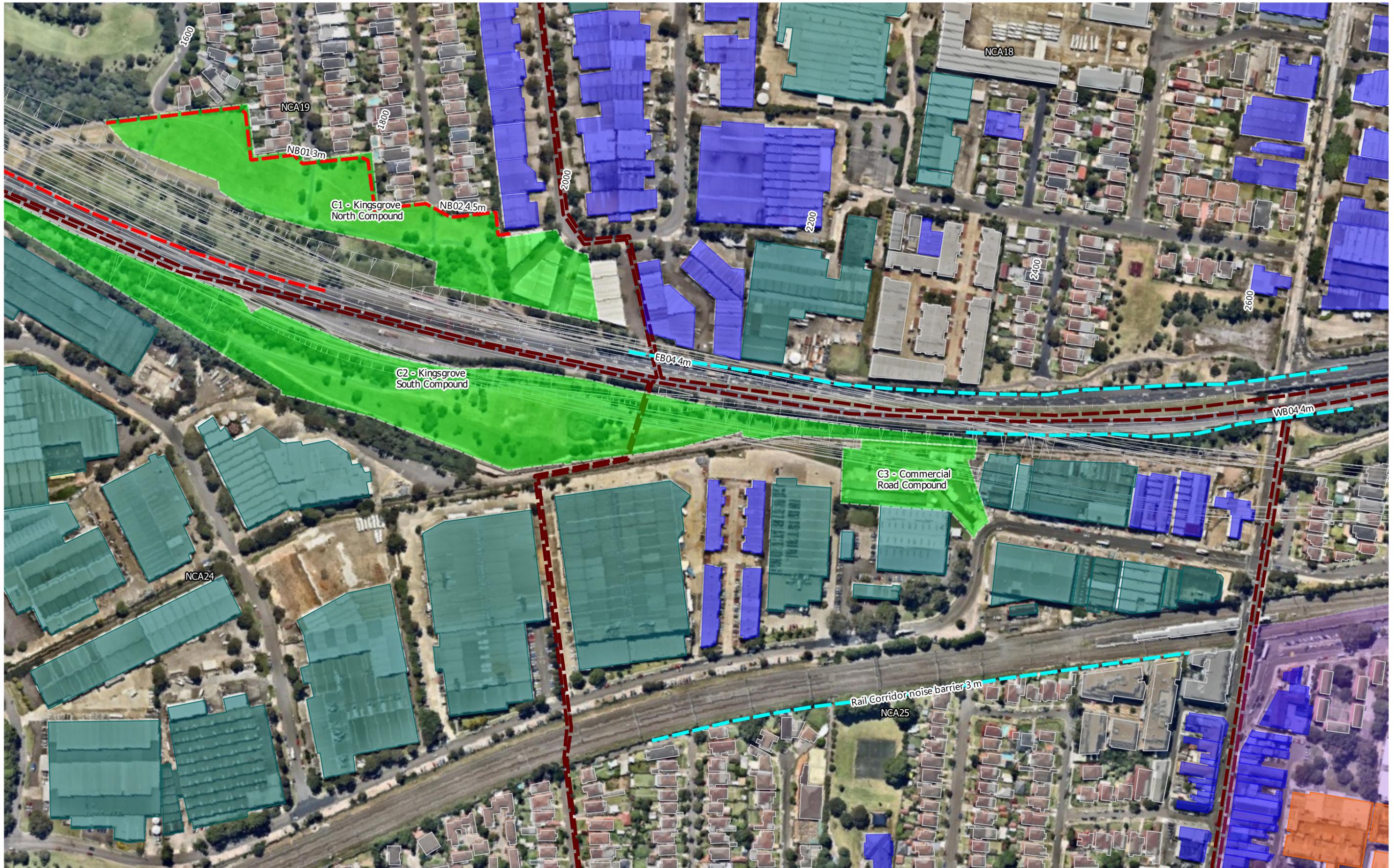
Description: Kingsgrove compound  
Noise catchment areas & Sensitive Receivers  
Temporary and permanent noise barrier locations

Created by: THW  
Figure No: TH014-05 6 0 1 006 (r0)  
Date: 31.05.2016  
Scale: 1:3,000 @ A3

**RENZO TONIN & ASSOCIATES**  
*inspired to achieve*

1/418A Elizabeth Street, SURRY HILLS NSW 2010  
P: 02 8218 0500 F: 02 8218 0501

Noise Levels are approximate due to interpolation of contours and should be used for reference only. For information only and not for construction. This information is protected by copyright.



Building Type		Legend	
Education	Hotel	Compound Sites	Permanent Noise Barriers
Under construction	Fire Station	Permanent Noise Barriers	Temporary Noise Barriers
Residential	Empty Lot	Church	NCA
Mixed Use	Community Centre	Aged care	
Industrial	Commercial	Heritage	

Client: **WestConnex New M5**

Project: **WestConnex Stage 2 M5**

25 0 25 50 75 100 m

Description: Kingsgrove compound  
Noise catchment areas & Sensitive Receivers  
Temporary and permanent noise barrier locations

Noise Levels are approximate due to interpolation of contours and should be used for reference only. For information only and not for construction. This information is protected by copyright.

**RENZO TONIN & ASSOCIATES**  
*inspired to achieve*

1/418A Elizabeth Street, SURRY HILLS NSW 2010  
P: 02 8218 0500 F: 02 8218 0501

Created by: THW  
Figure No: TH014-05 6 0 1 006 (r0)  
Date: 31.05.2016  
Scale: 1:3,000 @ A3

**Table C3: Noise Barrier Design Specifications****Kingsgrove Civil and Tunnel Support Works**

Noise barrier reference	Location	Noise barrier height	Required Rw	Proposed Construction	Acoustic Rating of Construction*
NB01	Kingsgrove North compound Northern boundary	3m	<b>Rw 15-20</b>	17 mm plywood hoarding	Rw 24
			<b>Medium</b>	Speedwall panel; OR	Rw 41
				150mm Hebel	Rw 40
NB02	Kingsgrove North compound Section of northern boundary adjacent to bottom of Glamis St (Ref Site Layout)	4.5m	<b>Rw 25</b>	Sandwich construction of 17mm plywood on either side of 45mm frame (45mm air gap between plywood sheets); <u>OR</u>	Rw 28
			<b>High</b>	Speedwall panel; <u>OR</u>	Rw 41
				150mm Hebel	Rw 40
NB03	Kingsgrove site - M5 Motorway along northern side of M5 eastbound carriageway (where feasible to do so)	4.5m	<b>Rw 15-20</b>	17 mm plywood hoarding; OR	Rw 24
			<b>Medium</b>	17 mm plywood hoarding on top of concrete barrier (Type F or Jersey Kerb); OR	Rw 22
				Single skin sheet steel (colorbond) 0.48 mm sheet steel (no gaps)	Rw 22
NB04	Kingsgrove site - M5 Motorway along southern side of M5 westbound carriageway work area	2-3m <sup>#</sup>	<b>Rw 15-20</b>	17 mm plywood hoarding; OR	Rw 24
			<b>Medium</b>	17 mm plywood hoarding on top of concrete barrier (Type F or Jersey Kerb); OR	Rw 22
				Single skin sheet steel (colorbond) 0.48 mm sheet steel (no gaps)	Rw 22
	Kingsgrove South compound Commercial Road compound	0m	-	Chain mesh or equivalent	-

## Notes:

Noise wall performance: Low - Rw 10-15; Medium - Rw 15-220; Medium-High - Rw 20-25; High - Rw 25; Very High - Rw 30

\* estimated by calculations and/or reference to other similar wall type data

# Subject to feasibility review. Barrier mounted hoarding does not comply with RMS Safety Barrier System Acceptance Conditions where there is insufficient clear zone / offset to the travel lane or where the hazard free deflection zone behind barrier does not provide space for a separate safety barrier and hoarding/ noise barrier. This is often the case for workzones where road widening is occurring, making barrier mounted hoard not feasible. This issue will require review by the construction design team for the relocatable roadside noise barrier on the northern side of the M5 East Motorway

## GENERAL

- The specified 'required rating' must be achieved by the product selected.
- By way of explanation, the Sound Insulation Rating Rw is a measure of the noise reduction property of the assembly, a higher rating implying a higher sound reduction performance.
- Note that the Rw rating of systems measured as built on site (R'w Field Test) may be up to 5 points lower than the laboratory result.
- The sealing of all gaps is critical in a sound rated construction. Use only sealer approved by the acoustic consultant.
- Check design of all junction details with acoustic consultant prior to construction.
- Check the necessity for HOLD POINTS with the acoustic consultant to ensure that all building details have been correctly interpreted and constructed.
- The information provided in this table is subject to modification and review without notice.
- The advice provided here is in respect of acoustics only. Supplementary professional advice may need to be sought in respect of fire ratings, structural design, buildability, fitness for purpose and the like.

## Appendix I: Environmental Obligations Register (extract)

Source	Ref no	Obligation	Document Reference
Environmental Planning and Assessment Act 1979	S115W	The Minister's approval is required for State Significant Infrastructure.	The SSI was approved, subject to conditions on the 20 <sup>th</sup> April 2016.
	S115ZI	Comply with the terms Minister for Planning's approval for the Project. Obtain the Minister's approval for any Project modifications that are not consistent with the planning approval.	Monitoring of compliance with approval conditions is managed through the Compliance Tracking Program A change management process to determine if modifications are consistent with the planning approval will be implemented.
Protection of the Environment Operations Act 1997	S47	Do not carry out or allow an activity listed in Schedule 1, or carry out work to enable such an activity, unless the premises are licensed by the EPA.	Environmental Protection Licence (EPL #20772) has been obtained for the Project
	S115	Do not risk harming the environment by willfully or negligently:	Appendices A & B
	S116	Disposing of waste unlawfully	Manage Soil and Water Procedure
	S117	Causing any substance to leak, spill or otherwise escape (whether or not from a container), or	Manage Waste Procedure
		Emitting an ozone depleting substance	Manage Hazardous Substances Procedure
	S120	Do not cause water pollution (other than to a sewer), except in accordance with the conditions of any EPA licence.	Environmental Protection Licence (EPL #20772) has been obtained for the Project
	S122		
	S124	Do not operate plant which emits air pollution caused by poor maintenance or operation.	Appendices A & B Manage Air Quality Procedure
	S139	Do not operate plant if it emits noise caused by poor maintenance or operation.	Appendices A & B
	S140	Do not cause noise by failing to properly and efficiently deal with materials.	Manage Environmental Noise Procedure
	S142A – S142E	Do not cause or permit land pollution other than under authority of a licence or regulation.	Environmental Protection Licence (EPL #20772) has been obtained for the Project. Appendices A & B Manage Soil and Water Procedure
	S146A/B	Do not transport waste to a place that cannot lawfully be used as a waste facility for that waste.	Appendix B Manage Waste Procedure
S148	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	Section 7	



Source	Ref no	Obligation	Document Reference
Contaminated Land Management Act 1997	S60	Notify the EPA if:	Appendices A & B Manage Contaminated Land Procedure
		Contaminants exceed thresholds contained in guidelines or the regulations where contamination has entered or will foreseeably enter neighbouring land, the atmosphere, groundwater or surface water	
		Contaminants in soil are equal to or exceed guideline levels with respect to the current or approved use of the land	
		Contamination meets other criteria that may be prescribed by the regulations.	
Noxious Weeds Act 1993	S13	As a public authority occupier of land, to control noxious weeds on the land as required under the control category or categories specified in relation to the weeds concerned.	
	S16	Notify relevant control authority within 3 days of becoming aware that a notifiable weed (W1 weed) is on land. (or ought reasonably to have known).	
	S32	Do not move or use machinery or equipment within NSW or interstate that has a notifiable weed on it.	
National Parks and Wildlife Act 1974	S118A	Do not harm any animal that is of a threatened species population or ecological community, or its habitat except in accordance with a planning approval.	Appendices A & B Manage Flora and Fauna Procedure
	S98	Do not harm critical habitat except as in accordance with a planning approval.	
	S120/127 /132C	Do not harm native fauna (other than listed unprotected fauna) except in accordance with a planning approval or licence.	
Threatened Species Conservation Act 1995 and Threatened Species Conservation Amendment Act 2002	S6-S9	Relates to the protection of species, ecological communities, populations and critical habitat listed as endangered or vulnerable.	
Environment Protection Biodiversity Conservation Act, 1999 (Cwealth)	Part 13	Do not kill, injure or take a member of a listed threatened species without a permit.	The project was determined to be a controlled action under this Act on 11 August 2015 and will therefore require approval.  The project is being assessed under the bilateral agreement with NSW.
Heritage Act 1977	S56-57	Do not undertake an activity that will affect a place, building, work, relic, moveable object or precinct which is subject to an Interim Heritage Order or is listed on the State Heritage	No works to be undertaken during establishment to impact on Heritage. In the event of an unexpected find,



Source	Ref no	Obligation	Document Reference
		Register without approval from the Heritage Council.	the Manage Cultural Heritage Procedure will be implemented.
	S139	Do not disturb or excavate land with knowledge or reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed; or	
		Do not disturb or excavate land on where a relic has been discovered or exposed.	
S146	Notify the heritage Council on discovery of a relic.		
National Parks and Wildlife Act 1974	S86	Do not harm or desecrate an Aboriginal object or Aboriginal place without consent.	No works to be undertaken during establishment to impact on Heritage.
	S89A	Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.	In the event of an unexpected find, the Manage Cultural Heritage Procedure will be implemented.
Water Management Act 2000	S57/60A	A licence is required for water to be extracted from a waterway (e.g. for dust control).	No water extraction to be undertaken during establishment works
	S91	Do not deposit material, excavate, or remove material within a watercourse bank, shore or bed, or on land 40 metres inland, or interfere with the likely flow of water to such a body, without a controlled activity approval.	Under the EP&A Act the Project is exempt from this licence (excluding aquifer interference activities).  Additional approvals and licences will be sought as required
	S91E		
	S91F		



## Appendix J: HV Power Addendum

# Ancillary Facilities Management Plan

## Addendum No. 1: Installation of HV

Project Name: WestConnex New M5

Project number:	15.7020.2597
Document number:	M5N-ES-PLN-PWD-0032
Revision date:	17/05/2016
Revision:	02

### Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
00	06/05/16	CDS-JV				
01	17/05/16	CDS-JV				
02	10/06/16	CDS-JV				
Signature:						

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



## Details of Revision Amendments

### Document Control

The Project Director is responsible for ensuring that this Plan is reviewed and approved. The Support Services Director (SSD) is responsible for updating this Plan to reflect changes to the Project, legal and other requirements, as required.

### Amendments

Any revisions or amendments must be approved by the Project Director before being distributed or implemented.

### Revision Details

Revision	Details
00	For Consultation
01	For Approval
02	Address DP&E Comments

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



### Contents

<b>1. Introduction</b> .....	<b>4</b>
1.1 Objectives .....	4
1.2 Interface with other Plans.....	4
<b>2. Environmental Planning Requirements</b> .....	<b>5</b>
2.1 Relevant Legislation .....	5
2.2 Minister’s Condition of Approval .....	5
2.3 Revised Environmental Management Measures .....	7
2.4 Environmental Protection Licence .....	7
<b>3. Consultation</b> .....	<b>8</b>
3.1 Stakeholder consultation .....	8
3.1.1 Ausgrid .....	8
3.1.2 Public transport .....	8
3.1.3 Emergency services .....	8
3.2 Community consultation .....	8
<b>4. Description of the Proposed Works</b> .....	<b>9</b>
4.1 Works Description .....	9
4.2 Overview of Alignments .....	9
4.2.1 Alignment 1: Rockdale Zone Substation to Kogarah Golf Course .....	9
4.2.2 Alignment 2: Commercial Road, Kingsgrove .....	9
4.2.3 Alignment 3: May Street and Mary Street to Canal Road, St Peters .....	9
4.2.4 Alignment 4: Campsie ZNS to Poole St .....	10
<b>5. Identify and Assess – Approved Facilities</b> .....	<b>15</b>
5.1 Construction hours .....	15
5.2 Detailed description of approved facilities .....	15
5.3 Plant and equipment .....	21
5.4 Chemicals and hazardous materials .....	21
<b>Appendix A: HV Power Installation Management Measures</b> .....	<b>22</b>

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



## 1. Introduction

The New M5 Project is the Stage 2 component of the WestConnex scheme, a NSW Government initiative to connect Sydney's west and south-west with the Sydney Airport and the Port Botany precinct. It is being delivered by the Sydney Motorway Corporation (SMC), formerly the WestConnex Delivery Authority (WDA).

The CPB Dragados Samsung Joint Venture (CDS-JV) will deliver the design and construction of WestConnex Stage 2 referred to as the New M5 (the Project). The Project will run from the existing M5 East corridor at Beverly Hills via tunnel to St Peters, providing improved access to the airport, south Sydney and Port Botany precincts. The Project will substantially improve the east - west corridor access between the Sydney CBD, Port Botany and Sydney Airport precincts and the South West growth areas.

The Project will deliver approximately nine kilometres of two-lane twin tunnels with capacity to operate three lanes in the future, motorway to motorway connections to the King Georges Road Interchange Upgrade at Beverly Hills, and a new interchange at St Peters. Infrastructure Approval was granted on 20 April 2016. Major works are expected to commence in mid-2016 and the New M5 tunnel is scheduled to open to traffic in late 2019.

The installation of temporary high voltage power to four construction compounds is required for tunnelling activities, as assessed in the Addendum to the Submissions and Preferred Infrastructure Report – Temporary Construction Power Enabling Works for the Westconnex New M5. This Addendum to the Ancillary Facilities Management Plan - Installation of HV (AFMP Addendum #1) addresses the works required for the installation of temporary high voltage power (HV power) to the construction compounds. This document addresses the project requirements including the relevant Minister's Condition of Approval (CoA) and Revised Environmental Management Measures (REMMs) relevant to these works.

### 1.1 Objectives

The objectives of this AFMP Addendum #1 are to:

- Identify and describe the work activities required for the HV power installation including the hours of operation, work methods and types of equipment to be used for the installation
- Identify and demonstrate measures to avoid, mitigate and manage environmental and social impacts related to HV power installation
- Demonstrate the means of compliance with the Infrastructure Approval SSI 6788

### 1.2 Interface with other Plans

This AFMP Addendum #1 forms part of the AFMP (M5N-ES-PLN-PWD-0026). Environmental management during the installation of high voltage power will be conducted in accordance with the AFMP, and once approved, the Construction Environmental Management Plan (CEMP) and associated sub-plans. Refer to the AFMP for further description of the interface of these plans.

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



## 2. Environmental Planning Requirements

### 2.1 Relevant Legislation

Key environmental legislation relevant to the HV power installation includes:

- *Protection of the Environment Operations Act 1997* (POEO Act)
- *Environmental Planning and Assessment Act 1979* (EP&A Act)
- *Contaminated Lands Management Act 1997* (CLM Act)
- *Roads Act 1993*
- *Electricity Supply Act 1995*
- *Heritage Act 1977*
- *Native Vegetation Act 2003*
- *National Parks and Wildlife Act 1974* (NPW Act)
- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

Relevant provisions of the above legislation are determined through the Project environmental obligations register.

### 2.2 Minister's Condition of Approval

The CoA relevant to this AFMP Addendum #1 are listed in Table 1. Refer to the AFMP Section 2.2 for CoA relevant to establishment works generally.

Table 1: Minister's Condition of Approval relevant to HV power installation

CoA Reference	Relevant condition	Where addressed
A2	The Proponent must carry out the SSI in accordance with the conditions of approval and generally in accordance with the: (d) <i>WestConnex New M5 Addendum to the Submissions and Preferred Infrastructure Report – temporary Construction Power Enabling Works</i> prepared by RMS, dated April 2016;	Section 2 Also refer to the AFMP
D57	Prior to the establishment of the ancillary facilities (including vegetation clearing) described in the documents referred to in conditions A2(b) and A2(c), the Proponent must prepare and implement an <b>Ancillary Facilities Management Plan</b> which outlines the environmental management practices and procedures for the establishment and operation of the ancillary facilities. The Ancillary Facilities Management Plan must be prepared in consultation with the relevant council(s) and submitted to the Secretary for approval prior to commencing site establishment works. The Ancillary Facilities Management Plan must detail the management of the ancillary facilities, and include, but not be limited to:	This Addendum provides additional information to support the AFMP. Refer to Section 3 of this Addendum for additional consultation undertaken for HV power installation
	(a) a description of the ancillary facility (including a site layout plan), its components and details of the existing environment on and in the vicinity of the site;	Sections 4 & 5 Figure 1 – Figure 4
	(b) a description of the works proposed to be undertaken during site establishment;	Sections 4 & 5 Figure 1 – Figure 4
	(c) details of the activities to be carried out at each facility, including the hours of operation, staging of operation and predicted date of commissioning;	Section 5.2
(d) a description of the plant, equipment and materials to be used and/or stored on each site, including dangerous and hazardous goods;	Sections 5.3, 5.4	

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



(e)	a summary of the potential environmental impacts associated with the establishment and operation of the facility;	Table 3- Table 6
(f)	details of the mitigation, monitoring and management procedures specific to each facility that would be implemented to minimise environmental and amenity impacts during both site establishment and operation or, where this is not possible, feasible and reasonable measures to offset these impacts;	Table 3- Table 6 Appendix A Also refer to the AFMP, Section 9.1 (Monitoring, Inspection & Reporting) and Appendix B
(g)	management measures to minimise and manage flora and fauna impacts including: (i) clearing procedures incorporating pre-clearing surveys and inspections and measures for minimising the extent of clearing, (ii) measures to protect the remaining portion of Cooks River/Castlereagh Ironbark Forest and ensure that it is not impacted by the establishment and operation of construction compounds, (iii) procedures for removal and relocation of fauna during clearing, and (iv) construction worker induction and education;	Appendix A - HV26- HV27 Manage Flora and Fauna Procedure Also refer to the AFMP Appendix B - A129 to A158
(h)	a description of how the management and mitigation measures set out in the documents referred to in conditions A2(b) and A2(c) will be implemented on each site, and if not, justification for any departures from those management and mitigation measures;	Table 3 - Table 6 Appendix A AFMP Appendix B
(i)	details of the community consultation to be undertaken with affected and adjoining landowners and sensitive receivers	Appendix A - HV18 AFMP Section 3 & Appendix B
(j)	details on the height and materials of noise barriers/hoardings at each facility;	N/A to HV installation works Refer to AFMP Section 7.9
(k)	identification of the timing for the completion of site activities at each facility and how each site will be decommissioned (including any necessary rehabilitation); and	Table 3 - Table 6
(l)	mechanisms for the monitoring, review and amendment of the Ancillary Facilities Management Plan.	Refer to the AFMP Section 8
	In considering the approval of the Ancillary Facilities Management Plan, the Secretary will take into account the Proponent's response to public authority and relevant council comments on the Plan.	Refer to the Consultation Comment and Response Register
	The Proponent must update the Ancillary Facilities Management Plan to incorporate the site establishment and operation practices required for any additional ancillary facilities approved by the Secretary under condition D63.	Refer to the AFMP Section 4 & Appendix C
	No construction-related works or activities are to be undertaken on the ancillary facility sites prior to approval of the Construction Environment Management Plan required under condition D67.	Refer to the AFMP, Sections 1.2 & 1.4

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



<b>D60</b>	<p>Site establishment works at ancillary facilities must be undertaken in accordance with the construction hours specified in conditions D12 and D14. Notwithstanding, the following activities can be undertaken outside of the hours specified in conditions D12 and D14:</p> <p>(a) the delivery of materials/equipment/plant where it is required by the police or other authorities for safety reasons;</p> <p>(b) works required in an emergency to avoid the loss of lives, property and/or prevent environmental harm;</p> <p>(c) utility connections where the utility provider requires the connections be performed outside of the specified hours; or</p> <p>works which have the potential to impact on road/traffic safety and must be carried out as a result of RMS Traffic Management Centre requirements.</p>	Section 5.1
<b>D61</b>	The Proponent must comply with the requirements of conditions D16, D18, D22 and D24, when establishing ancillary facilities.	Refer to the AFMP Appendix B A86-A106
<b>D62</b>	<p>Other than ancillary facilities described in the documents referred in conditions A2(b) and A2(c), or those ancillary facilities approved by the Secretary under condition D63, or allowed under condition D64, the location of ancillary facilities must comply with the following locational criteria:</p> <p>(a) be located more than 50 metres from a waterway;</p> <p>(b) be located within or adjacent to land where the SSI is being carried out;</p> <p>(c) have ready access to the road network;</p> <p>(d) be located to minimise the need for heavy vehicles to travel on local streets and/ or through residential areas;</p> <p>(e) be sited on relatively level land;</p> <p>(f) be separated from nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant),</p> <p>(g) not require vegetation clearing beyond that already required by the SSI;</p> <p>(h) not impact on heritage items (including areas of archaeological sensitivity) beyond those already impacted by the SSI;</p> <p>(i) not unreasonably affect the land use of adjacent properties;</p> <p>(j) be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented; and</p> <p>(k) provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.</p>	Table 2, Section 5.2

### 2.3 Revised Environmental Management Measures

The REMMs that relate to establishment activities, including the works described in this AFMP Addendum No. 1, are detailed in Table 3 of the AFMP.

### 2.4 Environmental Protection Licence

An Environmental Protection Licence (EPL 20772) was issued by the Environment Protection Authority (EPA) on 17/05/2016. The licence applies to site establishment works and will also apply to HV power installation works as described by this document.

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



### 3. Consultation

#### 3.1 Stakeholder consultation

The works that are the subject of this AFMP Addendum No. 1 require consultation with the relevant council(s) in accordance with CoA D57. As the majority of the proposal would be located within the road reserves, consultation with either Roads and Maritime or the relevant Council has been undertaken for all proposed alignments in accordance with section 138 of the Roads Act 1993. Additional consultation on this AFMP Addendum #1 will be undertaken with the relevant Councils. Consideration of all submissions received will be incorporated into the document as required (refer to Consultation Comment and Response Register).

##### 3.1.1 Ausgrid

Consultation with Ausgrid has been undertaken over the past ten months and they have certified the designs through the level 3 designer.

##### 3.1.2 Public transport

The proposed alignment is likely to have minor impacts on the operation of local buses, through road/lane closures. Consultation has commenced with Sydney Buses, the local bus operator in the vicinity of all alignments, to confirm which, if any, routes may be affected by the proposed works.

##### 3.1.3 Emergency services

Alignment 1 is located near Arncliffe Fire Station, which is located on West Botany Street between Eve Street and Brennans Road. Alignment 4 is located near to Canterbury Hospital, which is situated at the intersection of Canterbury Road and Charlotte Street. Consultation with the relevant emergency services has been undertaken as required. In addition, written notifications regarding works program for upcoming sites will be provided to all emergency services operating within the area of works.

#### 3.2 Community consultation

Community consultation for the works will be undertaken in accordance with Section 3.2 of the AFMP

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



## 4. Description of the Proposed Works

### 4.1 Works Description

The HV power installation will include installation of cabling and related fixtures to connect Ausgrid utilities from the existing network to four of the approved construction compounds along the alignment of the New M5 project.

Works will involve the following construction methods:

- Horizontal Directional Drilling (HDD)
- Trenching
- Pipe jacking
- Non-destructive excavation work including potholing and slit trenches.

The proposed works will be carried out in a highly urbanised environment, traversing a variety of geographical zones within the four Local Government Areas of Rockdale, Canterbury-Bankstown, Georges River and Inner West. For the most part, each route would be aligned within the road reserve including footpaths. Detailed descriptions of the alignments are provided in Section 5.2.

HV power installation works for each of the four alignments follow a standard method. The establishment of compounds is not required for HV cable installation, with plant and equipment moving progressively along the alignment to complete the works. Active work areas including trenches and excavations will be protected by temporary fencing (ATF), which will be progressively moved along the alignment with the works.

Existing conduit will be utilised where available. Trenches and jointing pits would be progressively excavated along the proposed alignments to install new conduits for HV services where necessary. Trenches will be backfilled and reinstated progressively to minimise the amount of trench exposed at any one time and to reduce impacts on environment and community. Following the installation of conduit, the HV cables will be installed through jointing pits (cable pulling). Following the installation of cables, jointing and splicing will occur to connect HV cables at jointing pits. Following the completion of jointing and quality assurance procedures, cable joints and jointing pits will be reinstated.

### 4.2 Overview of Alignments

#### 4.2.1 Alignment 1: Rockdale Zone Substation to Kogarah Golf Course

Alignment 1 would provide an 11kV feeder line from a 6MVA supply at Rockdale. The alignment would run from the Rockdale Zone Substation to the Arncliffe construction compound, taking the following course from the substation: Bryant Street, William Street, Highclere Avenue, West Botany Street, Terry Street, Bellevue Street, Duncan Street, Flora Street and crossing Marsh Street into the construction compound (Figure 1).

#### 4.2.2 Alignment 2: Commercial Road, Kingsgrove

This alignment would provide an 11kV feeder line from a 3MVA supply on Commercial Road. Commercial Road is a two-lane road servicing a light industrial area in Kingsgrove, on the southern side of the M5 Motorway approximately 200 metres west of Kingsgrove Road. The proposed infrastructure would comprise a short section of trench approximately 25 metres in length (Figure 2). Construction of the trench would temporarily obstruct a footpath adjacent to Commercial Road and cross a vehicular access that is shared by businesses at 30 and 32 Commercial Road.

#### 4.2.3 Alignment 3: May Street and Mary Street to Canal Road, St Peters

This alignment would provide an 11kV feeder line from a 6MVA supply from the May Street Substation and Mary Street Substation to the St Peters (C8) construction compound. The alignment would run from the May Street Substation along Unwins Bridge Road, Silver Street, Edith Lane, Edith Street, cross the Princes Highway into the construction compound. From the Mary Street Substation the alignment would run from Mary Street, along Robert Lane, into Roberts Street, Edith St, cross the Princes Highway, into the construction compound (Figure 3).



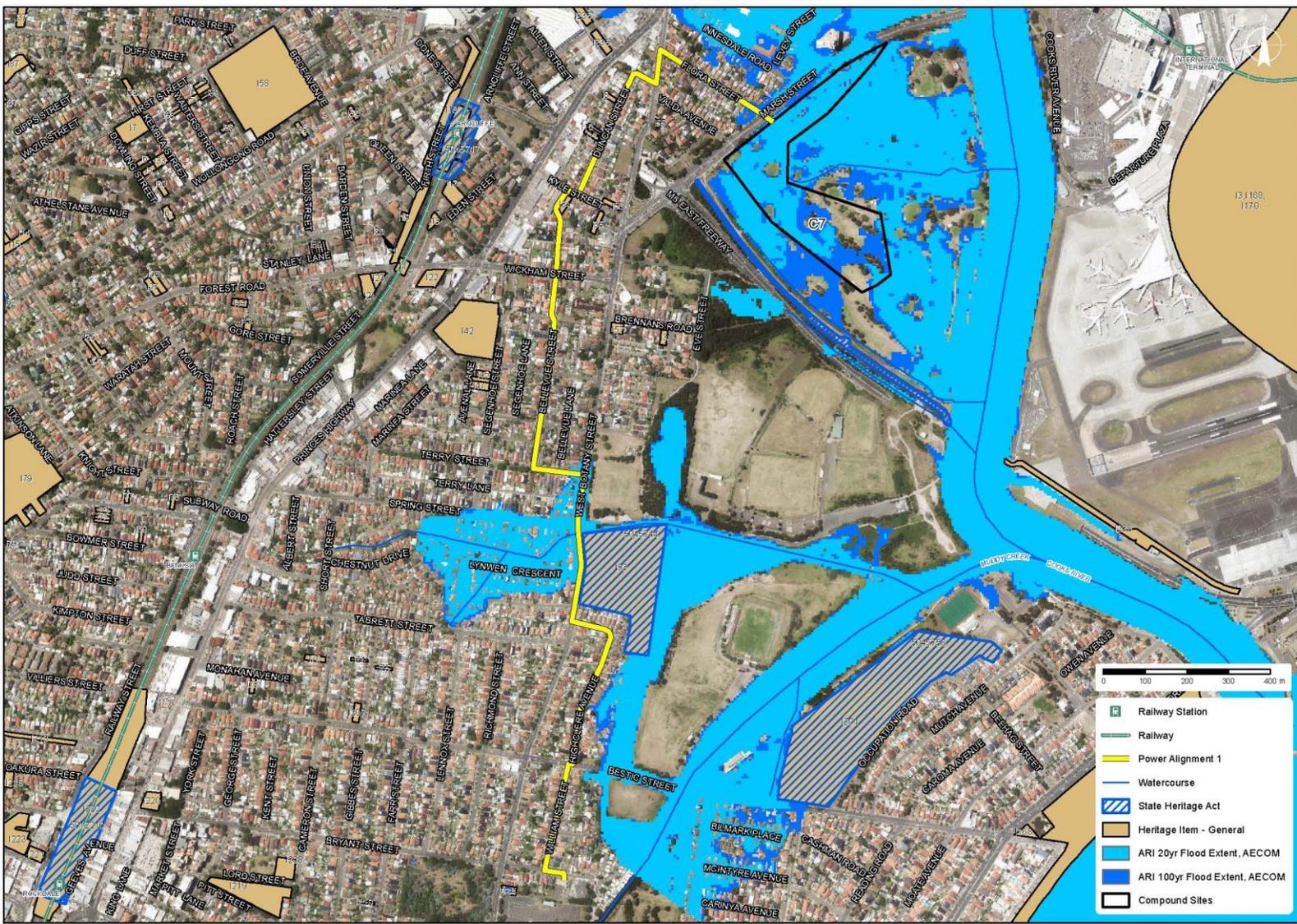
#### 4.2.4 Alignment 4: Campsie ZNS to Poole St

This alignment would provide an 11kV feeder line from a 6MVA supply within Campsie ZNS. The alignment would run from the Campsie ZNS along Nicholas Avenue, Canterbury Road, Bexley Road and Jarrett Street, (within pre-existing conduits), and then along Alfred Street, William Street, Rosemeath Avenue, Homer Street, Lundy Avenue and Poole Street to the Bexley Road North (C4) construction compound (Figure 4).

# Ancillary Facilities Management Plan Addendum No.1: Installation of HV



Figure 1: Alignment 1



# Ancillary Facilities Management Plan Addendum No.1: Installation of HV

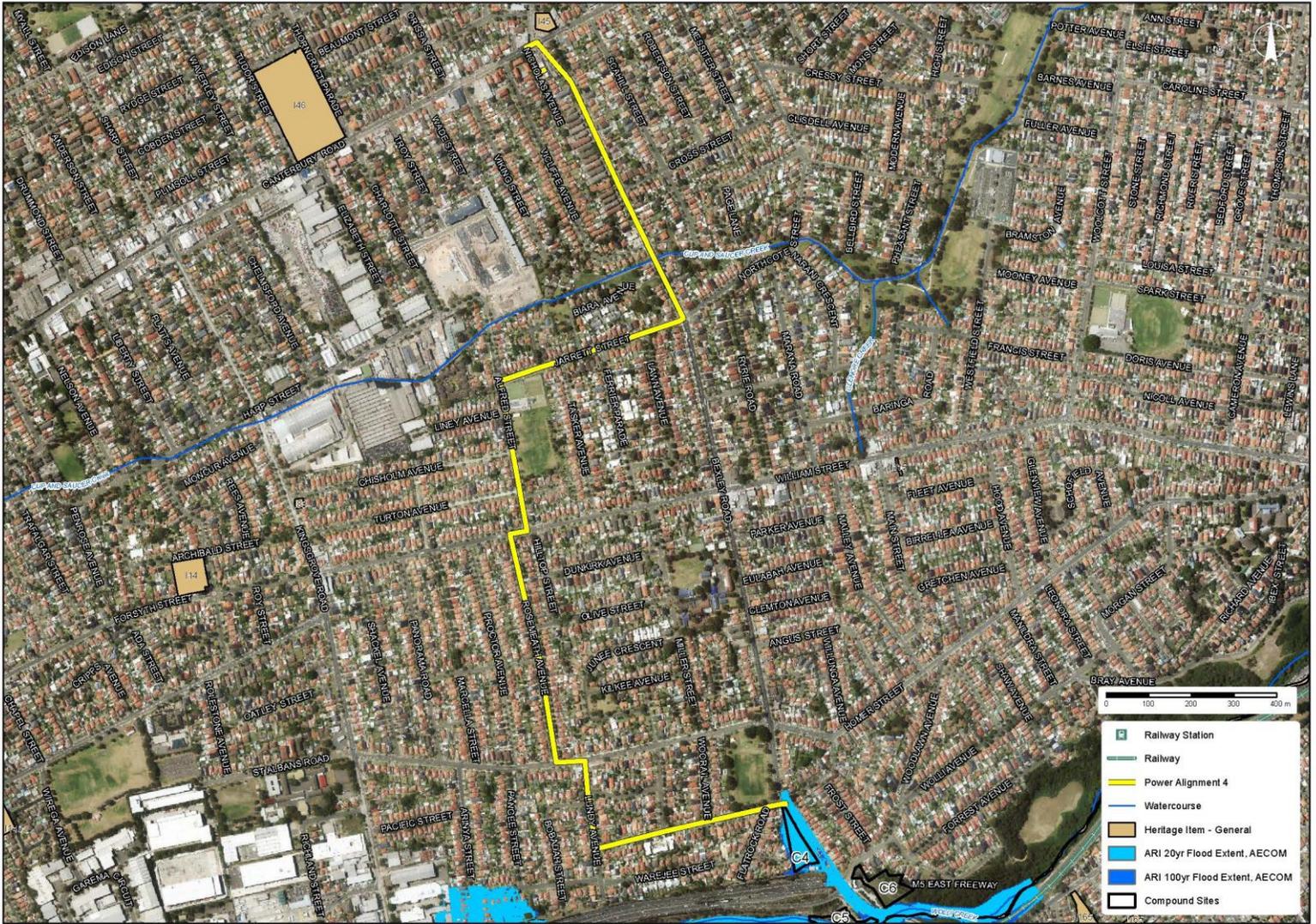
Figure 2: Alignment 2





# Ancillary Facilities Management Plan Addendum No.1: Installation of HV

Figure 2: Alignment 4



## 5. Identify and Assess – Approved Facilities

All four alignments described in Section 4 of this document are for the purposes of providing temporary HV power to construction compounds. Details regarding the environmental aspects and impacts, and associated control measures are provided below.

### 5.1 Construction hours

Where possible, the works will be undertaken during standard construction hours as described in Section 5.1.1 of the AFMP. Where works are required to be undertaken outside of standard hours, they will be carried out in accordance with the requirements of CoA D60, the Project Environmental Protection Licence (EPL), the Out-of-Hours Work Protocol and any relevant Road Occupancy Licences (ROLs).

Power alignments are primarily located within local roads to minimise traffic impacts and therefore to limit the amount of works required outside of standard constructions hours (required under some ROLs). Alignments 1, 3 and 4 will require some out-of-hours works.

Alignment 1 (Arncliffe) avoids Marsh Street and reduces the amount of work on West Botany Street, however night works are required for the crossing of some major roads.

Alignment 2 (Kingsgrove) does not require out-of-hours works.

Alignment 3 (St Peters) has been refined and night works are only required for traversing the Princes Hwy into the C8 construction compound.

Alignment 4 (Bexley) has also been refined to utilise existing conduit from the zone substation to Alfred Street, which minimises the extent of works and has also reduced the night works required under ROLs to approximately 3 nights (adjacent to the Zone Substation on Canterbury Road).

### 5.2 Detailed description of approved facilities

Table 2 identifies the locational criteria for ancillary facilities (CoA D62) and where HV power installation work sites are compliant with these criteria. Table 3 to Table 6 below provide further details regarding the activities to be undertaken within each alignment and the associated environmental impacts. References to the key environmental controls to manage the identified impacts are also provided. Specific controls associated with the HV power installation are provided in Appendix A of this document. Controls to be implemented across all site establishment activities, including those outlined in this AFMP Addendum #1, are provided in Annexure B of the AFMP.

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV

Table 2: Locational criteria for HV power installation works

Locational criteria	Alignment			
	1	2	3	4
a) be located more than 50 metres from a waterway;	x	x	✓	x
b) be located within or adjacent to land where the SSI is being carried out;	✓	✓	✓	✓
c) have ready access to the road network;	✓	✓	✓	✓
d) be located to minimise the need for heavy vehicles to travel on local streets and/ or through residential areas;	x	✓	x	x
e) be sited on relatively level land;	✓	✓	✓	✓
f) be separated from nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant),	x	x	x	x
g) not require vegetation clearing beyond that already required by the SSI;	✓	✓	✓	✓
h) not impact on heritage items (including areas of archaeological sensitivity) beyond those already impacted by the SSI;	✓	✓	✓	✓
i) not unreasonably affect the land use of adjacent properties;	✓	✓	✓	✓
j) be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented; and	x	✓	✓	✓
k) provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.	✓*	✓*	✓*	✓*

\*No bulk storage to occur on work sites. All materials to be removed off-site at the end of each work shift.

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



Table 3: Works for Alignment #1

Key work Activities <i>Note: items may not occur in sequence order</i>	Key Environmental Impacts	Key Environmental Controls
<p>HV power installation (May – December 2016)</p> <ul style="list-style-type: none"> <li>- Investigations and installation of environmental controls including:                             <ul style="list-style-type: none"> <li>o Site investigations</li> <li>o Erosion and sedimentation control</li> <li>o Delineation of no-go zones</li> </ul> </li> <li>- Traffic control measures</li> <li>- Potholing and service locations</li> <li>- Protection of existing services and utilities and relocations and connections where required</li> <li>- Trenching</li> <li>- Materials testing, classification and removal of unsuitable materials off site</li> <li>- Pipe jacking</li> <li>- Horizontal directional drilling</li> <li>- Cable-pulling</li> <li>- Cable jointing, splicing and commissioning</li> <li>- Temporary stockpiling</li> <li>- Backfilling of excavations</li> <li>- Reinstatement of pavements and rehabilitation works.</li> </ul>	<p>Temporary traffic/access impacts along alignment including Marsh Street and West Botany Street (both State roads) and local roads.</p>	<p>Appendix A - HV2-HV5 Also refer to AFMP, Appendix B</p>
	<p>Noise and vibration due to excavation and use of vehicles and plant. Out of hours noise and vibration issues, including sleep disturbance impacts, from approved night works.</p>	<p>Appendix A - HV8-HV17 Also refer to AFMP, Appendix B</p>
	<p>Potential disturbance of contaminated soils related to past industrial and manufacturing land use. This contamination may include asbestos, PCBs and hydrocarbons. Potential disturbance of acid sulfate soils Uncontrolled erosion and sediment run off. Spills of fuel, chemicals etc</p>	<p>Appendix A - HV19-HV20 Also refer to AFMP, Appendix B</p>
	<p>Potential inundation of work sites during flood conditions.</p>	<p>Appendix A - HV21-HV23 Also refer to AFMP, Appendix B</p>
	<p>Minor clearing/pruning of street trees</p>	<p>Appendix A - HV26-HV27 Also refer to AFMP, Appendix B</p>
	<p>Potential indirect (vibration) impacts on adjacent heritage items.</p>	<p>Appendix A - HV24-HV25 Also refer to AFMP, Appendix B</p>
	<p>Waste management, including green waste, demolition waste and general construction waste</p>	<p>Appendix A - HV28-HV30 Also refer to AFMP, Appendix B</p>
	<p>Air emissions associated with excavation, temporary stockpiling, backfilling and use of plant and equipment</p>	<p>Appendix A - HV6-HV7 Also refer to AFMP, Appendix B</p>
	<p>Amenity impacts including noise and light spillage on surrounding residents Visual Impact of construction works</p>	<p>Refer to AFMP, Appendix B</p>

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



Table 4: Works for Alignment #2

Key work Activities <i>Note: items may not occur in sequence order</i>	Key Environmental Impacts	Key Environmental Controls
HV power installation (May – December 2016) <ul style="list-style-type: none"> <li>- Investigations and installation of environmental controls including:                             <ul style="list-style-type: none"> <li>o Site investigations</li> <li>o Erosion and sedimentation control</li> <li>o Delineation of no-go zones</li> </ul> </li> <li>- Potholing and service location</li> <li>- Protection of existing services and utilities and relocations and connections where required</li> <li>- Trenching</li> <li>- Cable-pulling</li> <li>- Cable jointing, splicing and commissioning</li> <li>- Materials testing, classification and removal of unsuitable materials off site</li> <li>- Traffic control measures</li> <li>- Backfilling of excavations</li> <li>- Reinstatement of pavements and rehabilitation works.</li> </ul>	Temporary traffic/access impacts on Commercial Road. Impacts on pedestrians due to temporary closure of footpath	Appendix A - HV2-HV5 Also refer to AFMP, Appendix B
	Noise and vibration due to excavation and use of vehicles and plant.	Appendix A - HV8-HV17 Also refer to AFMP, Appendix B
	Potential disturbance of contaminated soils related to past industrial and manufacturing land use. This contamination may include asbestos, PCBs and hydrocarbons. Uncontrolled erosion and sediment run off. Spills of fuel, chemicals etc	Appendix A - HV19-HV20 Also refer to AFMP, Appendix B
	Potential inundation of work sites during flood conditions.	Appendix A - HV21-HV23 Also refer to AFMP, Appendix B
	Waste management, including green waste, demolition waste and general construction waste	Appendix A - HV28-HV30 Also refer to AFMP, Appendix B
	Air emissions associated with excavation, temporary stockpiling, backfilling and use of plant and equipment	Appendix A - HV6-HV7 Also refer to AFMP, Appendix B
	Visual impact of construction works	Refer to AFMP, Appendix B

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



Table 5: Site Establishment Works for Alignment #3

Key work Activities <i>Note: items may not occur in sequence order</i>	Key Environmental Impacts	Key Environmental Controls
<p>HV power installation (May – December 2016)</p> <ul style="list-style-type: none"> <li>- Investigations and installation of environmental controls including:                             <ul style="list-style-type: none"> <li>o Site investigations</li> <li>o Erosion and sedimentation control</li> <li>o Delineation of no-go zones</li> </ul> </li> <li>- Potholing and service location</li> <li>- Protection of existing services and utilities and relocations and connections where required</li> <li>- Trenching</li> <li>- Cable jointing, splicing and commissioning</li> <li>- Cable-pulling</li> <li>- Materials testing, classification and removal of unsuitable materials off site</li> <li>- Temporary stockpiling</li> <li>- Traffic control measures</li> <li>- Backfilling of excavations</li> <li>- Reinstatement of pavements and rehabilitation works.</li> </ul>	<p>Temporary traffic/access impacts on Princes Highway and local roads along alignment.</p> <p>Temporary impacts on pedestrians and cyclists due to temporary closure of the footpath and lanes.</p>	<p>Appendix A - HV2-HV5 Also refer to AFMP, Appendix B</p>
	<p>Noise and vibration due to excavation and use of vehicles and plant.</p> <p>Out of hours noise and vibration issues, including sleep disturbance impacts, from approved night works.</p>	<p>Appendix A - HV8-HV17 Also refer to AFMP, Appendix B</p>
	<p>Potential disturbance of contaminated soils related to past industrial and manufacturing land use. This contamination may include asbestos, PCBs and hydrocarbons.</p> <p>Uncontrolled erosion and sediment run off.</p> <p>Spills of fuel, chemicals etc</p>	<p>Appendix A - HV19-HV20 Also refer to AFMP, Appendix B</p>
	<p>Potential indirect (vibration) impacts on adjacent heritage items.</p>	<p>Appendix A - HV24-HV25 Also refer to AFMP, Appendix B</p>
	<p>Minor clearing/pruning of street trees</p>	<p>Appendix A - HV26-HV27 Also refer to AFMP, Appendix B</p>
	<p>Waste management, including green waste, demolition waste and general construction waste</p>	<p>Appendix A - HV28-HV30 Also refer to AFMP, Appendix B</p>
	<p>Air emissions associated with excavation, temporary stockpiling, backfilling and use of plant and equipment</p>	<p>Appendix A - HV6-HV7 Also refer to AFMP, Appendix B</p>
	<p>Amenity impacts including noise and light spillage on surrounding residents</p> <p>Visual Impact of construction works</p>	<p>Refer to AFMP, Appendix B</p>

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



Table 6: Site Establishment Works for Alignment #4

Key work Activities <i>Note: items may not occur in sequence order</i>	Key Environmental Impacts	Key Environmental Controls
<p>HV power installation (May – December 2016)</p> <ul style="list-style-type: none"> <li>- Investigations and installation of environmental controls including:                             <ul style="list-style-type: none"> <li>o Site investigations</li> <li>o Erosion and sedimentation control</li> <li>o Delineation of no-go zones</li> </ul> </li> <li>- Potholing and service location</li> <li>- Protection of existing services and utilities and relocations and connections where required</li> <li>- Trenching</li> <li>- Cable jointing, splicing and commissioning</li> <li>- Cable-pulling</li> <li>- Materials testing, classification and removal of unsuitable materials off site</li> <li>- Temporary stockpiling</li> <li>- Traffic control measures</li> <li>- Backfilling of excavations</li> <li>- Reinstatement of pavements and rehabilitation works.</li> </ul>	<p>Temporary traffic/access impacts on Canterbury Road and Bexley Road (State roads) and local roads along alignment.</p>	<p>Appendix A - HV2-HV5 Also refer to AFMP, Appendix B</p>
	<p>Noise and vibration due to excavation and use of vehicles and plant. Out of hours noise and vibration issues, including sleep disturbance impacts, from approved night works.</p>	<p>Appendix A - HV8-HV17 Also refer to AFMP, Appendix B</p>
	<p>Potential disturbance of contaminated soils related to past industrial and manufacturing land use. This contamination may include asbestos, PCBs and hydrocarbons. Uncontrolled erosion and sediment run off. Spills of fuel, chemicals etc</p>	<p>Appendix A - HV19-HV20 Also refer to AFMP, Appendix B</p>
	<p>Minor clearing/pruning of trees</p>	<p>Appendix A - HV26-HV27 Also refer to AFMP, Appendix B</p>
	<p>Potential indirect (vibration) impacts on adjacent heritage items.</p>	<p>Appendix A - HV24-HV25 Also refer to AFMP, Appendix B</p>
	<p>Waste management, including green waste, demolition waste and general construction waste</p>	<p>Appendix A - HV28-HV30 Also refer to AFMP, Appendix B</p>
	<p>Air emissions associated with excavation, temporary stockpiling, backfilling and use of plant and equipment</p>	<p>Appendix A - HV6-HV7 Also refer to AFMP, Appendix B</p>
	<p>Amenity impacts including noise and light spillage on surrounding residents Visual Impact of construction works</p>	<p>Refer to AFMP, Appendix B</p>

## 5.3 Plant and equipment

An indicative list of plant and equipment associated with the proposal is:

• Excavator with attachments	• Power and hand tools
• Vacuum truck	• Road saw
• Skidsteer (Bobcat) with bucket and profiler	• Water cart
• wacker packer / Compactor	• Lighting tower
• Horizontal drill rig with mud collection unit	• Light vehicle
• Small truck	• Asphaltting truck.

The list may change as construction progresses, and not every item of plant/equipment would be required at every work site.

## 5.4 Chemicals and hazardous materials

There will be no bulk storage of chemicals or hazardous materials on site. Any chemicals or other materials required for the works will be brought to site and stored in vehicles during work shifts.

### Appendix A: HV Power Installation Management Measures

The table below details additional mitigation and management measures to specifically address the identified potential environment and social impacts resulting from the HV power installation works. These measures will be implemented in addition to the CDS-JV environmental procedures and environmental controls described in the AFMP during the HV power installation alignment works. Implementation of all control measures will:

- Minimise any potential adverse impacts arising from the proposed works, and
- Ensure compliance with environmental obligations and requirements.

Regular compliance activities, such as inspections, observations and monitoring will be undertaken throughout the HV power installation, inclusive of subcontractor works. These compliance activities and any non-conformances will be undertaken in accordance with Section 9 of the AFMP.

# Ancillary Facilities Management Plan – Addendum No.1: Installation of HV



No.	Impact	Environmental safeguards	Responsibility	Timing
HV1.	General	All environmental safeguards must be incorporated within the following: <ul style="list-style-type: none"> <li>• Construction Area Plan</li> <li>• Work Pack (Including Site Environment Plan)</li> <li>• Detailed design stage</li> </ul>	Project manager	Pre-construction
HV2.	Traffic and access	Traffic Control Plans will be prepared, if required, for the proposed works. The Plans will: <ul style="list-style-type: none"> <li>• be prepared in accordance with the relevant standards and guidelines.</li> <li>• seek to minimise delays and disruptions, and identify and respond to any changes in road safety as a result of the works.</li> </ul>	ASP 1 Contractor approved by CDS JV Traffic Manager	Prior to works
HV3.		All works to be progressively reinstated on a daily basis to minimise the length of time access would be affected	Construction Manager	During works
HV4.		Works would be undertaken to maintain use of bus stops by the public along the affected route	Construction Manager	During works
HV5.		Notification to Sydney buses would be required in advance of works to inform drivers of the affected routes	Construction Manager	During works
HV6.		Air quality	Ensure all construction vehicles comply with their relevant emission standards.	Project Manager / Site Supervisor
HV7.	Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.		Project Manager / Site Supervisor	During works

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



No.	Impact	Environmental safeguards	Responsibility	Timing
HV8.	Noise and vibration	<p>Out of hours work and scheduling:</p> <ul style="list-style-type: none"> <li>Works to be carried out during normal work hours (i.e. 7am to 6pm Monday to Friday; 8am to 1pm Saturdays). Any work that is performed outside normal work hours or on Sundays or public holidays is to minimise noise impacts.</li> <li>For out of hours works, wherever possible and practical, works involving the use of saw cutting equipment, horizontal drilling rig or pipe jacking plant must be completed before 12am.</li> </ul>	Project Manager / Site Supervisor	During works
HV9.		<p>Provide respite periods for affected receivers:</p> <ul style="list-style-type: none"> <li>One hour respite after every three consecutive hours of high impact activities.</li> <li>One day respite after three consecutive days of high impact activities.</li> <li>Ensure that out of hours works do not affect a receiver for a period of more than two nights in a one week period.</li> </ul>	Project Manager / Site Supervisor	During works
HV10.		Temporary acoustic barriers will be considered at work areas where feasible and reasonable.	Project Manager	Prior to works / During works
HV11.		Where feasible and reasonable, particularly noisy activities such as the use of road and concrete saws, will be scheduled around times of high background noise to provide masking and/or during the less sensitive times of 9.00 am to 12.00 pm or 2.00 pm to 5.00 pm where feasible and reasonable.	Project Manager	During works
HV12.		Out of hours works (OOHW) will be carried out in accordance with a Construction Noise and Vibration Impact Statement (CNVIS) prepared for the works	Project Manager / Site Supervisor	During works

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



No.	Impact	Environmental safeguards	Responsibility	Timing
HV13.		Night works will be programmed to minimise the number of consecutive nights that works affect the same receivers.	Project Manager	Prior to works / During works
HV14.		Alternative work methods, such as the use of hydraulic or electric controlled units in place of diesel units, will be considered and implemented where feasible and reasonable.	Project Manager	During works
HV15.		Measures, including allowing adequate separation between rollers and adjacent buildings and/or using non vibrating rollers, are to be used to minimise or prevent vibration impacts.	Project manager	During works
HV16.		Where horizontal drilling, pipe jacking or compaction activities are proposed within 10 metres of a vibration-sensitive structure, conduct inspections and document the structural condition prior to and after the completion of the activities.	Project Manager / Site Supervisor	Prior to works / During works
HV17.		If inspections identify that damage to a structure has occurred, rectify any such damages with consideration to relevant structural and heritage guidance.	Project Manager / Site Supervisor	After works
HV18.	Community	Owners and occupants of properties adjacent to the works will be provided with advanced notification of relevant project schedules, construction works and any changes to access arrangements in accordance with the Section 3 of the AFMP.	Community Relations Manager	Prior to works
HV19.	Soil and water	Implement the the Manage Soil and Water Procedure (M5N-ES-PRC-PWD-0044)	Site Supervisor	During works

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



No.	Impact	Environmental safeguards	Responsibility	Timing
HV20.		Implement the Manage Hazardous Substances Procedure where required (M5N-ES-PRC-PWD-0041).	Site Supervisor	During works
HV21.	Flooding and drainage	In the event of flooding in an area, work will not commence until this flooding has subsided.	Site Supervisor	During works
HV22.		At the conclusion of ground disturbance works such as potholing and trenching, wastewater and any excess spoil is to be removed and disposed of off-site to an appropriately licensed facility.	Project Manager	During works
HV23.		Flood emergency response procedures are to be developed, to remove temporary works during periods of heavy rainfall and for evacuation of staff.	Project Manager	Prior to works
HV24.	Non-Aboriginal heritage	Implement the Manage Cultural Heritage Procedure (M5N-ES-PRC-PWD-0039). Known heritage items would be identified in the contractor's Site Environment Plans. Measures to avoid/manage impacts would be included, where appropriate.	Environmental and Sustainability Manager	Prior to works
HV25.		Separation distances between the proposed works and heritage items would be maximised and low vibration inducing machinery and techniques would be used, where possible	Project Manager	Prior to works / During works
HV26.	Flora and fauna	The removal of street trees would be avoided where possible. If required, clearing would be undertaken in accordance with a Tree Report prepared for the works and the Manage Flora and Fauna Procedure (M5N-ES-PRC-PWD-0042).	Environment and Sustainability Manager	Prior to works / During works

# Ancillary Facilities Management Plan

## Addendum No.1: Installation of HV



No.	Impact	Environmental safeguards	Responsibility	Timing
HV27.		Environmental advisor to be contactable and on call if excavation works are within the critical root zone to confirm if an arborist is required.	Environment and Sustainability Manager	During works
HV28.	Resources and waste	Implement the Manage Waste Procedure (M5N-ES-PRC-PWD-0044). Residual waste will be classified, handled and stored on site in accordance with the <i>Waste Classification Guidelines: Part 1 Classifying Waste</i> (EPA 2014) until collection by a contractor for disposal.	Project Manager	During works
HV29.		Storage containers (bins, skips, tanks, etc) are provided in sufficient numbers to facilitate segregation of waste at the source of generation, where ever possible. The correct bin type must be used to avoid contamination.	Project Manager	During works
HV30.		Contaminated waste, including asbestos waste, will be handled and managed in accordance the Manage Contaminated Land Procedure (M5N-ES-PRC-PWD-0036) and relevant State legislation, government policies and Australian Standards.	Project Manager	During works

## Appendix K: Complaints Management System

### Complaints Management

A complaint is an expression of dissatisfaction, resentment or a grievance (whether real or perceived) made to the WCX M5 AT or CDS-JV and related to the Project works, services or the complaint-handling process itself, where a response or resolution is explicitly or implicitly expected.

Complaint classification will consider the following:

- type of issue raised
- impact it has delivered
- stakeholder identifies the issue as a complaint
- complaint is validated (e.g. genuinely related to CDS-JV works).

All complaints will be managed by the Community Relations representative and addressed as a matter of priority and in accordance with agreed response timeframes noted in Table 2.

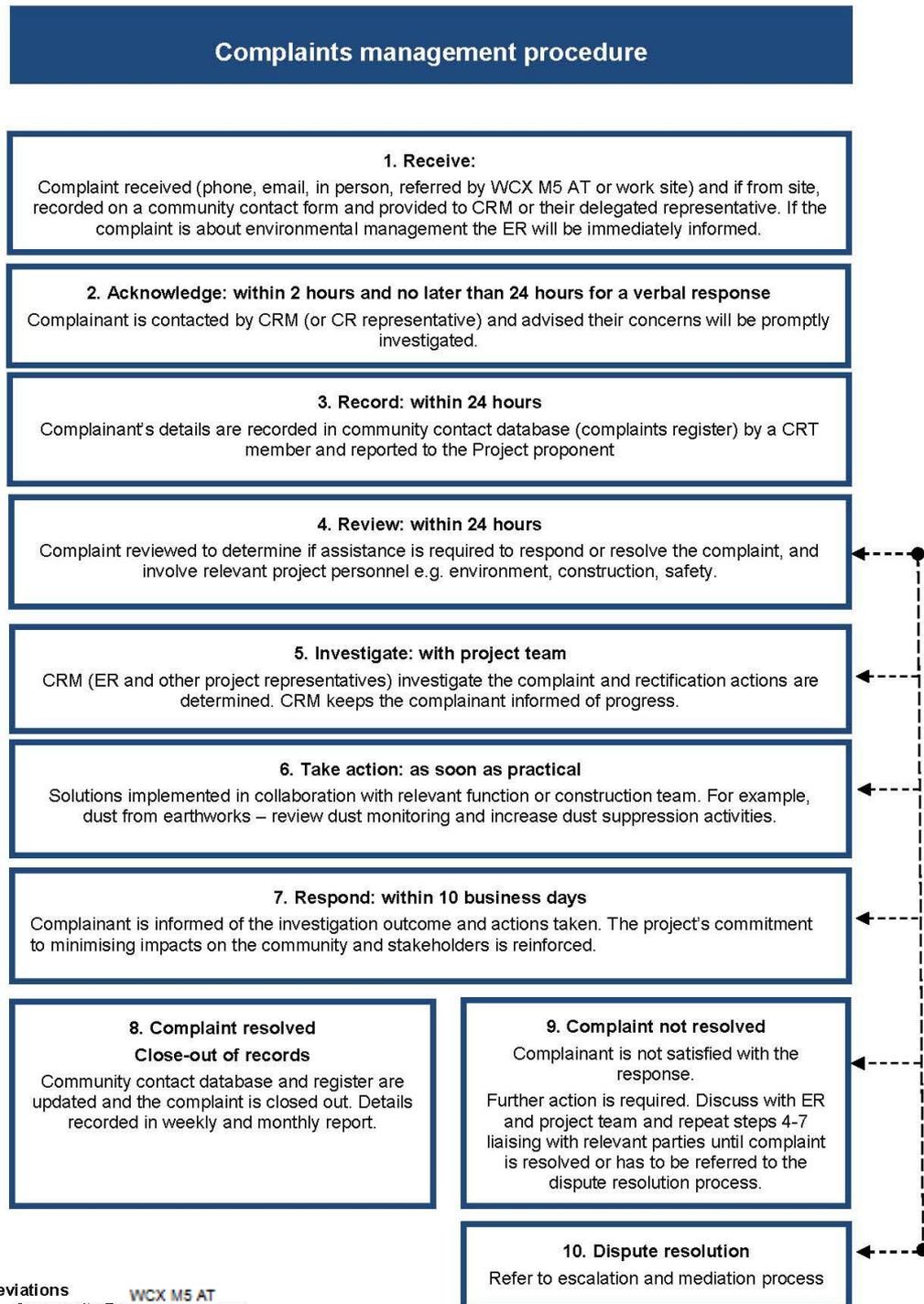
Every effort will be made to resolve the complaint at the first point of contact, by providing a solution or negotiating an agreed course of action. In situations where this is not possible, the complainant will be kept informed of the status of the investigation until the complaint is resolved. At any point during this time the complainant can request mediation.

All complaints will be registered in the community contact database. Information collected will be used to track issues causing concern to the community and shared with construction teams to ensure the appropriate mitigation measures are incorporated in ongoing works planning and delivery.

For all environmental management complaints, the ER will be consulted. The complaint will also be immediately notified to the Environment and Sustainability Manager.

Information on the status of complaints will be reported monthly and quarterly, including responses and close out times.

Figure 1: Complaints Management Procedure



**Abbreviations**

WCX M5 AT  
 CRM – Community Relations manager  
 CR – Community Relations Representative  
 CRT – Community Relations Team  
 SMC – Asset Trustee  
 ER – Environmental Representative

## Escalation Process

If a situation, issue or complaint is unable to be resolved by the CRM, it will be escalated to the senior member of the Project team, the Environmental Representative (ER) and or to the WCX M5 AT as outlined in Table 1.

As required under the Condition of Approval D1 an experienced and independent Environmental Representative will be employed for the duration of construction and *'be consulted in responding to the community concerning the environmental performance of the SSI, where the resolution of points of conflict between the WCX M5 AT and the community is required.'*

Environmental management matters could include:

- Heritage
- Noise (and work hours)
- Vibration
- Fauna and Flora
- Dust and air impacts
- Flooding
- Waste management
- Spoil and contamination land management

Issues other than environmental could include:

- Safety (around work sites including public areas)
- Property damage / claim process
- Parking and access
- Impacts on business operations
- Traffic and haulage
- Temporary noise barriers
- Urban and landscape design

Table 1: Complaints Escalation Process

Issue	Escalation Process
Environmental matter	<ul style="list-style-type: none"> <li>• If not resolved in the first instance by the CRM and site based environmental officer</li> <li>• Referred to Environment and Sustainability Manager and the Environmental Representative</li> <li>• If not resolved, implement the mediation process</li> </ul>
Health and Safety	<ul style="list-style-type: none"> <li>• Referred to Health and Safety Manager</li> <li>• If not resolved, referred to Project Director</li> <li>• If not resolved implement a mediation process</li> </ul>
Consultation / Communication	<ul style="list-style-type: none"> <li>• Referred to Community Relations Manager</li> <li>• If not resolved, referred to Support Services Director</li> <li>• If not resolved referred to the Project Director</li> <li>• If not resolved implement the mediation process</li> </ul>
Construction issue	<ul style="list-style-type: none"> <li>• If not resolved in the first instance by the CRM and site based Construction or Tunnelling Manager</li> <li>• Referred to Construction Director or Tunnelling Director</li> <li>• If not resolved, referred to Project Director</li> <li>• If not resolved implement the mediation process</li> </ul>
Other	<ul style="list-style-type: none"> <li>• If not resolved in the first instance by the CRM</li> <li>• Referred to Project Director</li> <li>• If not resolved, referred to the WCX M5 AT</li> <li>• If not resolved implement the mediation process</li> </ul>

## Mediation process

CDS-JV is committed to using all reasonable endeavours to resolve community issues and complaints associated with the delivery of construction works. Our philosophy is to initiate rather than react, however in the event in which a timely resolution of a complaint or issue has not been achieved bilaterally between the Project team and the stakeholder the complainant will be invited to attend a

# Ancillary Facilities Management Plan



mediation session conducted by an independent and suitably qualified mediation specialist. The mediation session will aim to:

- obtain a resolution acceptable to both parties
- define a timeframe for actions associated with the resolution
- formalise the resolution by obtaining written agreement regarding the agreed actions (this document will enable CDS-JV to complete the complaints register and consultation manager event). The mediation expert will determine the number of mediation sessions depending on the nature of the issue. There will be a maximum of three sessions.
- if no agreement is reached at the sessions, the complaint will be closed out and the person who submitted the feedback will be advised that reasonable attempts to resolve the matter were unsuccessful. The same outcome will apply if the person who submitted the feedback declines the invitation to attend these sessions.

Records of the dispute and mediation will be captured in the community contact database and register along with any associated documents and photographs. All disputes involving community representatives will be managed by the CDS-JV's community relations manager (CRM).

## Target Response Times

As indicated in Table 2 below, enquiries and complaints will be acknowledged by the CRT within - eight working hours for enquiries and two hours for complaints.

Where the feedback, enquiry or complaint cannot be resolved satisfactorily (or closed out) during the initial contact, a follow-up verbal response (within 24 hours) will be provided to the enquirer with an update on progress and the action proposed to resolve the matter.

Table 2: Target response times

Contact	Initial Contact/ Acknowledgement	Resolution Time #
<b>Complaints</b> - Telephone/email/fax or personal contact (details maintained in a complaints register and report monthly on the receipt and responses to complaints in CDS-JV's monthly progress report) # In the event that are complaint cannot be resolved within the required times frame	Within 2 hours Follow-up verbal response within 24 hours	10 business days
<b>Enquiries</b> - Telephone/email/fax or personal contact	Within 8 hours	5 business days
<b>Written communication</b> – initial response (allows for the preparation of written response) # If contact details are provided (phone) then an initial response will be provided within 2 hours, where possible	Posted acknowledgement of the enquiry/complaints within 1 business day	10 business days
<b>Community representations</b> - (maintain a register of all representation and provide a report on the status of responses.	Acknowledge within 5 business days	Respond within 10 business days



## Appendix L: Minor ancillary facilities approvals

# Minor Ancillary Facilities Plan: Eve Street Compound

Project Name: WestConnex New M5

<b>Project number:</b>	15.7020.2597
<b>Document number:</b>	M5N-ES-PLN-ARN-0005
<b>Revision date:</b>	22/07/2016
<b>Revision:</b>	01

## Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
00	14/07/16	CDS-JV				
01	22/07/16	CDS-JV				
Signature:						

# Minor Ancillary Facilities Plan: Eve Street Compound



## Eve Street Compound

The Eve Street Compound is a property owned and maintained by Roads and Maritime Services (RMS). In accordance with the New M5 EIS, CPB, Dragados and Samsung C&T Joint Venture (CDS-JV) will be constructing new Green and Golden Bell Frog Ponds. As per B15 in the *Infrastructure Planning Approval (SSI6788)*, construction of the ponds and facilities must occur within 1 year of construction. CDS-JV will commence construction activities between December 2016 and February 2017.

## Scope of the proposed Eve Street Compound for Temporary HV Power Enabling Works

CDS-JV requests use of the Eve Street Compound as minor ancillary facility for the Temporary HV Power Enabling Works to:

- Store minor plant and equipment,
- Store materials like conduit and cable,
- Provide limited off-street car parks for workforce, and
- Provide crib hut facilities for supervisors for documentation.

Table 1 outlines the key impacts involved in using the Eve Street Compound for Temporary HV Power Enabling Works and the environmental controls CDS-JV will implement to mitigate these impacts.

Table 1 Key Environmental Impacts

Key Impact	Key environmental
Traffic and access by construction vehicles (LV and delivery trucks)	The only access to this site will be through the existing stabilized access point. This will be maintained and monitored through the duration of these activities listed above.
Noise and vibration due to staff, vehicles, loading and unloading activities	As per EPL #20772, L4 Hours of Operation. Pre-starts will occur at the active work areas with no cars accessing this compound outside of standard construction hours.
Ground disturbance resulting in erosion	Ground disturbance will be avoided in the first instance. Erosion and Sediment Controls will be installed as required.
Leaks or spills	Spill kit will be available on site. Limited chemicals will be kept on site. All chemicals will be stored in accordance with the Site Environmental Plan.
Community interaction	Any interactions with the community will be direct to the Project Hotline and reported to the Community Team. There will be ongoing engagement with nearby residents to keep them informed of activities on site.
Dust Nuisance	Ground disturbance will be avoided in the first instance and if required, dust suppression will be applied.
Stockpile Management	In the event that material is required to be stockpiled within this compound, erosion and sediment controls will be installed prior to arrival of the material.
Waste	Skips will be provided on site by a licensed service provider. Locations of skips are illustrated on the Site Environmental Plan.

## Justification for Eve Street Compound for Temporary HV Power Enabling Works

The Temporary HV Power Enabling Works involve the installation of cabling and related fixtures to connect Ausgrid utilities from the existing network to four of the approved construction compounds along the alignment of the NewM5 project. These works are to be carried out in highly urbanised environments with the routes aligned within road reserves (including footpaths). The active work areas will progressively move along the alignment and are highly restricted in space for laydown, storage and amenities.

Other alignment works (for Bexley and St Peters Interchange) have laydown and facilities available on the existing construction compounds. Due to the nature and program of the site establishment activities at the Arncliffe Construction Compound, the Temporary HV Power Enabling Works for Alignment 1 (Arncliffe) cannot be utilised. The use of this Compound as a minor ancillary facility for the Temporary HV Power Enabling Works would assist the time and efficient execution of these activities due to the easy and close access to materials.

The use of this Compound would not impact the construction of the GGBF Habitat Ponds as Temporary HV Power Enabling Works are scheduled to be completed in late November 2016.

# Minor Ancillary Facilities Plan: Eve Street Compound



## Compliance with Infrastructure Approval

Ref	Detail of condition	Evidence of compliance
D64	The secretary's approval is not required for minor ancillary facilities (e.g. lunch sheds, office sheds and portable toilet facilities etc.) that do not comply with the criteria set out in condition D62 of this approval and which:	This document.
(a)	Are located within an active construction zone within the approved SSI footprint; and	The site forms part of the active construction zone for the project as it comprises the site for construction of the Green and Golden Bell Frog Habitat Ponds required by Condition B15.  The <i>Arncliffe Compound</i> featured in the Premise Map (M5N-ES-PWD-0001-02).
(b)	Have been assessed by the Environmental representative to have -	
	(i) Minimal amenity impacts to the surrounding residences, with consideration to matters such as noise and vibration impacts, traffic and access impacts, dust and odour impacts and visual (including light spill) impacts; and	Site Environmental Plan (M5N-ES-SEP-ARN-0003)  Environmental controls outlined in Table 1 will be monitored through scheduled Environmental Inspections conducted by the Environmental Advisor and Supervisor.
	(ii) Minimal environmental impact in respect to waste management, and no impacts on flora and fauna, soil and water, and heritage beyond those approved for the SSI; and	
(c)	Have environmental and amenity impact that can be managed through the implementation of environmental measures detailed in the CEMP required under condition D67.	All relevant management measures contained in Appendix A and Appendix B of the Ancillary Facilities Management Plan (M5N-ES-PLN-ARN-0001-02) will be implemented for the works. All relevant management measures contained in the CEMP and sub-plans would be implemented during the construction phase.

Table 1 below outlines how the Eve Street Compound complies with D64 and the means of compliance.

---

# Minor Ancillary Facilities Plan: Eve Street Compound

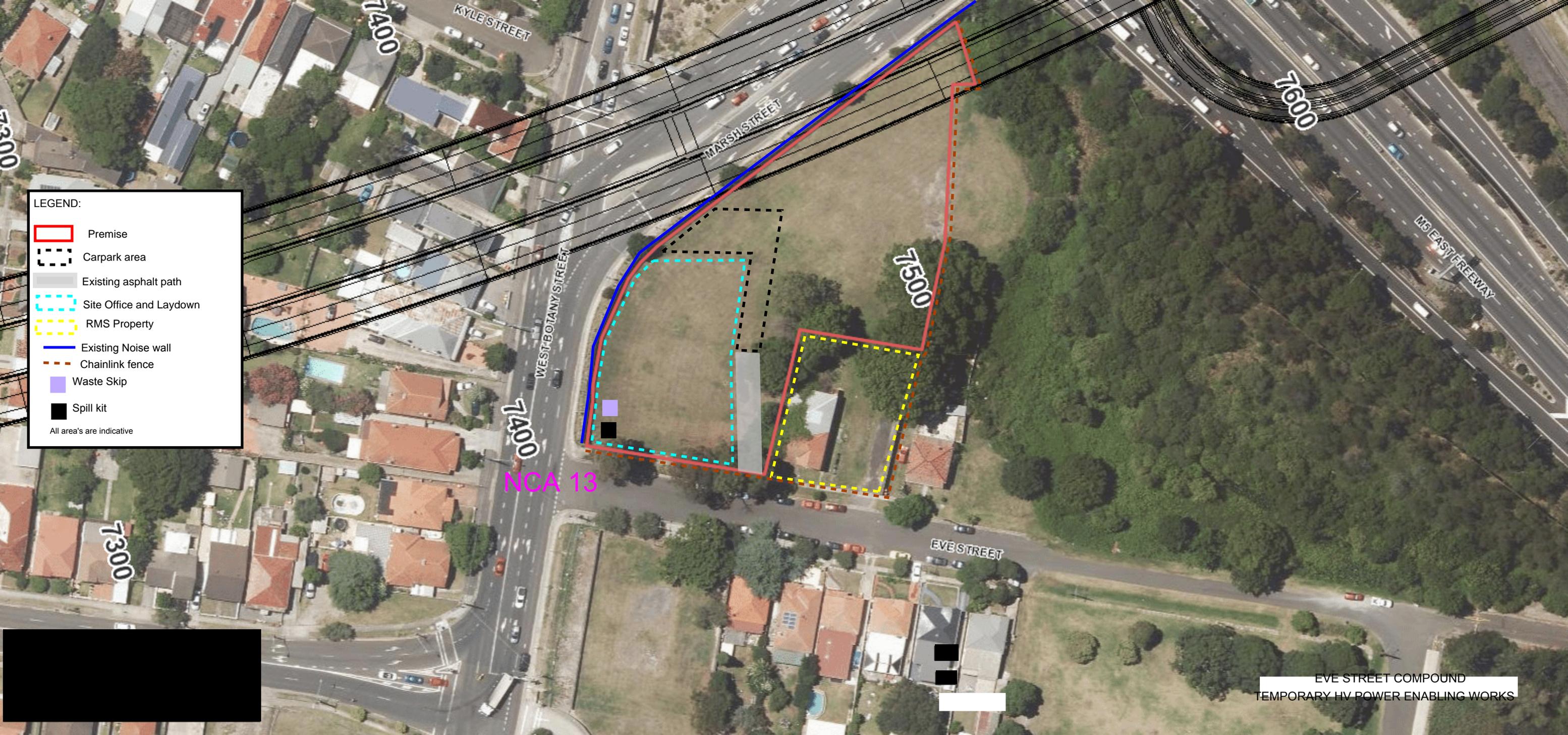


## Appendix A Eve Street Compound Site Environmental Plan

**LEGEND:**

- Premise
- Carpark area
- Existing asphalt path
- Site Office and Laydown
- RMS Property
- Existing Noise wall
- Chainlink fence
- Waste Skip
- Spill kit

All area's are indicative



EVE STREET COMPOUND  
 TEMPORARY HV POWER ENABLING WORKS

# WESTCONNEX NEW M5 PROJECT – Eve Street Compound Site Environmental Plan (SEP)

Document Number: M5N-ES-SEP-ARN-0003-00

SEP Scope and Timeframe
<p><b>This SEP covers mandatory environmental management measures relevant to activities which will be undertaken during Westconnex New M5 High Voltage Power Connection including:</b></p> <ul style="list-style-type: none"> <li>• Store minor plant and equipment,</li> <li>• Store materials like conduit and cable,</li> <li>• Provide off-street car parks for workforce, and</li> <li>• Provide amenities and toilet facilities for the workforce.</li> </ul>

Key Potential Environmental Impacts
<ul style="list-style-type: none"> <li>• Impact on the community from noise and vibration</li> <li>• Increased dust and poor air quality</li> <li>• Impact to water from erosion, sedimentation or discharge to stormwater</li> <li>• Unexpected discovery or disturbance of ASS, contamination, archaeological and cultural heritage items</li> </ul>

General Control Measures	Who
Refer to the CDS-JV Procedures listed in the heading of each table. These Procedures are available online in the CPB Project Management System, on Incite or through Teambinder.	
No clearing or earthworks without a <b>Permit to Clear Land or Vegetation</b> (MSID-4-363)	Superintendent
Adhere to construction boundary and do not access Environmental "No-Go" Zones without <b>Permit to Enter No Go Zone</b> (MSID-4-199)	Superintendent
No discharge of water without <b>Permit to Dewater</b> (MSID-4-198)	Superintendent Subcontractor Supervisor

Soil and Water Refer to Manage Soil and Water Procedure (M5N-ES-PRC-PWD-0035)	
Key Management Measures	Who
No ground disturbance is anticipated at this site. erosion and sediment controls will be installed where required.	Superintendent Subcontractor Supervisor
Cleared areas must be kept to a minimum and be progressively rehabilitated as they become available.	Superintendent Subcontractor Supervisor
All materials must be stockpiled away from water flow paths.	Superintendent Subcontractor Supervisor
Sediment laden water (dirty water) captured onsite must be preferentially reused eg. dust control.	Superintendent Subcontractor Supervisor
No transfer/discharge will be made without a <b>Permit To Dewater</b> (MSID-4-198) approved by the Environmental Officer including runoff into stormwater drains.	Superintendent Subcontractor Supervisor

Waste Refer to Manage Waste Procedure (M5N-ES-PRC-PWD-0044)	
Key Management Measures	Who
All wastes need to be classified, stored, tracked, transported and treated in accordance with contractual and regulatory requirements, including the use of licensed transporters and receiving facilities. See the Waste Management Flowchart (M5N-ES-FLC-PWD-0009) for further information.	Subcontractor Supervisor
Storage containers (bins, skips, tanks, etc) are provided at each work area in sufficient numbers to facilitate segregation of waste at the source of generation. The correct bin type must be used to avoid contamination.	Subcontractor Supervisor

Air Quality & Dust Refer to Manage Air Quality Procedure (M5N-ES-PRC-PWD-0040)	
Key Management Measures	Who
If visible dust is seen leaving site, all dust generating activities must cease. Refer to the Air Quality Flowchart for further information (M5N-ES-FLC-PWD-0010)	Superintendent Subcontractor Supervisor
Disturbed areas must be treated with dust suppressants (e.g. water trucks or chemical suppressants) especially in high risk areas and/or during high risk days.	Superintendent Subcontractor Supervisor
Stabilised access must be established for each area to minimise mud on public roads. Sweepers shall be used periodically to clean public roads where mud has been deposited.	Superintendent Subcontractor Supervisor
Burning of any materials is prohibited onsite.	Superintendent

Noise & Vibration Refer to Manage Environmental Noise Issues Procedure (M5N-ES-PRC-PWD-0043)	
Key Management Measures	Who
Undertake construction activities within the nominated hours of work to comply with contractual and legal requirements.	Superintendent
Any works that need to occur outside these hours must be approved by the Environmental Coordinator. Refer to the Out of Hours Work Approval Flowchart (M5N-ES-FLC-PWD-0006) for further information.	Superintendent

Hours of Work Refer to Manage Environmental Noise Issues Procedure (M5N-ES-PRC-PWD-0043)	
<b>Construction Works</b>	

Monday to Friday	7am to 6pm
Saturday	8 am to 1pm
No work shall be carried out on any Sunday and public holidays. <b>High impact noise works may be undertaken in continuous blocks not exceeding 3 hours with a minimum respite of 1 hour between each block.</b>	
Approval must be issued by the Environmental Team for work outside of these hours. Refer to the <b>Out of Hours Approval Flowchart</b> (M5N-ES-FLC-PWD-0006).	

Flora, Fauna and Weeds Refer to Manage Flora and Fauna Procedure (M5N-ES-PRC-PWD-0042)	
Key Management Measures	Who
Prior to any disturbance, clearing or grubbing activities in any locations the following must be in place; <ul style="list-style-type: none"> <li>• A Permit to Clear Land or Vegetation (MSID-4-363).</li> <li>• No-go Zones for significant flora and fauna must be established, fenced/flagged or sign posted prior to commencement of clearing.</li> <li>• A wildlife catcher/spotter needs to conduct a search for any wildlife that may need to be removed and relocated.</li> </ul> Refer to the Vegetation Clearing Flowchart (M5N-ES-FLC-PWD-0011) for further information.	Superintendent
If a threat to an animal is evident onsite you must contact your supervisor and the Environmental Officer immediately. Works may need to cease if the animal is in danger or harmed until it has been relocated. Refer to the Fauna Handling Flowchart (M5N-ES-FLC-PWD-0004)	Superintendent
All plant should remain on designated areas.	Superintendent Subcontractor Supervisor

Hazardous Materials Refer to Manage Hazardous Substances Procedure (M5N-ES-PRC-PWD-0041)	
Key Management Measures	Who
Storage and handling of hazardous substances must be in strict accordance with the applicable Standards and SDS.	Subcontractor Supervisor
Hazardous substances must be stored in a bunded area with a minimum holding capacity of 110% of the largest container within the bund or 25% of the total capacity of all containers within it, whichever is the greatest.	Subcontractor Supervisor
Spill kits must be located adjacent to all hazardous substance storage units, in refuelling and maintenance areas and at designated locations as per the Site Environment Plan (SEP).	Subcontractor Supervisor

Refuelling must not occur within 30m of a waterway (without appropriate controls in place).	Subcontractor Supervisor
In the event of a spill, the Spill Response Flowchart should be followed. After ensuring the area is safe, bund and stop the source of the spill, contact your supervisor and clean up.	Superintendent Subcontractor Supervisor

Heritage Refer to Manage Cultural Heritage Procedure (M5N-ES-PRC-PWD-0039)	
Key Management Measures	Who
All cultural heritage items and places to be preserved will be fenced/flagged and sign posted as No-Go Zones and shown on relevant site plan. These No-Go Zones must be observed at all times until a Permit to Enter No-Go Zone has been authorised. No-Go Zones at the SPI site are identified on the SEP.	Superintendent
The Unexpected Discovery of Heritage Item Flowchart (M5N-ES-FLC-PWD-0002) will be executed in the event that a heritage object is discovered that may be a suspected heritage item. Work must cease immediately and notify the Superintendent and Environmental Officer.	Superintendent

Contaminated Land Refer to Manage Contaminated Land Procedure (M5N-ES-PRC-PWD-0039)	
Key Management Measures	Who
The Unexpected Discovery of Contaminated Land Flowchart (M5N-ES-FLC-PWD-0001) will be executed in the event that contaminated materials are discovered or suspected. Works must cease and the Environmental Officer must notified immediately.	Superintendent Subcontractor Supervisor
Contaminated land will need to be handled, stockpiled, reused and/or disposed of as per the Manage Contaminated Land Procedure (M5N-ES-PRC-PWD-0036)	Superintendent Subcontractor Supervisor
The movement of materials must be tracked via the Waste management Register (M5N-ES-PLN-PWD-008).	Superintendent

Acid Sulphate Soils (ASS) Refer to Manage Acid Sulfate Soils Procedure (M5N-ES-PRC-PWD-0038)	
Key Management Measures	Who
The Unexpected Discovery of Contaminated Land Flowchart (M5N-ES-FLC-PWD-0001) will be executed in the event that contaminated materials are discovered or suspected. Works must cease and the Supervisor and Environmental team must be notified immediately.	Superintendent Subcontractor Supervisor

All known or discovered areas of ASS/PASS will be communicated to those involved via the induction, toolbox talks, pre starts and Site Environmental Plans.	Environmental Manager
Disturbance of surface and subsurface soils in potential ASS/PASS must be minimised.	Superintendent
The movement of ASS/PASS materials must be tracked via the Waste management Register (M5N-ES-PLN-PWD-008).	Subcontractor Supervisor
Water runoff from ASS/PASS stockpiles must be contained, treated or disposed to ensure there is no pollution of land or waterways.	Subcontractor Supervisor
A spill of ASS/PASS material outside the ASS/PASS storage and/or treatment areas or evidence of impacts on waterways must be reported to the supervisor and Environmental team immediately.	Superintendent

Licences and Approvals	
Approval	Details
Infrastructure Approval	SSI 6788 Issued by the Department of Planning and Environment
Environmental Protection Licence	EPL # 20772 Issued by the Environmental Protection Authority M5N-ES-LIC-PWD-0001

Community Notification	
Approval	Details
Infrastructure Approval C1	Owners and occupants of properties adjacent to the works will be provided with advanced notification of relevant project schedules, construction works and any changes to access arrangements.
Environmental Protection Licence	EPL # 20772 Issued by the Environmental Protection Authority M5N-ES-LIC-PWD-0001

Evaluating Performance	Who
Daily, inspect the condition of protection and control measures and arrange maintenance, as required.	Superintendent Subcontractor Supervisor
Weekly site inspections.	Superintendent and Environmental Team
Event triggered inspections	Superintendent and Environmental Team

---

# Minor Ancillary Facilities Plan: Eve Street Compound



## Appendix B Ancillary Facility Application



## Appendix D: Ancillary Facility Application

Step 1 – Ancillary facilities information			
<b>Site location (attach map for reference):</b> <i>Eve Street Compound. See SEP attached.</i>			
<b>Date works to commence:</b> <i>25/07/16 (PENDING CEMP APPROVAL FROM DPSE)</i>		<b>Date works to finish:</b> <i>November - December 2016.</i>	
<b>Proposed activities (select all that apply):</b>			
Office and amenities	<input checked="" type="checkbox"/>	Construction compound	<input type="checkbox"/>
Laydown area	<input checked="" type="checkbox"/>	Parking	<input checked="" type="checkbox"/>
Batch Plant	<input type="checkbox"/>	Materials storage compound	<input type="checkbox"/>
Maintenance workshop	<input type="checkbox"/>	Material stockpile area	<input type="checkbox"/>
Other _____	<input type="checkbox"/>	Other _____	<input type="checkbox"/>
<b>Please provide details regarding the proposed ancillary facility.</b>			
<b>Is the proposed facility within the approved construction footprint?</b>		<i>Yes.</i>	
<b>Distance to the nearest waterway?</b>		<i>230m</i>	
<b>Proposed access route?</b>		<i>Access via eve street from West Botany Road.</i>	
<b>Do heavy vehicles need to travel through residential areas?</b>		<i>Yes.</i>	
<b>Is the proposed site on relatively level ground?</b>		<i>Yes.</i>	
<b>Distance to nearest residential receiver?</b>		<i>17m.</i>	
<b>Is vegetation clearance or trimming required? If so, what is the area in hectares?</b>		<i>No.</i>	
<b>Will the facility impact heritage?</b>		<i>No.</i>	
<b>Will the facility affect the land use of adjacent properties?</b>		<i>No.</i>	
<b>Is the facility above the 20 ARI flood level?</b>		<i>Yes.</i>	
<b>Will out of hours works be required to establish facility? During operation of the facility?</b>		<i>No. If Required, the Manage Environmental Noise Procedure will be followed.</i>	
<b>Potential noise and vibration impacts?</b>		<i>yes see attached Plan.</i>	
<b>Potential dust or odour impacts?</b>		<i>NO. see attached Plan</i>	
<b>Potential visual or light spill impacts?</b>		<i>NO.</i>	
<b>Potential waste management impacts?</b>		<i>NO. see attached Plan.</i>	
<b>Potential soil and water impacts?</b>		<i>Driving on turf when wet to be Yes. avoided, see attached plan.</i>	

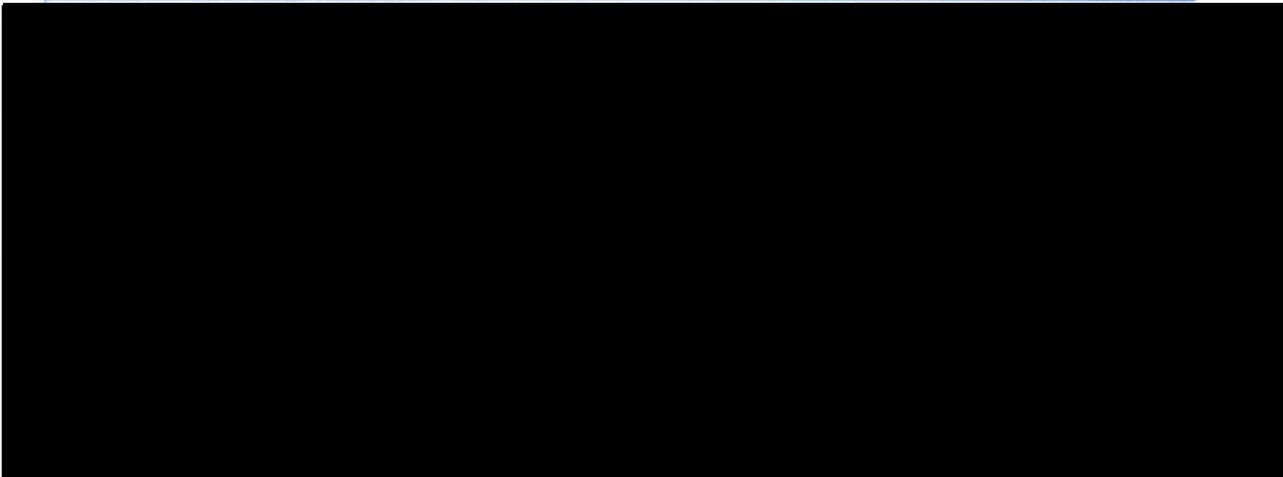
QQ

# Ancillary Facilities Management Plan

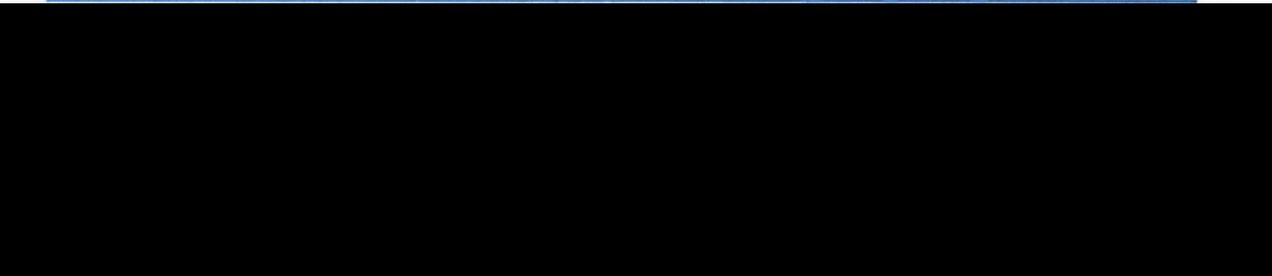


Step 2 – Environmental and Sustainability Manager Review	
Is additional assessment required (e.g. noise, biodiversity, heritage)?	No.
Is the proposed facility compliant with CoA D62 criteria?	No.
Is the ancillary facility included in the EIS?	NO.
Does the ancillary facility have minimal amenity impacts to surrounding residences?	Yes.
Does the ancillary facility have minimal environmental impact?	Yes.
Can potential impacts be managed through existing controls identified in the CEMP?	Yes.

## Step 3 – Sign off



## Step 4 – Environmental Representative sign off





# Minor Ancillary Facilities Plan: Albert Street Compound

Project Name: WestConnex New M5

<b>Project number:</b>	15.7020.2597
<b>Document number:</b>	M5N-ES-PLN-LRW-0003
<b>Revision date:</b>	21/09/2016
<b>Revision:</b>	00

## Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
00	14/07/16	CDS-JV	CDS-JV		CDS-JV	
Signature:						

# Minor Ancillary Facilities Plan

## Albert Street Compound



### Albert Street Compound

The Albert Street Compound (4-16 Campbell St, St Peters) is a property owned by Roads and Maritime Services (RMS) forming part of the construction area for the New M5. The compound will eventually form part of the widened Campbell St. The Property is in the possession of CDS-JV.

### Scope of Albert Street Compound

CDS-JV requests use of the Albert Street Compound as minor ancillary facility for investigation and construction activities to:

- Store minor plant and equipment,
- Store materials like pipes and sand,
- Provide limited off-street car parks for workforce, and
- Provide minor worker amenities such as port-a-loos

Table 1 outlines the key impacts involved in using the Albert Street Compound and the environmental controls CDS-JV will implement to mitigate these impacts.

Table 1 Key Environmental Impacts

Key Impact	Key environmental
Traffic and access by construction vehicles (LV and delivery trucks)	Access to this site will be through the existing stabilized access point. Access to the compound will be via a left turn off Campbell Rd. Access from the compound will be via a left turn into Albert St.
Noise and vibration due to staff, vehicles, loading and unloading activities	The compound will be operated in accordance with EPL #20772. If required, use of the compound out of hours will be in accordance with EPL #20772 and CDS Manage Environment Noise Issues Procedure.
Ground disturbance resulting in erosion	The site is paved. While the site is used as a compound it is not proposed that the paving will be removed.
Leaks or spills	Spill kit will be available on site. Limited chemicals will be kept on site. All chemicals will be stored in accordance with the Site Environmental Plan.
Community interaction	Any interactions with the community will be direct to the Project Hotline and reported to the Community Team. Engagement with the community will be in accordance with the Community Involvement Plan.
Dust Nuisance	Stockpiles of construction materials prone to creating dust will be covered.
Stockpile Management	In the event that material is required to be stockpiled within this compound, erosion and sediment controls will be installed prior to arrival of the material.
Waste	A skip will be provided on site by a licensed service provider. Location of the skip is indicatively illustrated on the Site Environmental Plan.
Flora	Trees on the compound will be cleared during the Campbell Rd widening. Prior to this work tree protection zones in accordance with M5N-ES-RPT-PWD-0002-01 Tree Removals and Plantings will be installed.
Light Spill	Should lighting for the compound be required it will be designed to create minimal amenity impacts to the surrounding residences.

### Justification for Albert Street Compound

Approval for this compound is being sought under Ministers Condition of Approval D64 as a Minor Ancillary Facility. Table 2 below demonstrates compliance for the use of this site as a Minor Ancillary Facility. This compound will facilitate construction of the New M5. The nearby Campbell St Compound identified in the EIS will provide future service to this area of the Project, however it will not be constructed until land acquisition and demolition at the Campbell St Compound location has been undertaken (estimated for early 2<sup>nd</sup> quarter 2017).

# Minor Ancillary Facilities Plan

## Albert Street Compound



### Compliance With infrastructure Approval

Ref	Detail of condition	Evidence of compliance
D64	The secretary's approval is not required for minor ancillary facilities (e.g. lunch sheds, office sheds and portable toilet facilities etc.) that do not comply with the criteria set out in condition D62 of this approval and which:	Scope of this Report.
(a)	Are located within an active construction zone within the approved SSI footprint; and	The compound is within the construction footprint defined in the SSI6788 Approval as 'The area shown as 'construction footprint' in the Figures 6-1 to 6-4, inclusive, in Section 6 of the EIS'.  Figure 6-4 from the EIS is attached as Appendix 2.
(b)	Have been assessed by the Environmental representative to have -	
	(i) Minimal amenity impacts to the surrounding residences, with consideration to matters such as noise and vibration impacts, traffic and access impacts, dust and odour impacts and visual (including light spill) impacts; and	CDS-JV seeks concurrence from the New M5 Environmental Representative that the Albert St Compound, operated in accordance with this document, is consistent with Condition D64(b)
	(ii) Minimal environmental impact in respect to waste management, and no impacts on flora and fauna, soil and water, and heritage beyond those approved for the SSI; and	Site Environmental Plan (M5N-ES-SEP-LRW-0001)  Environmental controls outlined in Table 1 and the Site Environment Plan will be monitored through scheduled Environmental Inspections in accordance with the CEMP.
(c)	Have environmental and amenity impact that can be managed through the implementation of environmental measures detailed in the CEMP required under condition D67.	All relevant management measures contained in Appendix A and Appendix B of the Ancillary Facilities Management Plan (M5N-ES-PLN-ARN-0001-02) will be implemented for the works. All relevant management measures contained in the CEMP and sub-plans would be implemented during the construction phase.

# Minor Ancillary Facilities Plan

---

## Albert Street Compound



### Appendix 1 Site Environment Plan

# WESTCONNEX NEW M5 PROJECT - Site Environmental Plan (SEP) Albert St Compound

Document Number: M5N-ES-SEP-LRW-0001-00

SEP Scope and Timeframe
<p><b>This SEP covers mandatory environmental management measures relevant to activities which will be undertaken during Westconnex. Activities includes:</b></p> <ul style="list-style-type: none"> <li>Construction and operation of Albert St Compound</li> </ul>

Key Potential Environmental Impacts
<ul style="list-style-type: none"> <li>Impact on the community from noise and vibration</li> <li>Increased dust and poor air quality</li> <li>Impact to water from erosion, sedimentation or unapproved discharge</li> <li>Unexpected discovery or disturbance of ASS, contamination, archaeological and cultural heritage items</li> <li>Impact to protected flora/fauna in No-Go Zones</li> <li>Import of weeds, pests and pathogens</li> <li>Incorrect waste disposal</li> <li>Ineffective use or storage of dangerous goods and hazardous substances.</li> </ul>

General Control Measures	Who
Refer to the CDS-JV Procedures listed in the heading of each table. These Procedures are available online in the CPB <b>Project Management System</b> , on <b>Incite</b> or through <b>Teambinder</b> .	
No clearing or earthworks without a <b>Permit to Clear Land or Vegetation</b> (MSID-4-363)	Project Manager
Adhere to construction boundary and do not access Environmental "No-Go" Zones without <b>Permit to Enter No Go Zone</b> (MSID-4-199)	Project Manager
No discharge of water without <b>Permit to Dewater</b> (MSID-4-198)	Supervisor

Soil and Water	
Refer to Manage Soil and Water Procedure (M5N-ES-PRC-PWD-0035)	
Key Management Measures	Who
An <b>Erosion and Sediment Control Plan</b> must be progressively implemented upon the commencement of site establishment activities.	Senior Project Engineer (SPE), Supervisor
Cleared areas must be kept to a minimum and be progressively rehabilitated as they become available.	SPE Superintendent Supervisor
All materials must be stockpiled away from water flow paths.	Supervisor Foreman
Sediment laden water (dirty water) captured onsite must be preferentially reused eg. dust control.	Supervisor
No transfer/discharge will be made without a <b>Permit To Dewater</b> (MSID-4-198) approved by the Environmental Coordinator.	Superintendent Supervisor
An adequate number of concrete washout facilities must be maintained when concreting. The washout facilities will be bunded and lined.	Supervisor

Waste	
Refer to Manage Waste Procedure (M5N-ES-PRC-PWD-0044)	
Key Management Measures	Who
All wastes need to be classified, stored, tracked, transported and treated in accordance with contractual and regulatory requirements, including the use of licensed transporters and receiving facilities. See the Waste Management Flowchart (M5N-ES-FLC-PWD-0009) for further information.	Supervisor Foreman
Storage containers (bins, skips, tanks, etc) are provided at each work area in sufficient numbers to facilitate segregation of waste at the source of generation. The correct bin type must be used to avoid contamination.	Supervisor Foreman
Excess concrete and concrete washout is not to be discharged to land or storm water; a concrete washout facility must always be used.	Supervisor Foreman

Air Quality & Dust	
Refer to Manage Air Quality Procedure (M5N-ES-PRC-PWD-0040)	
Key Management Measures	Who
If visible dust is seen leaving site, all dust generating activities must cease. Refer to the Air Quality Flowchart for further information (M5N-ES-FLC-PWD-0010)	Supervisor Foreman
Disturbed areas and haul roads must be treated with dust suppressants (e.g. water trucks or chemical suppressants) especially in high risk areas and/or during high risk days.	Supervisor Foreman
Stabilised access, rumble grids, wash bays or similar must be established for the site exits to minimise mud on public roads. Sweepers shall be used periodically to clean public roads where mud has been deposited.	Supervisor Foreman
Burning of any materials is prohibited onsite.	Superintendent

Noise & Vibration	
Refer to Manage Environmental Noise Issues Procedure (M5N-ES-PRC-PWD-0043)	
Key Management Measures	Who
Undertake construction activities within the nominated hours of work to comply with contractual and legal requirements.	Superintendent Supervisor
Any works that need to occur outside these hours must be approved by the Environmental Coordinator. Refer to the Out of Hours Work Approval Flowchart (M5N-ES-FLC-PWD-0006) for further information.	Superintendent SPE

Hours of Work	
Refer to Manage Environmental Noise Issues Procedure (M5N-ES-PRC-PWD-0043)	
Construction Works	
Monday to Friday	7am to 6pm
Saturday	8 am to 1pm
No work shall be carried out on any Sunday and public holidays. High impact noise works may be undertaken in continuous blocks not exceeding 3 hours with a minimum respite of 1 hour between each block.	
Approval must be issued by the Environmental Team for work outside of these hours. Refer to the <b>Out of Hours Approval Flowchart</b> (M5N-ES-FLC-PWD-0006).	

Flora, Fauna and Weeds	
Refer to Manage Flora and Fauna Procedure (M5N-ES-PRC-PWD-0042)	
Key Management Measures	Who
Prior to any disturbance, clearing or grubbing activities in any locations the following must be in place; <ul style="list-style-type: none"> <li>A Permit to Clear Land or Vegetation (MSID-4-363).</li> <li>No-go Zones for significant flora and fauna must be established, fenced/flagged or sign posted prior to commencement of clearing.</li> <li>A wildlife catcher/spotter needs to conduct a search for any wildlife that may need to be removed and relocated.</li> </ul> Refer to the Vegetation Clearing Flowchart (M5N-ES-FLC-PWD-0011) for further information.	Project Manager Superintendent
If a threat to an animal is evident onsite you must contact your supervisor and the Environmental Coordinator immediately. Works may need to cease if the animal is in danger or harmed until it has been relocated. Refer to the Fauna Handling Flowchart (M5N-ES-FLC-PWD-0004)	Superintendent Supervisor
The site speed limits must be obeyed at all times.	Supervisor Foreman
All plant should remain on haul roads.	Supervisor Foreman

Hazardous Materials	
Refer to Manage Hazardous Substances Procedure (M5N-ES-PRC-PWD-0041)	
Key Management Measures	Who
Storage and handling of hazardous substances must be in strict accordance with the applicable Standards and SDS.	Foreman
Hazardous substances must be stored in a bunded area with a minimum holding capacity of 110% of the largest container within the bund or 25% of the total capacity of all containers within it, whichever is the greatest.	Supervisor Foreman

Spill kits must be located adjacent to all hazardous substance storage units, in refuelling and maintenance areas and at designated locations as per the Site Environment Plan (SEP).	Supervisor Foreman
Refuelling must not occur within 30m of a waterway (without appropriate controls in place).	Supervisor Foreman
In the event of a spill, the Spill Response Flowchart should be followed. After insuring the areas is safe, bund and stop the source of the spill, contact your supervisor and clean up.	All Personnel

Heritage	
Refer to Manage Cultural Heritage Procedure (M5N-ES-PRC-PWD-0039)	
Key Management Measures	Who
All cultural heritage items and places to be preserved will be fenced/flagged and sign posted as No-Go Zones and shown on relevant site plan. These No-Go Zones must be observed at all times until a Permit to Enter No-Go Zone has been authorised.	Superintendent Supervisor
The Unexpected Discovery of Heritage Item Flowchart (M5N-ES-FLC-PWD-0002) will be executed in the event that a heritage object is discovered that may be a suspected heritage item. Work must cease immediately and notify the Superintendent and Environmental Coordinator.	Project Manager Superintendent

Contaminated Land	
Refer to Manage Contaminated Land Procedure (M5N-ES-PRC-PWD-0039)	
Key Management Measures	Who
The Unexpected Discovery of Contaminated Land Flowchart (M5N-ES-FLC-PWD-0001) will be executed in the event that contaminated materials are discovered or suspected. Works must cease and the Environmental Coordinator must notified immediately.	Superintendent Supervisor
Contaminated land will need to be handled, stockpiled, reused and/or disposed of as per the Contaminated Land Management Strategy.	Supervisor
The movement of materials must be tracked via the Materials Tracking Form.	Project Engineer
Water runoff from contaminated land and stockpiles must be contained and captured for disposal to a licenced waste facility to ensure there is no pollution of land or waterways.	Superintendent Supervisor

Acid Sulphate Soils (ASS)	
Refer to Manage Acid Sulfate Soils Procedure (M5N-ES-PRC-PWD-0038)	
Key Management Measures	Who
The Unexpected Discovery of	Superintendent

Contaminated Land Flowchart (M5N-ES-FLC-PWD-0001) will be executed in the event that contaminated materials are discovered or suspected. Works must cease and the Supervisor and Environmental Coordinator must notified immediately.	Supervisor
All known or discovered areas of ASS/PASS will be communicated to those involved via the induction, toolbox talks, pre starts and Site Environmental Plans.	Environmental Coordinator
Disturbance of surface and subsurface soils in potential ASS/PASS must be minimised.	Project Manager Supervisor
The movement of ASS/PASS materials must be tracked via the Materials Tracking Form.	Site Engineer
Water runoff from ASS/PASS stockpiles must be contained, treated or disposed to ensure there is no pollution of land or waterways.	Supervisor
A spill of ASS/PASS material outside the ASS/PASS storage and/or treatment areas or evidence of impacts on waterways must be reported to the supervisor and Environmental Coordinator immediately.	Supervisor

Licences and Approvals	
Approval	Details
Infrastructure Approval	SSI 6788 Issued by the Department of Planning and Environment
Environmental Protection Licence	EPL # 20772 Issued by the Environmental Protection Authority M5N-ES-LIC-PWD-0001

Evaluating Performance	Who
Daily, inspect the condition of protection and control measures and arrange maintenance, as required.	Foreman
Weekly site inspections.	Foreman, Supervisor and Environmental Coordinator
Event triggered inspections (rain and high wind)	Foreman, Supervisor and Environmental Coordinator



- Construction Waste Skip
- Spill Kit
- Compound Boundary
- Toilets
- Gates, Left in Campbell St & left out Albert St

Key Contacts



	Name	Initial	Date
Prepared By:			
Approved By:			



For Information Only - NOT FOR CONSTRUCTION

Original Size	A3
Coordinate System	MGA ZONE 56
Height Datum	AHD
Filename:	

WestConnex New M5

**WESTCONNEX New M5**  
**SITE ENVIRONMENT PLAN**  
**ALBERT STREET COMPOUND**

DOCUMENT NUMBER  
M5N-ES-SEP-LRW-0001

# Minor Ancillary Facilities Plan

---

## Albert Street Compound



### Appendix 2 – EIS Construction Footprint

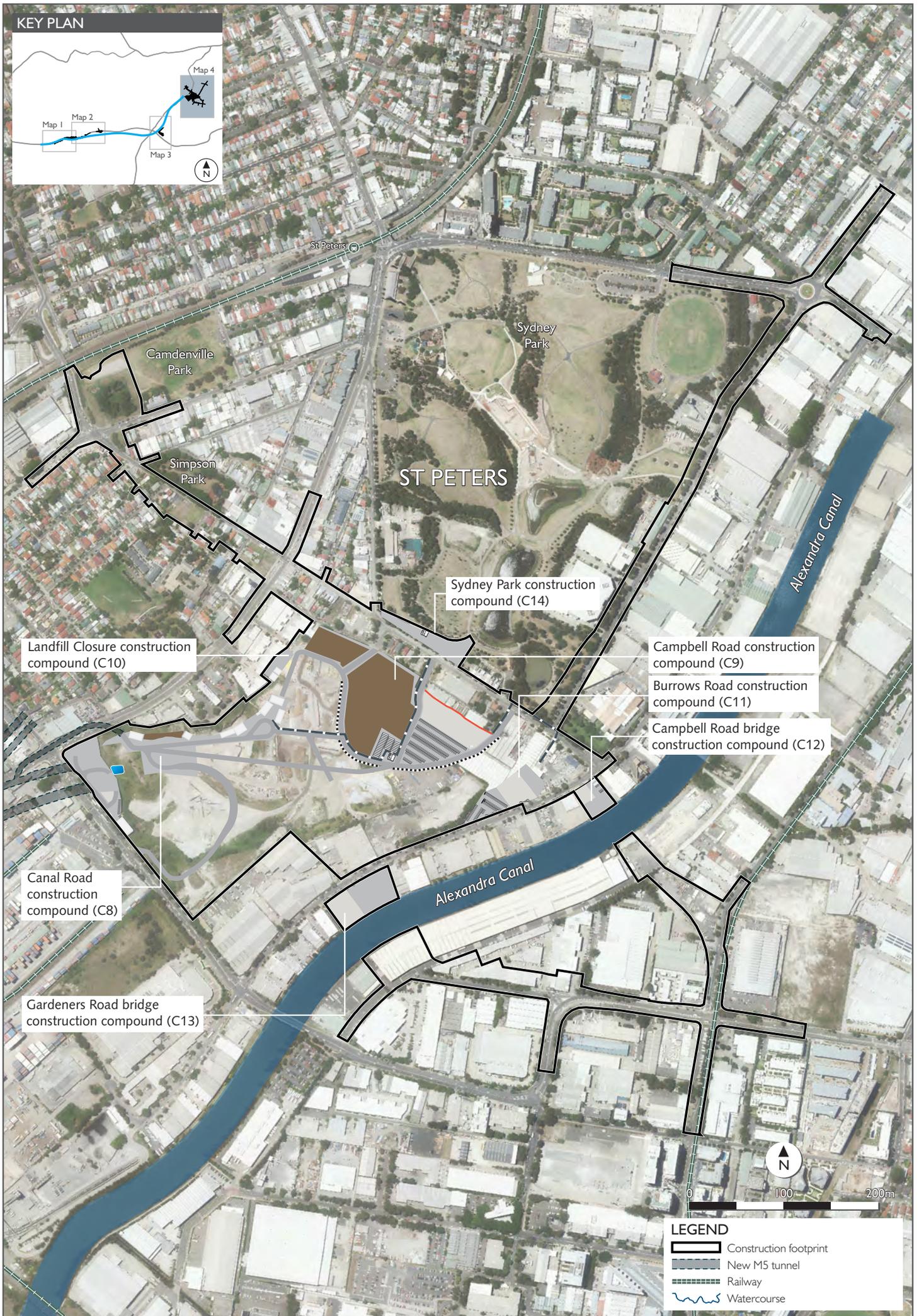


Figure 6-4 Project construction footprint - map 4

# Minor Ancillary Facilities Plan

---

## Albert Street Compound



### Appendix 3 – Ancillary Facility Application

# Ancillary Facilities Management Plan



## Appendix D: Ancillary Facility Application

Step 1 – Ancillary facilities information			
Site location (attach map for reference):			
4-16 Campbell St.			
Date works to commence:		Date works to finish:	
5/10/16		1/7/17	
Proposed activities (select all that apply):			
Office and amenities	<input checked="" type="checkbox"/> Portaboo	Construction compound	<input checked="" type="checkbox"/>
Laydown area	<input checked="" type="checkbox"/>	Parking	<input checked="" type="checkbox"/>
Batch Plant		Materials storage compound	<input checked="" type="checkbox"/>
Maintenance workshop		Material stockpile area	<input checked="" type="checkbox"/>
Other _____		Other _____	
Please provide details regarding the proposed ancillary facility.			
Is the proposed facility within the approved construction footprint?		Yes	
Distance to the nearest waterway?		560 m	
Proposed access route?		Left in from Campbell St, left out to Albert St	
Do heavy vehicles need to travel through residential areas?		Yes, in accordance with ETS	
Is the proposed site on relatively level ground?		Yes & paved	
Distance to nearest residential receiver?		15 m	
Is vegetation clearance or trimming required? If so, what is the area in hectares?		No	
Will the facility impact heritage?		No	
Will the facility affect the land use of adjacent properties?		No	
Is the facility above the 20 ARI flood level?		Yes	
Will out of hours works be required to establish facility? 1. During operation of the facility? 2.		1. No 2. Only if approved by Noise Assessment	
Potential noise and vibration impacts?		Minor vehicle noise	
Potential dust or odour impacts?		Any materials stockpiles to be covered	
Potential visual or light spill impacts?		Any lights to be directed away from whits	
Potential waste management impacts?		No, skip bin on site	
Potential soil and water impacts?		No, site is paved.	

# Ancillary Facilities Management Plan



Step 2 – Environmental and Sustainability Manager Review	
Is additional assessment required (e.g. noise, biodiversity, heritage)?	No
Is the proposed facility compliant with CoA D62 criteria?	No
Is the ancillary facility included in the EIS?	No
Does the ancillary facility have minimal amenity impacts to surrounding residences?	Yes
Does the ancillary facility have minimal environmental impact?	Yes
Can potential impacts be managed through existing controls identified in the CEMP?	Yes

Step 3 – Sign off	

Step 4 – Environmental Representative sign off	
Is this a minor ancillary facility (CoA D64)?	YES
Does this ancillary facility require DP&E approval?	NO
Does the AFMP need to be updated?	



## Appendix M: Site-specific Ancillary Facility Management Plans

# Site-specific Ancillary Facilities Management Plan: Wolli Creek

Project Name: WestConnex New M5

<b>Project number:</b>	15.7020.2597
<b>Document number:</b>	M5N-ES-PLN-PWD-0037
<b>Revision date:</b>	4/01/2017
<b>Revision:</b>	04

## Document Approval

Rev.	Date	Prepared by	Reviewed by	Recommended by	Approved by	Remarks
00	31/08/16	CDS-JV				
01	22/09/16	CDS-JV				
02	30/09/16	CDS-JV				
03	12/10/16	CDS-JV				
04	4/01/17	CDS-JV				
Signature:						



## Details of Revision Amendments

### Document Control

The Project Director is responsible for ensuring that this Plan is reviewed and approved. The Support Services Director (SSD) is responsible for updating this Plan to reflect changes to the Project, legal and other requirements, as required.

### Amendments

Any revisions or amendments must be approved by the Project Director before being distributed or implemented.

### Revision Details

Revision	Details
00	Prepared for DP&E approval
01	Updated to address DP&E comments. For ER endorsement
02	For DP&E approval
03	Updated to address DP&E comments. For DP&E approval.
04	Updated in accordance with DP&E approval



## Contents

<b>1. Introduction.....</b>	<b>4</b>
1.1 Context.....	4
<b>2. Environmental Planning Requirements.....</b>	<b>5</b>
2.1 Compliance with CoA D63.....	5
<b>3. Identify and Assess.....</b>	<b>6</b>
3.1 Detailed description of the ancillary facility.....	6
3.2 Construction aspects and environmental impacts.....	11
<b>4. Consultation.....</b>	<b>17</b>
<b>5. Implement Controls.....</b>	<b>18</b>
<b>6. Consistency with existing project impacts and approvals.....</b>	<b>26</b>
<b>7. References.....</b>	<b>27</b>
<b>Appendix A: Ancillary Facility Application.....</b>	<b>28</b>
<b>Appendix B: Evidence of consultation.....</b>	<b>31</b>



## 1. Introduction

### 1.1 Context

The New M5 Project is the Stage 2 component of the WestConnex scheme, a NSW Government initiative to connect Sydney's west and south-west with the Sydney Airport and the Port Botany precinct. It is being delivered by the Sydney Motorway Corporation (SMC), formerly the WestConnex Delivery Authority (WDA).

The CPB Contractors Dragados Samsung Joint Venture (CDS-JV) will deliver the design and construction of WestConnex Stage 2 referred to as the New M5 (the Project). The Project will run from the existing M5 East corridor at Beverly Hills via tunnel to St Peters, providing improved access to the airport, south Sydney and Port Botany precincts. The Project will substantially improve the east - west corridor access between the Sydney CBD, Port Botany and Sydney Airport precincts and the South West growth areas.

The Project will deliver approximately nine kilometres of two-lane twin tunnels with capacity to operate three lanes in the future, motorway to motorway connections to the King Georges Road Interchange Upgrade at Beverly Hills, and a new interchange at St Peters. Infrastructure Approval was granted for the project on 20 April 2016. Major works are expected to commence in mid 2016 and the New M5 tunnel is scheduled to open to traffic in late 2019.

The Construction Environmental Management Plan (CEMP) provides further background and a detailed description of the Project.

The Ancillary Facilities Management Plan describes the establishment and use of the approved ancillary facilities identified in the New M5 Environmental Impact Statement (EIS).

#### 1.1.1. Purpose and scope

This Site-specific Ancillary Facilities Management Plan (SSAFMP) describes an additional ancillary facility to those approved under the EIS. The site is required for a construction-phase incident response office, including site offices and amenities, first aid room, storage facility, workshop and parking for CDS-JV. The site is located at 1 Burrows Street, Wolli Creek, which is outside the approved project area.

The site does not meet the locational criteria identified in condition of approval (CoA) D62 and does not meet the requirements of a minor ancillary facility (CoA D64) as it is located outside the approved project area. This SSAFMP has been prepared for the approval of the Secretary, Department of Planning and Environment (DP&E), to satisfy CoA D63.



## 2. Environmental Planning Requirements

### 2.1 Compliance with CoA D63

Section 4 and Appendix E of the approved Ancillary Facilities Management Plan (AFMP) describe the approval pathways for ancillary facilities associated with the project. For proposed ancillary facilities that are not included in the EIS and are not compliant with CoA D62 or D64, a Site-Specific Ancillary Facilities Management Plan (SSAFMP) is required to be approved by the Secretary, DP&E.

The Wolli Creek site compound is not included in the EIS and is located outside of the project area and therefore outside an active construction zone. Therefore approval of a SSAFMP, under CoA D63 is required. Table 1 identifies the requirements of CoA D63 and where they are addressed in this SSAFMP.

Table 1: Compliance with requirements of CoA D63

CoA D63 Reference	Requirement	Where addressed
a)	a detailed description of the ancillary facility, including proposed use and access arrangements;	Section 3.1
b)	a review of the environmental and social impacts of the ancillary facility, including an analysis of compliance with the locational criteria specified in condition D62;	Section 3.2
c)	measures to avoid, mitigate and manage environmental and social impacts associated with the ancillary facility; and	Section 5
d)	demonstration that, with the measures proposed in accordance with (c), the impacts of the ancillary site are consistent with - <ul style="list-style-type: none"> <li>i. the overall project impacts described in documents referred to in conditions A2(b) and A2(c), and</li> <li>ii. all relevant conditions of this approval.</li> </ul>	Section 6

## 3. Identify and Assess

### 3.1 Detailed description of the ancillary facility

#### 3.1.1 Site description

The site of the proposed compound is located at 1 Burrows Street, Wollie Creek. The site is owned by RMS and is currently being used as a construction compound by Transport for NSW to support the Arncliffe Station Upgrade. The compound is no longer required for that project and is currently being demobilised. The site contains hardstand areas including parking areas, site offices, a first aid room and amenities. The site also contains retained vegetation and covered soil stockpiles. Prior to its use as a construction compound the site was a vacant grassed block with scattered trees.

Part of the site was used until recently as a temporary commuter car park for Arncliffe Station to compensate for the temporary loss of the Arncliffe Station commuter car park due to the Arncliffe Station Upgrade works. The permanent car park has now been returned to commuters and the temporary car park has been decommissioned.

Surrounding land uses at the site are primarily residential. A place of worship (Masjid Darul Imaan) is located directly opposite the site compound on the corner of Eden and Burrows Streets. The Eastern Suburbs and Illawarra train line (T4 line) and Arncliffe Train Station occur immediately west of the site.

The existing use at the compound site will cease prior to CDS-JV taking occupation of the site.

#### 3.1.2 Site activities

The Wollie Creek site compound is proposed to be used as an Incident Response Office for the construction of the New M5 project and as a storage compound. The site would provide site offices, amenities, first aid room and a workshop as well as storage facilities for traffic management plant and equipment, including portable VMS, lighting towers, portable barriers and traffic control equipment.

CDS-JV is currently in consultation with the Arncliffe Station Upgrade project, and is planning to reuse existing facilities on site, including the first aid room, demountable office, site sheds and amenities. With the reuse of these facilities, no modifications to the site are anticipated to be required by CDS-JV and therefore there would be no establishment activities required at the site compound.

The compound would be operated by CDS-JV under a lease agreement with RMS from January 2017 to January 2020. The site would be decommissioned and rehabilitated to its pre-construction condition or better, or as otherwise agreed by the landowner, in accordance with CoA D65, after the completion of New M5 construction works.

Refer to Table 4 for further details of the proposed activities at the site.

#### 3.1.3 Hours of operation

The compound would be operated as an Incident Response Office and therefore would be staffed 24 hours, 7 days per week. Two 12-hour shifts would occur at the site with shift changeovers generally occurring at 6 am and 6 pm.

The workshop would only be operated during standard working hours:

- 7 am – 6 pm Monday to Friday, inclusive; and
- 8 am – 1 pm Saturday;
- At no time on Sundays or public holidays.

Deliveries would also primarily be restricted to standard working hours. Some deliveries may need to occur outside of standard construction hours for emergency response purposes, or for safety and/or road network restriction reasons. These works will be carried out in accordance with the Infrastructure Approval (in particular CoA D15) and any applicable Road Occupancy Licences (ROs).

Operation of the Wollie Creek site compound would be in accordance with all requirements specified in the Ancillary Facilities Management Plan (AFMP), the Construction Environmental Management Plan (CEMP) and CEMP Sub-Plans.

## Site-specific AFMP: Wollie Creek



### 3.1.4 Services and utilities

All services and utility requirements including power, water, sewer and fibre optic services for the site are existing. Connections would be made to these services where required. No modifications to services are anticipated.

### 3.1.5 Site access

The primary access/egress at the site will be via one of two access points on Burrows Street (ie main compound access and parking area access). Access to the site will be gained from the Princes Highway via Brodie Spark Drive and Arncliffe Street for traffic travelling southbound on the Princes Highway. Access for all northbound traffic on the Princes Highway will be gained directly via Burrows Street. Egress from the site for all vehicles will be via Burrows Street and directly on to the Princes Highway (refer to Figure 2). Burrows Street, Arncliffe Street and Brodie Spark Drive are all local roads as they are not classified as State or Regional roads under RMS' Schedule of Classified Roads and Unclassified Regional Roads (January 2014).

### 3.1.6 Workforce and vehicle movements

The total number of light and heavy vehicle movements at the site each day is likely to vary depending on the construction and traffic management activities that are occurring at the surrounding project sites. The site would primarily be accessed using light vehicles, with limited heavy vehicle movements mostly occurring during standard construction hours. Indicative numbers for site-based personnel and vehicles accessing the site are provided in Table 2. The site is anticipated to be used for pre-start/toolbox talks for the traffic control teams for both day and night shifts. Each talk is anticipated to have on average 25 personnel in attendance. Talks would indicatively occur between 6-7 am for the day shift and 6-7 pm for the night shift.

Table 2: Indicative vehicle movements and personnel numbers per day

Wollie Creek site compound	Light vehicle movements per shift <sup>1</sup>		Heavy vehicle movements per shift <sup>2</sup>		Personnel <sup>3</sup>	
	Day	Night	Day	Night	Day	Night
Indicative number	92	80	2	0	8	2

Notes:

1: Number includes traffic movements associated with toolbox talk attendees. These movements would coincide with day shift pre-start (6-7 am) and night shift pre-start (6-7pm) talks.

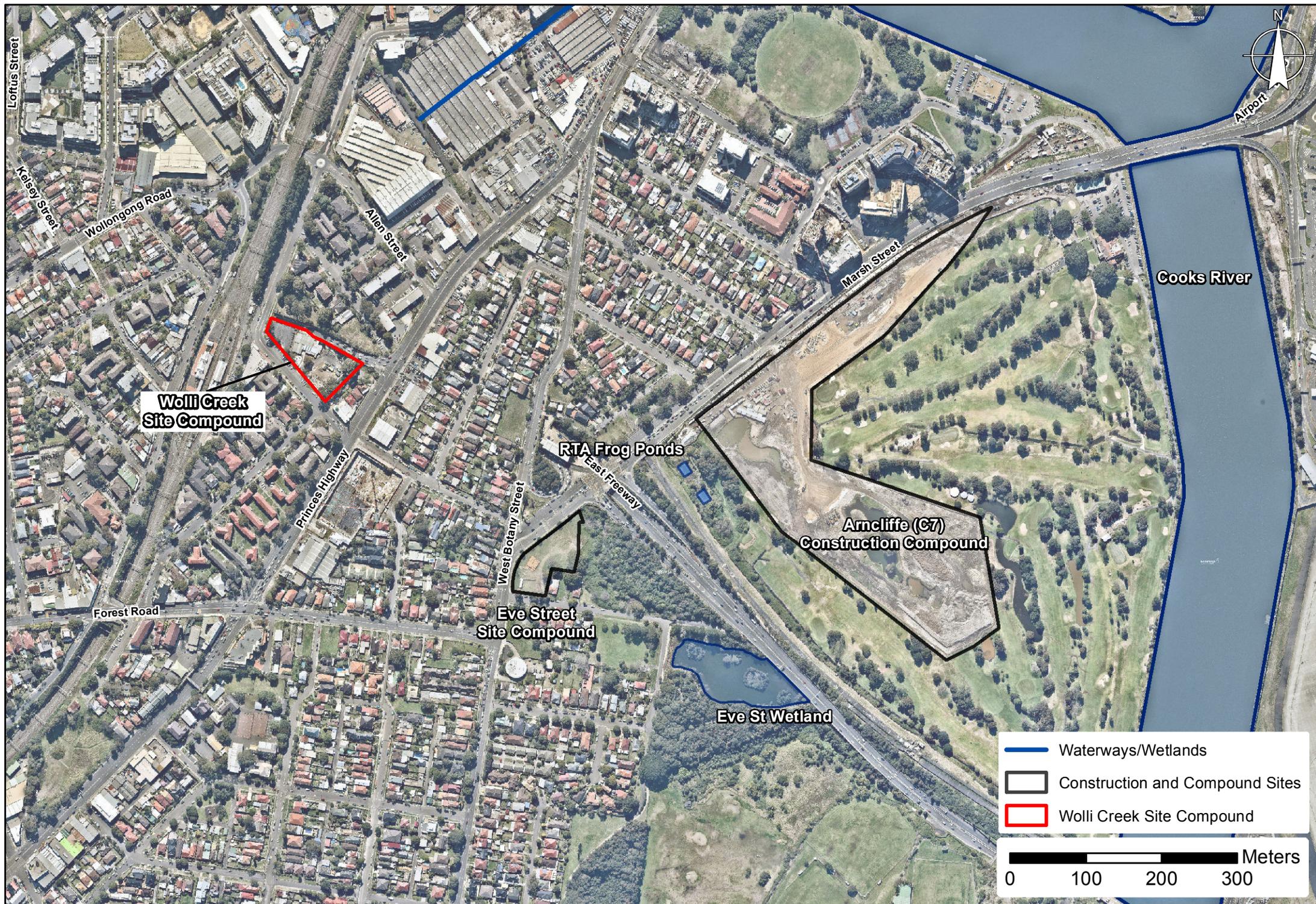
2: No heavy vehicle movements are anticipated during the night shift, unless required for emergency response, safety or road network restriction purposes

3: Number includes site-based personnel only. Personnel attending each toolbox / pre-start talk are anticipated to be around 25 personnel for day and night shifts.

### 3.1.7 Plant, equipment and materials

The types and amounts of plant, equipment and materials to be stored at the site will vary throughout the operation of the site compound. Items to be stored will primarily comprise traffic management and emergency response plant and equipment. Typical items are likely to include:

- First aid and incident response supplies, including spill kits,
- Portable VMS,
- Lighting towers,
- Portable barriers,
- Traffic control equipment
- Fuels and lubricants.



**Wollli Creek  
Site Compound**

**RTA Frog Ponds**

**Arncliffe (C7)  
Construction Compound**

**Eve Street  
Site Compound**

**Eve St Wetland**

**Cooks River**

**Airport**

— Waterways/Wetlands

▭ Construction and Compound Sites

▭ Wollli Creek Site Compound

0 100 200 300 Meters

**Figure 1: Site Location**

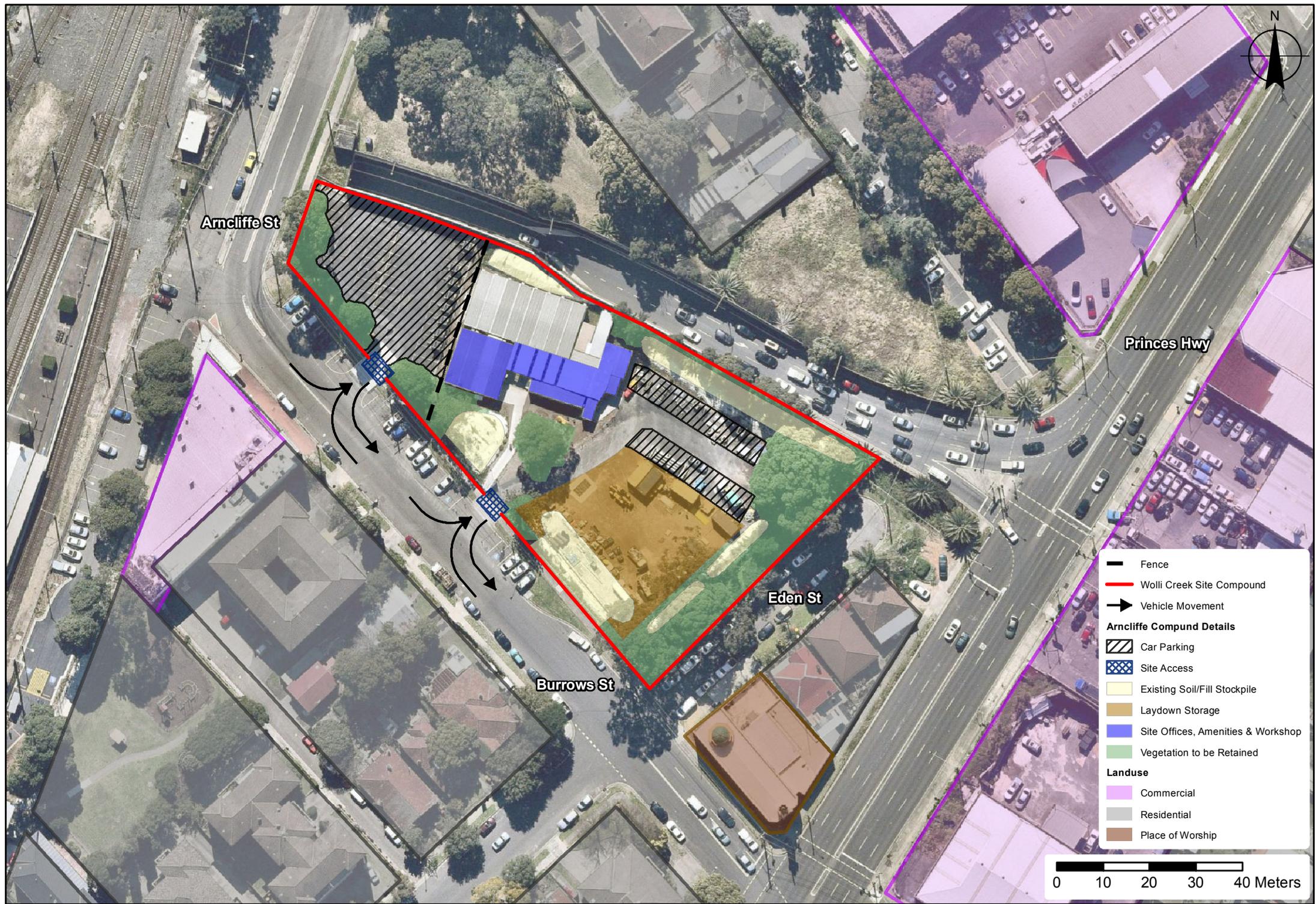


Figure 2: Site Layout

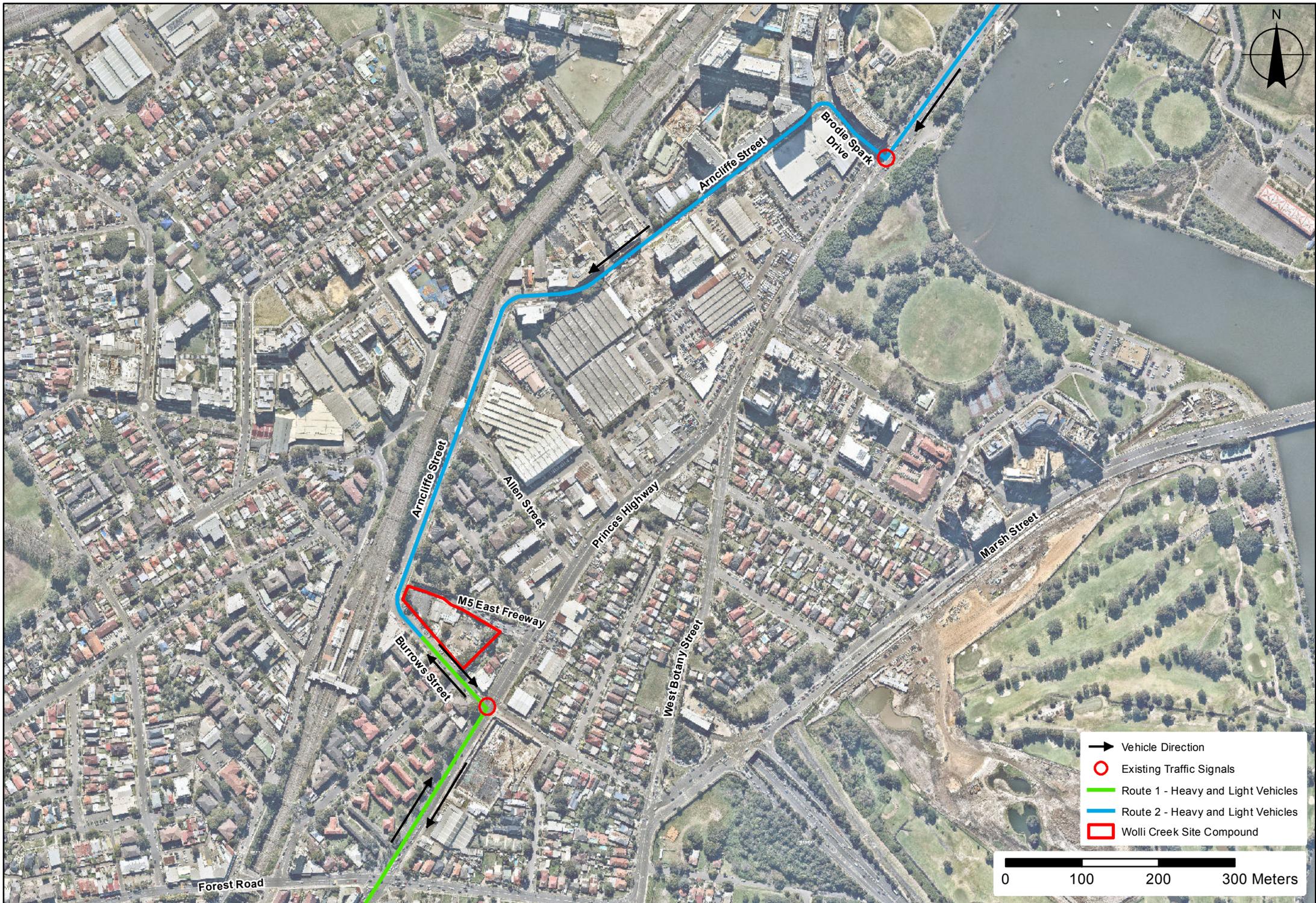


Figure 3: Site Compound Access Routes

## 3.2 Construction aspects and environmental impacts

### 3.2.1 Locational criteria assessment

Table 3: Locational criteria for ancillary facilities (CoA D62)

CoA D62 Reference	Requirement	Compliant	Comments
a)	Be located more than 50 metres from a waterway;	✓	Refer to Section 3.2.5 and Figure 1.
b)	Be located within or adjacent to land where the SSI is being carried out;	✗	The site is located at 1 Burrows Street, Wollie Creek, approximately 330 m west of the nearest project boundary (Eve St compound site) and approximately 440 m west of the Arncliffe construction compound site (C7) (Refer to Figure 1).
c)	Have ready access to the road network;	✓	Refer to section 3.1.5 and Figure 2 and Figure 3 for further information on site access.
d)	Be located to minimise the need for heavy vehicles to travel on local streets and/or through residential areas;	✓	Refer to section 3.1.5 and Figure 3 for details on heavy vehicle access.
e)	Be sited on relatively level land;	✓	The site is level.
f)	Be separated from nearest residences by at least 200 metres (or at least 300 metres for a temporary batching plant);	✗	The site is approximately 20 metres from the nearest residences on Eden Street and 25 metres from the nearest residences on Burrows Street. Refer to Sections 3.2.3 and 3.2.4 and Figure 2.
g)	Not require vegetation clearing beyond that already required by the SSI;	✓	The site requires no further vegetation clearing.
h)	Not impact on heritage items (including areas of archaeological sensitivity) beyond those already impacted by the SSI;	✓	Refer to Section 3.2.7
i)	Not unreasonably affect the land use of adjacent properties;	✓	The site will be used on a temporary basis for the duration of construction of the project. Use of the site as a compound is consistent with its current use as a construction compound for the Arncliffe Station Upgrade works. With the implementation of the site-specific management measures in Section 4 of this SSAFMP, the use of this site is not expected to unreasonably affect the land use of adjacent properties.

## Site-specific AFMP: Wollie Creek



CoA D62 Reference	Requirement	Compliant	Comments
j)	Be above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented; and	✓	The site is not within the flood planning area as identified on the Rockdale LEP 2011 Flood Planning Map (Sheet FLD_003), which is based on the 100 year ARI flood level.
k)	Provide sufficient area for the storage of raw materials to minimise, to the greatest extent practical, the number of deliveries required outside standard construction hours.	✓	The site will not be used for the storage of raw materials. The site will provide storage / laydown area for traffic management plant and equipment and is considered to have sufficient storage area for this requirement. Deliveries will occur during standard hours, except where required by a Road Occupancy Licence (ROL) or for safety reasons.

### 3.2.2 Traffic and transport

The site would be accessed via Brodie Spark Drive, Burrows and Arncliffe Streets, local roads that are accessed from the Princes Highway, which is a classified major road (refer to sections 3.1.5 and Figure 3 for a detailed description of access routes). Potential traffic and access impacts on Burrows Street, Arncliffe Street and Brodie Spark Drive are considered to be minor given the low number of vehicles, and in particular, low numbers of heavy vehicles, that would be accessing the site.

### 3.2.3 Noise and vibration

Potential noise impacts, including out of hours impacts, may occur on nearby sensitive receivers including residences, commercial premises and a nearby place of worship.

Potential noise sources include vehicle access/egress, loading/unloading, workshop activities and project personnel. Out-of-hours noise impacts from out-of-hours deliveries, access and emergency response may occur where these activities are required.

Potential vibration impacts are considered unlikely given that no construction works are to occur at the site. With the implementation of the mitigation measures outlined in Table 5, it is expected that potential noise impacts associated with the site compound would be minor.

### 3.2.4 Visual amenity

The site would be visible from nearby properties and residential areas. Site fencing and hoarding and access points would be visible from surrounding streets and properties. Buildings, laydown and carparking areas would be partially visible from the surrounding streets and properties. The site would therefore have visual amenity impacts on these surrounding residences, commercial premises and place of worship, which would include potential light spill impacts as a result of 24 hour use and security lighting. The site is currently being used as a construction site compound for the Arncliffe Station Upgrade project, which is located on the opposite side of Arncliffe Street. It is considered that visual amenity impacts resulting from the proposed New M5 use of the site would be the same, or less (due to reduced activities and personnel at the site), than those experienced during the Arncliffe Station Upgrade works. Management measures outlined in Table 5 would be implemented to minimise visual amenity and light spill impacts at the site.

### 3.2.5 Soil and water quality

The site is located approximately 330 metres south-west of an open drainage channel which drains into the Cooks River via Cahill Park. The site is also approximately 400 m west of the Eve St wetlands and RTA frog ponds adjacent to the Arncliffe construction compound (C7) (Refer to Figure 1). No construction or excavation works are proposed at the site, however, the site may have small amounts of stored fuels/oils/lubricants associated with the workshop. Therefore potential impacts on soil and water would most likely be associated with spills/leaks of fuels or other hazardous substances. The site contains a number of covered soil stockpiles which contain topsoil retained on site after clearing

(refer to Figure 2). There is potential for erosion and sedimentation impacts as a result of these stockpiles. With the implementation of mitigation measures outlined in Table 5, it is expected that potential soil and water quality impacts at the site would be minor.

### 3.2.6 Flora and fauna

No vegetation is proposed to be removed or modified at the site and no ground disturbance activities are proposed. A number of trees have been retained on site, including a Narrow-leaved Black Peppermint (*Eucalyptus nicholii*). This species is listed as vulnerable under the TSC Act but is a planted specimen outside of its natural range (Australian Wetlands Consulting, 2015). Trees retained on site may also provide habitat for fauna species, including the Grey-headed Flying-fox, listed as a vulnerable species under the TSC Act and the EPBC Act.

Assessments of significance were completed for both of the above threatened species for the Arncliffe Station Upgrade Review of Environmental Factors (REF) (Transport for NSW, 2015). These assessments concluded that it would be unlikely that the project would contribute towards the local extinction of either of the above listed species (Australian Wetlands Consulting, 2015). With the implementation of mitigation measures outlined in Table 5, it is expected that potential impacts on flora and fauna at the site would be minor.

### 3.2.7 Heritage

The closest item of heritage to the site is the Arncliffe Train Station, a state-listed heritage item, situated on the opposite side of Arncliffe Street. There are a number of other locally listed heritage items within a 200 m radius of the site. Given that no construction activities or ground disturbance works are proposed at or surrounding the site, the use of this site is not expected to impact on any heritage items or areas of archaeological sensitivity.

### 3.2.8 Air quality

There are no construction works or ground disturbance activities proposed at the site. The existing soil stockpiles at the site are covered and will be maintained in this state for the duration of the site use. Vehicle emissions associated with vehicles accessing the site will occur, however, with the implementation of measures outlined in Table 5, impacts to air quality are expected to be minor.

### 3.2.9 Waste and contamination

The proposed activities at the site would generate small amounts of waste, including general office waste, packaging, and any damaged/defective items of traffic plant and equipment. No ground disturbance activities are proposed at the site and therefore it is unlikely that any existing contamination would be encountered. With the implementation of the measures outlined in Table 5, impacts associated with waste are expected to be minor.

### 3.2.10 Socio-economic

Use of the site compound has the potential for some minor impacts on the surrounding community including visual, noise and traffic impacts as described in the sections above. These impacts would be temporary and localised. No property acquisition would be required for the site and sufficient parking exists within the site for project personnel and therefore no loss of parking space for the surrounding residents or other road users.

Use of the site also has potential for minor positive economic impacts through use of local businesses by project personnel. With the implementation of the mitigation measures outlined in Table 5, any potential socio-economic impacts associated with the site compound would be minor.

### 3.2.11 Rehabilitation

In accordance with CoA D65, ancillary facilities must be rehabilitated to at least their pre-construction condition or better, to the satisfaction of the Secretary, unless otherwise agreed by the landowner. Restoration works will include cleanup, dismantling and removal of temporary offices and all site facilities, ground preparation, spreading of topsoil (currently stockpiled on site), planting and/or laying of turf, or as otherwise agreed with the landowner, RMS.

### 3.2.12 Cumulative impacts

The proposed site is currently being used as a construction compound to support the TfNSW Arncliffe Station Upgrade and Arncliffe Pedestrian Link projects. These works commenced in 2015 and are now in the final stages of completion. Subject to approval of the Secretary, DP&E, the site would be transferred to CDS-JV for use in accordance with this SSAFMP. The proposed CDS-JV use would therefore extend the use of the site as a compound until early 2020, which may extend impacts associated with the site for the local community. Given that no construction works are proposed at or in proximity to the site and the limited nature of activities to be conducted at the site, it is considered that cumulative impacts would primarily relate to the visual impact of the compound. With the implementation of mitigation measures outlined in Table 5, it is considered that any potential cumulative impacts on the surrounding community would be temporary and minor.

### 3.2.13 Construction activities and associated impacts summary

Key construction activities to be conducted at the Wolli Creek site compound are identified in Table 4 below, along with the associated impacts and corresponding environmental controls.

# Site-specific AFMP: Wollli Creek



Table 4: Key site activities proposed during construction

Key work activities	Key environmental impacts	Key environmental controls
<ul style="list-style-type: none"> <li>• Use of existing site office, amenities and staff parking including capacity for 24 hour emergency response</li> <li>• Use of existing first aid room</li> <li>• Workshop for traffic management plant and equipment</li> <li>• Deliveries / pickup of plant and equipment</li> <li>• Storage and temporary laydown of traffic management plant and equipment, including:               <ul style="list-style-type: none"> <li>▪ Portable VMS</li> <li>▪ Lighting towers</li> <li>▪ Portable barriers</li> <li>▪ Traffic control equipment.</li> </ul> </li> <li>• Decommissioning of site, including removal of all project materials, site rehabilitation and clean-up.</li> </ul>	Traffic and access impacts on Burrows Street, Arncliffe Street and Brodie Spark Drive.	Refer to the management measures in Section 5 Also refer to the Construction Traffic and Access Management Plan (M5N-ES-PLN-PWD-0004) and the Ancillary Facilities Management Plan (AFMP; M5N-ES-PLN-PWD-0026)
	Noise impacts, including out of hours impacts, on nearby sensitive receivers including residences, commercial premises and place of worship.  Potential noise sources include vehicle access/egress, loading/unloading, workshop activities and project personnel. Out-of-hours noise impacts from out-of-hours deliveries, access and emergency response where required.	Refer to the management measures in Section 5 Also refer to the Construction Noise and Vibration Management Plan (M5N-ES-PLN-PWD-0003-14) and the AFMP
	Spills or leaks of fuels or other hazardous substances  Erosion/sedimentation impacts from existing soil stockpiles.	Refer to the management measures in Section 5 Also refer to the Construction Soil and Water Quality Sub-plan (M5N-ES-PLN-PWD-0005) and the AFMP
	Generation of waste, including general office waste, packaging, and any damaged/defective items of plant or equipment	Refer to the management measures in Section 5 Also refer to the Construction Waste and Resource Sub-plan (M5N-ES-PLN-PWD-0008) and the AFMP
	Light spill and visual amenity impacts on surrounding residences, commercial premises and place of worship.	Refer to the management measures in Section 5 Also refer to the AFMP
	Emissions/air quality impacts due to vehicles accessing the site	Refer to the management measures in Section 5

# Site-specific AFMP: Wolli Creek



Key work activities	Key environmental impacts	Key environmental controls
		Also refer to the Construction Air Quality Sub-plan (M5N-ES-PLN-PWD-0002)
	Damage to retained vegetation on site.	Refer to the management measures in Section 5 Also refer to the Construction Flora and Fauna Sub-plan (M5N-ES-PLN-PWD-0007)



#### 4. Consultation

Consultation has been undertaken with residents and other properties surrounding the proposed site. A community notification was distributed on 14 September 2016 (refer to Appendix B) to advise the surrounding community of the proposed site use. No feedback has been received to date from community members notified. Door knocks have also been undertaken for properties in the immediate vicinity, including residents, businesses and a place of worship (Masjid Darul Imaan) (refer Appendix B),

Rockdale City Council (now Bayside Council) has also been consulted in regards to the use of the site. Council confirmed via email (22/09/2016) that they have no issue with the proposal (refer Appendix B).



## 5. Implement Controls

The table below details mitigation and management measures to specifically address the identified potential environmental and social impacts resulting from the operation of the Wolli Creek site compound. These measures will be implemented in addition to any relevant CDS-JV environmental procedures and controls described in the AFMP and CEMP. Implementation of all control measures will:

- Minimise any potential adverse impacts arising from the use of the site compound, and
- Ensure compliance with environmental obligations and requirements.

Regular compliance activities, such as inspections, observations and monitoring will be undertaken throughout the construction phase, inclusive of any subcontractor activities. These compliance activities and any non-conformances will be undertaken in accordance with Element 3 of the CEMP.

## Site-specific AFMP: Wollie Creek



Table 5: Site-specific environmental safeguards

No.	Impact	Environmental safeguards	Responsibility	Timing
WC1.	General	<ul style="list-style-type: none"> <li>All relevant safeguards provided in the Ancillary Facilities Management Plan (M5N-ES-PLN-PWD-0026), the Construction Environmental Management Plan (M5N-ES-PLN-PWD-0001) and all sub-plans must be implemented.</li> </ul>	Project manager	Prior to and during site operation
WC2.		All environmental safeguards must be incorporated within the following: <ul style="list-style-type: none"> <li>Construction Area Plan</li> <li>Work Pack (Including Site Environment Plan)</li> </ul>	Project manager	Prior to site operation
WC3.		<ul style="list-style-type: none"> <li>Training will be provided to all Project personnel, including relevant sub-contractors on site management requirements through inductions, toolboxes and targeted training where required.</li> </ul>	Project manager	Prior to and during site operation
WC4.		<ul style="list-style-type: none"> <li>The weekly environmental inspection checklist will be completed and will record ancillary facility management related issues.</li> </ul>	Environmental coordinator	Site operation
WC5.	Community	<ul style="list-style-type: none"> <li>CDS-JV will advise affected residents and property owners of the site use in accordance with the Community Communication Strategy.</li> </ul>	Community relations manager	Prior to and during site operation
WC6.		<ul style="list-style-type: none"> <li>Community complaints will be recorded and actioned in accordance with the Community Communication Strategy.</li> </ul>	Community relations manager	Site operation
WC7.	Traffic and access	<ul style="list-style-type: none"> <li>Access to site from the Princes Highway (northbound) will occur via a left turn into Burrows Street. Access to site from the Princes Highway (southbound) will occur via a right hand turn into Brodie Spark Drive, Arncliffe Street and Burrows Street.</li> <li>All egress from site will be via Burrows Street directly onto the Princes Highway.</li> </ul>	Project manager Site supervisor	Site operation

## Site-specific AFMP: Wollie Creek



No.	Impact	Environmental safeguards	Responsibility	Timing
WC8.		<ul style="list-style-type: none"> <li>Deliveries will be carried out during standard construction hours where feasible and reasonable.</li> <li>Project personnel to be made aware of appropriate access and parking requirements for the site during induction/toolbox talks.</li> <li>Project personnel to be encouraged to use public transport to access site.</li> </ul>	Site supervisor	Site operation
WC9.	Noise	<p>Appropriate behavioural practices to be reinforced at site inductions / toolboxes, including:</p> <ul style="list-style-type: none"> <li>Relevant site approval conditions and site specific mitigation measures</li> <li>Location of nearest sensitive receivers</li> <li>No unnecessary loud swearing or unnecessary shouting,</li> <li>No loud stereos/radios on site,</li> <li>No dropping of materials from height where practicable or throwing of items, and</li> <li>No slamming of doors.</li> </ul>	Site supervisor	Site operation
WC10.		Ensure all deliveries occur during standard construction hours where reasonable and feasible.	Site supervisor	Site operation
WC11.		Non-tonal reversing beepers (or an equivalent mechanism) must be fitted & used on all vehicles regularly used on site.	Project Manager Site supervisor	Site operation
WC12.		<ul style="list-style-type: none"> <li>Feasible and reasonable noise mitigation measures should be applied to construction activities when the following residential ground-borne noise levels are exceeded:               <ol style="list-style-type: none"> <li>evening (6:00 pm to 10:00 pm) — internal LAeq(15 minute): 40 dB(A); and</li> <li>night (10:00 pm to 7:00 am) — internal LAeq(15 minute): 35 dB(A).</li> </ol> </li> </ul>	Project Manager Environmental Advisor Site supervisor	Site operation

## Site-specific AFMP: Wollie Creek



No.	Impact	Environmental safeguards	Responsibility	Timing
WC13.		<ul style="list-style-type: none"> <li>Undertake consultation (at least 5 days prior to relevant works) with potentially-affected community, religious, educational institutions and vibration-sensitive business and critical working areas, to ensure, where feasible and reasonable, works that may impact on the above groups/businesses are not timetabled during sensitive periods.</li> </ul>	Community Relations Manager Project Manager Environmental advisor	Prior to and during site operation
WC14.		<ul style="list-style-type: none"> <li>During construction, proponents of other construction works in the vicinity of the SSI must be consulted and reasonable steps taken to coordinate works to minimise impacts on, and maximise respite for, affected sensitive receivers</li> </ul>	Community Relations Manager Project Manager Environmental advisor	Site operation
WC15.		<ul style="list-style-type: none"> <li>Plant and equipment would be switched off when not in operation for periods of greater than 15 minutes. Where reasonable and feasible, noisy equipment will be substituted for alternative low-emitting equipment particularly for activities or in locations that may impact on potential noise sensitive receivers.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC16.		<ul style="list-style-type: none"> <li>Noisy equipment and equipment with directional noise emissions will be orientated away from neighbouring properties where practicable. The distance between plant and noise sensitive receivers will be maximised where practical.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC17.		<ul style="list-style-type: none"> <li>Community consultation protocols for sensitive receivers likely to be impacted by construction activities such as vibration and noise will be prepared and implemented, as required.</li> </ul>	Community Relations Manager Project Manager Environmental advisor	Site operation

## Site-specific AFMP: Wollie Creek



No.	Impact	Environmental safeguards	Responsibility	Timing
WC18.	Flora and fauna	<ul style="list-style-type: none"> <li>Site induction to include awareness of flora and fauna requirements on site, including</li> <li>No damage to any vegetation/trees on site</li> <li>Any unexpected species finds on site to be reported to the Environment advisor/Environment &amp; Sustainability Manager.</li> </ul>	Project Manager Site supervisor Environmental advisor	Site operation
WC19.		<ul style="list-style-type: none"> <li>No-go zones to be implemented for all retained vegetation on site. No access to exclusion zones without a permit to enter no-go zones. No damage to occur to vegetation on site.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC20.		<ul style="list-style-type: none"> <li>Equipment storage and laydown areas to be located outside the drip line of trees</li> </ul>	Project manager Site supervisor	Site operation
WC21.		<ul style="list-style-type: none"> <li>Unexpected species finds to be managed in accordance with the Manage Flora and Fauna Procedure.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC22.		<ul style="list-style-type: none"> <li>If a threat to an animal is evident onsite, the Site supervisor and/or Environmental advisor must be notified immediately. Works may need to cease if the animal is in danger or harmed until it has been relocated.</li> <li>The handling of injured fauna must be carried out by licensed fauna handler such as fauna ecologist or wildlife carer.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC23.		<ul style="list-style-type: none"> <li>Weed and pathogen management and control will be undertaken in accordance with the project Construction Flora and Fauna Sub-Plan (M5N-ES-PLN-PWD-0007), including ensuring vehicles and machinery are clean prior to entering site, and active management of weeds</li> </ul>	Site supervisor Environmental advisor	Site operation

## Site-specific AFMP: Wollie Creek



No.	Impact	Environmental safeguards	Responsibility	Timing
WC24.		<ul style="list-style-type: none"> <li>Rehabilitation of site to occur at the completion of site operations to at least its pre-construction condition (refer Section 3.2.11), and in accordance with any relevant rehabilitation requirements specified in the Construction Flora and Fauna Sub-Plan (M5N-ES-PLN-PWD-0007) and the Ancillary Facilities Management Plan (M5N-ES-PLN-PWD-0026), or as otherwise agreed with RMS.</li> <li>Site rehabilitation to include use of retained topsoil stockpiled on site.</li> </ul>	Project Manager	At the completion of site operation
WC25.	Soil and Water	<ul style="list-style-type: none"> <li>Erosion and sedimentation control plan to be developed for the site consistent with Managing Urban Stormwater – Soils and Construction Vols 1 and 2, 4th Edition (Landcom 2004).</li> </ul>	Environmental advisor	Prior to site operation
WC26.		<ul style="list-style-type: none"> <li>Sediment controls to be inspected and maintained as necessary, including after rain</li> </ul>	Site supervisor Environmental advisor	Prior to site operation
WC27.		<ul style="list-style-type: none"> <li>Covered soil berms on site are to be maintained and kept weed free.</li> </ul>	Site supervisor Environmental advisor	Prior to site operation
WC28.		<p>The following measures to be in place to avoid and manage spills:</p> <ul style="list-style-type: none"> <li>Storage of fuels, chemicals and other hazardous materials to be in appropriately secure and bunded areas in accordance with EPA guidelines</li> <li>Chemical storage areas to be sited away from property boundaries</li> <li>Spills or contaminated runoff would be captured and treated and / or disposed of at a licensed facility</li> <li>Any re-fuelling and wash down would be undertaken in bunded areas to mitigate risks in relation to spills or leaks of fuels / oils or other hazardous onsite construction material</li> <li>Any soil which has been contaminated with fuel, oils or other chemicals would be disposed as contaminated soil by a waste subcontractor.</li> </ul>	Project manager Site supervisor Environmental advisor	Site operation

## Site-specific AFMP: Wollie Creek



No.	Impact	Environmental safeguards	Responsibility	Timing
WC29.		<ul style="list-style-type: none"> <li>In the event of a spill the Spill Management Procedure will be implemented. Emergency spill kits will be kept onsite and Project personnel would be aware of the location of spill kits and trained in their use.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC30.	Visual amenity	<ul style="list-style-type: none"> <li>All vegetation at the site to be retained</li> <li>Site hoardings/ temporary noise barriers would be maintained during site operation</li> </ul>	Project Manager Site supervisor Environmental advisor	Site operation
WC31.		<ul style="list-style-type: none"> <li>Cut-off and/or directed lighting would be used at the site with lighting location and direction considered to ensure glare and light spill are minimised. Lighting to be generally consistent with the requirements of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting. Any residual night lighting impacts to adjoining or adjacent properties to be managed in consultation with affected landowners.</li> </ul>	Project Manager	Site operation
WC32.	Air quality	<ul style="list-style-type: none"> <li>Dust suppression measures to be incorporated into the Erosion and Sedimentation Control Plan for the site.</li> </ul>	Environmental advisor	Prior to site operation
WC33.		Control emissions on site, including: <ul style="list-style-type: none"> <li>Ensure all construction vehicles comply with their relevant emission standards</li> <li>Ensure that, where practicable engine idling is minimised when vehicles are stationary</li> <li>Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable</li> <li>Promote and encourage sustainable travel (public transport, cycling, walking, and car-sharing)</li> <li>No bonfires and burning of any materials including waste.</li> </ul>	Project Manager Site supervisor	Site operation

## Site-specific AFMP: Wolli Creek



No.	Impact	Environmental safeguards	Responsibility	Timing
WC34.	Waste	<ul style="list-style-type: none"> <li>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.</li> </ul>	Site supervisor Environmental advisor	Site operation
WC35.		<ul style="list-style-type: none"> <li>All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.</li> </ul>	Site supervisor Environmental advisor	Site operation



## 6. Consistency with existing project impacts and approvals

The use of the Wolli Creek site compound will assist in achieving the environmental objectives for the New M5 project as identified in the CEMP and associated Sub-plans. Use of the additional storage facilities for traffic management plant and equipment at the site will minimise heavy vehicle movements associated with rehandling of plant and equipment at and between construction compounds. The site will also provide for the storage of traffic management plant and equipment which has been demobilised from other road construction projects, prior to its reuse for construction of the New M5. This will assist in minimising the need for new equipment and resources.

The impacts associated with the site, identified in Section 3.2, are considered to be minor, and consistent with the impacts identified in the New M5 EIS and other project approval documentation. The identified impacts can be appropriately managed through implementation of the management measures identified in Section 5 of this SSAFMP as well as those identified in the AFMP, the CEMP and the relevant Sub-plans.



## 7. References

Australian Wetlands Consulting (February 2015) *Arncliffe Station Upgrade Flora and Fauna Assessment*. Prepared for Transport for New South Wales, Sydney.

Transport for NSW (February 2015) *Arncliffe Station Upgrade Review of Environmental Factors*. Transport for NSW, Sydney.

## Appendix A: Ancillary Facility Application

Step 1 – Ancillary facilities information			
<b>Site location (attach map for reference):</b>		1 Burrows Street, Wollie Creek (refer to Figure 1, SSAFMP: Wollie Creek)	
<b>Date works to commence:</b> September 2016		<b>Date works to finish:</b> January 2020	
<b>Proposed activities (select all that apply):</b>			
Office and amenities	✓	Construction compound	✗
Laydown area	✓	Parking	✓
Batch Plant	✗	Materials storage compound	✓
Maintenance workshop	✓	Material stockpile area	✓ (existing soil stockpile only)
Other _____	Emergency Response Office	Other _____	
<b>Please provide details regarding the proposed ancillary facility.</b>			
<b>Is the proposed facility within the approved construction footprint?</b>		No	
<b>Distance to the nearest waterway?</b>		Approximately 330 metres from an open drainage channel to the north-east. Approximately 400 m from the Eve Street wetlands to the south-east.	
<b>Proposed access route?</b>		Access via Princes Highway, Brodie Spark Drive, Arncliffe Street and Burrows Street for traffic travelling southbound on Princes Highway. Access via Princes Highway and Burrows Street for traffic travelling northbound on Princes Highway. Refer Section 3.1.5 of the SSAFMP.	
<b>Do heavy vehicles need to travel through residential areas?</b>		Yes, however there will be minimal heavy vehicle access required for this site. Refer to Sections 3.1.5 and 3.1.6 of the SSAFMP.	
<b>Is the proposed site on relatively level ground?</b>		Yes, the site is level.	
<b>Distance to nearest residential receiver?</b>		Approximately 20 metres.	
<b>Is vegetation clearance or trimming required? If so, what is the area in hectares?</b>		No, all existing vegetation on site will be retained.	
<b>Will the facility impact heritage?</b>		No impacts are expected.	
<b>Will the facility affect the land use of adjacent properties?</b>		The site will be used on a temporary basis for the duration of construction of the project. Use of the site as a compound is consistent with its current use as a construction compound for the Arncliffe Station Upgrade works. With the implementation of the site-specific management measures in Section 4 of this SSAFMP, the use of this site is not expected to	

## Site-specific AFMP: Wollie Creek



	unreasonably affect the land use of adjacent properties.
<b>Is the facility above the 20 ARI flood level?</b>	Yes. The site is not within the flood planning area as identified on the Rockdale LEP 2011 Flood Planning Map (Sheet FLD_003), which is based on the 100 year ARI flood level.
<b>Will out of hours works be required to establish facility? During operation of the facility?</b>	No establishment works are required for the compound. The site will be operated out-of-hours and there is potential for out-of-hours vehicle access and deliveries, however, no construction works will be undertaken at the site at any time.
<b>Potential noise and vibration impacts?</b>	No major impacts expected. Noise and vibration impacts at the site would be limited to minor traffic noise due to vehicle access and deliveries, as well as loading/unloading of plant and equipment, workshop activities and noise from site personnel. It is expected that noise and vibration impacts as a result of the proposed use would be less than those resulting from the current use of the site for the Arncliffe Station Upgrade project.
<b>Potential dust or odour impacts?</b>	None expected.
<b>Potential visual or light spill impacts?</b>	No major impacts expected. There are no proposed changes to the site that would affect its visual and/or light spill impact. The site would be lit 24 hours due to its use as an emergency response office, however site lighting would be in accordance with the relevant standards.
<b>Potential waste management impacts?</b>	Waste materials at the site will primarily comprise general office waste as well as small amounts of out-of-service plant and equipment, waste fuels and lubricants.
<b>Potential soil and water impacts?</b>	None expected. Appropriate bunding will be used for storage of fuels and other hazardous substances, where these are stored on site. Erosion and sediment controls will also be implemented in accordance with the Construction Soil and Water Quality Sub-Plan.

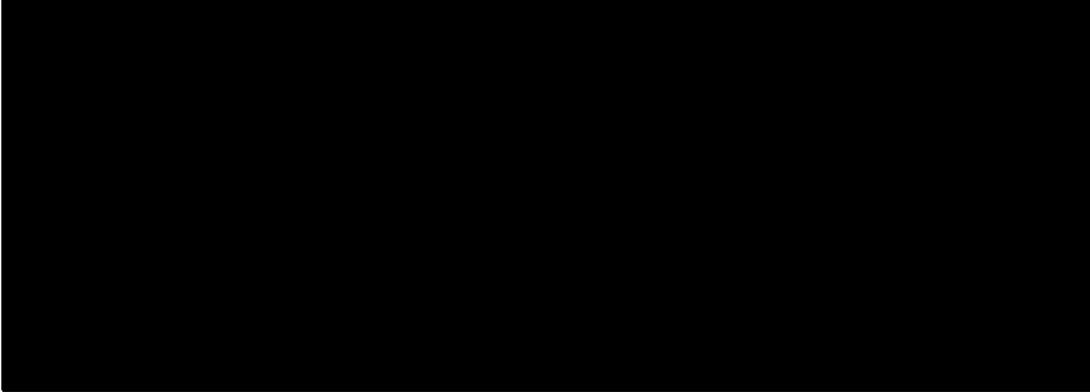
### Step 2 – Environmental and Sustainability Manager Review

<b>Is additional assessment required (e.g. noise, biodiversity, heritage)?</b>	No
<b>Is the proposed facility compliant with CoA D62 criteria?</b>	No
<b>Is the ancillary facility included in the EIS?</b>	No
<b>Does the ancillary facility have minimal amenity impacts to surrounding residences?</b>	Yes
<b>Does the ancillary facility have minimal environmental impact?</b>	Yes
<b>Can potential impacts be managed through existing controls identified in the CEMP?</b>	Yes



**Step 3 – Sign off**

Surface Works / Tunnel / M&E D&C Director



**Step 4 – Environmental Representative sign off**

Is this a minor ancillary facility (CoA D64)?	No
Does this ancillary facility require DP&E approval?	Yes
Does the AFMP need to be updated?	Yes





## Appendix B: Evidence of consultation

**14 September 2016**

## **Incident Response Office – Burrows Street, Wollri Creek**

Work is underway on WestConnex which involves widening and extending the M4 and M5 and joining them to create a free-flowing motorway network.

As part of the project, the New M5 will duplicate the existing M5 East corridor, doubling vehicle capacity and easing congestion between St Peters and Beverly Hills. It will include twin tunnels, an upgrade of King Georges Road Interchange and a new interchange at St Peters. For more information, visit [westconnex.com.au/NewM5](http://westconnex.com.au/NewM5).

In order to deliver the project safely and efficiently, an incident response office will operate from **1-3 Burrows Street, Wollri Creek** to provide ongoing emergency support to construction teams working on the New M5. A map of the location of the compound is provided overleaf.

The compound will contain site offices, a first aid room and workshop, as well as storage facilities for traffic management plant and equipment, including portable signage, lighting towers, portable barriers and traffic control equipment.

The incident response office will take over the existing Arncliffe Station upgrade project compound, including using the facilities and amenities currently onsite.

The incident response office is necessary to provide onsite support as well as the ready deployment of traffic management resources in the case of an emergency. It will assist in the safe and timely delivery of the New M5.

If you would like further information or want to discuss the location of the incident response office, please call 1800 660 248 and ask to speak to a member of the New M5 community engagement team or email [info@newm5.com.au](mailto:info@newm5.com.au).

Notification no: 138

### **ABOUT WESTCONNEX**

WestConnex is part of a broader transport plan for Sydney which includes improved public transport, such as Sydney Metro and light rail, as well as better, more reliable motorway solutions. More than two-thirds of WestConnex will be built underground. Once complete, motorists will be able to avoid up to 52 sets of traffic lights and enjoy significant travel time savings.

#### For more information

 [info@newm5.com.au](mailto:info@newm5.com.au)

 1800 660 248

 [westconnex.com.au](http://westconnex.com.au)



Constructed by





Easing congestion



Creating jobs



Connecting communities

Location of the incident response office on Burrows Street, Wollri Creek



Map data © Nearmap 2016



### We speak your language

To learn more simply visit [westconnex.com.au/yourlanguage](http://westconnex.com.au/yourlanguage).

Need an interpreter? Call the Translating and Interpreting Service on **131 450**



Figure B1: Community notification area









# King Georges Road Interchange Upgrade and New M5 (Beverly Hills to St Peters) Snapshot Report

Notification: 14 Sep 2016

<i>Event Type</i>	Notification
<i>Event Date</i>	14 Sep 2016 3:42 PM (GMT +10)
<i>Event End Date</i>	14 Sep 2016 3:42 PM (GMT +10)
<i>Location</i>	Arncliffe
<i>Summary</i>	Letterbox drop - Incident Response Unit - 1-3 Burrows Street, Wolli Creek
<i>Team Response</i>	Distributed 200 notifications to residents at:  -Apartments aligning Burrows street -All apartments/ houses and businesses aligning Eden Street
<i>Issues</i>	Operation: Visual amenity, Construction: Compound site
<i>Address</i>	ARNCLIFFE NSW 2205 AUSTRALIA
<i>Projects</i>	King Georges Road Interchange Upgrade and New M5 (Beverly Hills to St Peters)
<i>Restricted to</i>	Selected Projects Only

## Team Members:

<i>Full Name</i>	<i>Organisation</i>	<i>Phone</i>	<i>Mobile</i>	<i>Email</i>	<i>Projects</i>
[REDACTED]	[REDACTED]			[REDACTED]	[REDACTED]
	[REDACTED]				[REDACTED]
					[REDACTED]



# King Georges Road Interchange Upgrade and New M5 (Beverly Hills to St Peters) Snapshot Report

## Door knock: 11 Oct 2016

<i>Event Type</i>	Door knock
<i>Event Date</i>	11 Oct 2016 2:00 PM (GMT +11)
<i>Event End Date</i>	11 Oct 2016 3:00 PM (GMT +11)
<i>Location</i>	Wolli Creek
<i>Summary</i>	Door knock residents along Eden Street and Burrows Street about the use of 1-3 Burrows Street as an incident response office
<i>Stakeholder Comments</i>	No issue with the use of 1-3 Burrows Street as an incident response office.
<i>Team Response</i>	Ran through the notification issued on 14 September and ask if they had any comments or questions.
<i>Issues</i>	Consultation: WestConnex Initiated Information
<i>Address</i>	
	AUSTRALIA
<i>Projects</i>	King Georges Road Interchange Upgrade and New M5 (Beverly Hills to St Peters)
<i>Restricted to</i>	Selected Projects Only

## Team Members:

<i>Full Name</i>	<i>Organisation</i>	<i>Phone</i>	<i>Mobile</i>	<i>Email</i>	<i>Projects</i>
[REDACTED]	[REDACTED]			[REDACTED]	[REDACTED]
	[REDACTED]				[REDACTED]
					[REDACTED]

## Properties:

<i>Property No</i>	<i>Address</i>	<i>Property Name</i>	<i>Reference</i>	<i>Stakeholders</i>	<i>Linked Projects</i>
	[REDACTED]		No issue		
	[REDACTED]				
	[REDACTED]				

# King Georges Road Interchange Upgrade and New M5 (Beverly Hills to St Peters) Snapshot Report

<i>Property No</i>	<i>Address</i>	<i>Property Name</i>	<i>Reference</i>	<i>Stakeholders</i>	<i>Linked Projects</i>
	[Redacted]		No issue		
	[Redacted]		No issue		
	[Redacted]		No issue		
	[Redacted]		Not home		
	[Redacted]		Not home		

## Appendix N: Glossary of Terms

Term/acronym	Definition
<b>AFMP</b>	Ancillary Facilities Management Plan (this Plan)
<b>CAQSP</b>	Construction Air Quality Sub-Plan
<b>CCS</b>	Community Communication Strategy
<b>CEMP</b>	Construction Environmental Management Plan
<b>CFFSP</b>	Construction Flora and Fauna Management Sub-Plan
<b>CLM Act</b>	<i>Contaminated Lands Management Act 1997</i>
<b>CNVIS</b>	Construction Noise Vibration Impact Statement
<b>CNVSP</b>	Construction Noise and Vibration Sub-Plan
<b>CoA</b>	Condition of Approval
<b>Construction Area</b>	A separable portion of work that is identified early in construction planning to help drive early definition of construction methodology and alignment of design activities. Work Areas should be listed in the overall construction methodology. The planning document for a work area is called a Construction Area Plan
<b>Construction Area Plan (CAP)</b>	The main document prepared during the construction Planning for that work area. Includes construction methodology, risk assessment, constructability reviews and Work Pack listing
<b>CSWQSP</b>	Construction Soil and Water Quality Sub-Plan
<b>CTAMSP</b>	Construction Traffic and Access Management Sub-Plan
<b>CWRSP</b>	Construction Waste and Resource Sub-Plan
<b>D&amp;C</b>	Design and Construction
<b>Deed</b>	As appropriate to the defined scope of the WestConnex New M5 Main Works D&C Deed
<b>DP&amp;E</b>	NSW Department of Planning and Environment
<b>DPI</b>	NSW Department of Primary Industries (incorporating Fisheries NSW and NSW Office of Water)
<b>E&amp;SM</b>	Environmental and Sustainability Manager
<b>EA</b>	Environmental Advisor
<b>EIS</b>	Environmental Impact Statement
<b>EMM</b>	Environmental management measures (proposed in the Environmental Impact Assessment)
<b>EMS</b>	Environmental Management System

Term/acronym	Definition
<b>Environmental aspect</b>	Element of an organisation's activities, products or services that can interact with the environment
<b>Environmental impact</b>	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services.
<b>Environmentally sensitive area</b>	An area, location or place that is vulnerable to a negative environmental impact, such as a floodplain, a wetland, an area where noise levels are excessively high, or areas containing vulnerable, threatened or critically endangered terrestrial and aquatic habitat or species.
<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979</i>
<b>EPA</b>	Environment Protection Authority
<b>EPL</b>	Environment Protection Licence
<b>ER</b>	Environmental Representative
<b>ESCP</b>	Erosion and Sediment Control Plan
<b>EWMS</b>	Environmental Work Method Statement – a component of the environmental management system that addresses environmental management issues relevant to a specific site and/or activity
<b>GGBF</b>	Green and Golden Bell Frog
<b>GGBF PoM</b>	Green and Golden Bell Frog Plan of Management
<b>HMP</b>	Construction Heritage Management Sub-Plan
<b>IC</b>	Independent Certifier
<b>Infrastructure Approval</b>	Approval under the <i>Environmental Planning &amp; Assessment Act 1979</i> for SSI 6788 (to be determined)
<b>CDS-JV</b>	CPB Dragados Samsung Joint Venture (Contractor)
<b>NPW Act</b>	<i>National Parks and Wildlife Act 1974</i>
<b>NSW</b>	New South Wales
<b>OEH</b>	Office of Environment and Heritage
<b>POEO Act</b>	<i>Protection of the Environment Operations Act 1997</i>
<b>Project</b>	WestConnex New M5 Project
<b>Project Company</b>	WCX M5 PT Pty Limited
<b>REMM</b>	Revised Environmental Management Measure (from the SPIR)
<b>RMS, Roads and Maritime</b>	Roads and Maritime Services



Term/acronym	Definition
<b>SEP</b>	Site Environment Plan – consolidation of environmental and socially sensitive areas, sites or places shown on a series of map-based sheets that extend the length of the site, used to assist with the Planning and management of Work Under the deed.
<b>SMC</b>	Sydney Motorway Corporation
<b>SPIR</b>	Submission and Preferred Infrastructure Report
<b>SSI</b>	State significant infrastructure
<b>SWTC</b>	As appropriate to the defined scope of the Scope of Works & Technical Criteria defined under the New M5 D&C Deed
<b>TCP</b>	Traffic Control Plan
<b>TSC Act</b>	<i>Threatened Species Conservation Act 1995</i>
<b>WCX</b>	WestConnex
<b>WDA</b>	WestConnex Delivery Authority, now Sydney Motorway Corporation (SMC)
<b>Work Pack</b>	Assembly of documents that contain relevant information for the field delivery team to undertake a specific package of works. Inputs include safety, environment, design, temporary works, Project control, approvals/permits and community notices.
<b>Work Procedure</b>	A document that provides a detailed step-by-step description for how work activities will be carried out. May document Risks & Controls associated with each step.