



White Bay Compound – Historical Archaeological Research Design and Excavation Methodology

Project: Westconnex 3A Construction	Date: 02 August 2018
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Background

The Westconnex 3A Construction program is part of the M4-M5 Link project. The overall M4-M5 Link project consists of tunnels connecting the M4 East at Haberfield (via the Wattle Street interchange) and the New M5 at St Peters (via the St Peters interchange), a new interchange at Rozelle and a link to Victoria Road (the Iron Cove Link). The Rozelle interchange also includes ramps and tunnels for connections to the proposed future Western Harbour Tunnel and Beaches Link project.

The scope of this document is the proposed White Bay Compound, which will be utilised as additional truck and car parking area during construction. The location of this site is shown in Figure 1 and 2. The White Bay Compound is referred to as “C11: White Bay Civil Site” in Figure 1.

White Bay Power Station is a listed heritage item of State significance on the SHR (#01015), with associated significant archaeological components known to exist both within and outside the SHR curtilage. The item is also listed on the SREP 26 Sch. 4, Part 3 (#11) and the Ausgrid Heritage and Conservation Register (#74) under section 170 of the Heritage Act 1977 (NSW). The White Bay Compound site is adjacent to the eastern boundary of the White Bay Power Station SHR curtilage (SHR #01015).

This Historical Archaeological Research Design and Excavation Methodology (HARD&EM) for the White Bay compound outlines the archaeological methodology required to mitigate potential construction impacts to non-Aboriginal archaeological remains at the White Bay site compound, as required under the Minister’s Conditions of Approval (CoA E168; see below for additional approval and legislative context). This document also complies with Revised Environmental Management Measure (REMM) NAH04, included in the Westconnex M4-M5 Link Submissions and Preferred Infrastructure Report (SPIR).

Where works significant differ from those addresses in this document, this HARD&EM should be updated to account for revised impacts, or in response to unexpected finds. This HARD&EM does not include management for other areas of the Westconnex 3A Construction project.

Approval Framework

The M4-M5 Link project has been declared by Ministerial Order to be State significant infrastructure (SSI) and critical SSI under section 115U(4) and 115V of the Environmental Planning and Assessment Act 1979 (NSW) (EP&A Act).

An Environmental Impact Statement (EIS) for the M4-M5 Link project was prepared in 2017 to address the Secretary's Environmental Assessment Requirements (SEARs) issued by the Secretary of the NSW Department of Planning and Environment (DP&E). In accordance with Part 5.1 of the EP&A Act, the EIS presented an assessment of all potential environmental issues identified during the planning and assessment of the project. The EIS, including detailed technical studies, was reviewed by DP&E and its independent technical peer reviewers as well as key NSW Government agencies, to confirm that the EIS addressed the SEARs, prior to it being finalised and placed on public exhibition from 18 August to 16 October 2017.

In accordance with section 115Z(6) of the EP&A Act the SPIR was prepared for the M4-M5 Link in January 2018. The SPIR included amendments to the project to further reduce environmental impacts and address stakeholder and community concerns.

Due to concerns over heavy vehicle access and traffic an additional construction ancillary facility, the White Bay civil site compound, was proposed near White Bay at Rozelle.

Condition of Approval (CoA) E168 of the Minister's Conditions of Approval states that prior to works that have a direct material impact on a HAMU, a suitably qualified archaeologist whose experience complies with the Heritage Council of NSW's *Criteria for Assessment of Excavation Directors* (July 2011) (the Excavation Director) must prepare a HARD&EM.

CoA E169 states that the HARD&EM must be submitted to the Heritage Council of NSW (or its delegate) for review and comment prior to finalisation. The HARD&EM must:

- a) Be consistent with the *NSW Heritage Council's Archaeological Assessments Guideline* (1996) or as updated;
- b) Provide for the detailed analysis of any heritage items discovered during the investigations
- c) Include management options for discovered heritage items, whether known or unexpected finds (including options for avoidance, salvage, relocation and display)
- d) For unexpected finds that are determined to be relics, set out the assessment process that will determine an appropriate archaeological response to managing their significance
- e) Include procedures for notifying the Heritage Council of NSW (or its delegate) and Secretary of any relic findings
- f) If the findings of the investigations are significant, provide for the preparation and implementation of a Heritage Interpretation Plan (CoA E167).

CoA E170 states that where excavation works are required in the vicinity of potential archaeological sites, the Excavation Director must be consulted to advise on how the works are to be managed and any archaeological impact minimised. The Excavation Director must be given the authority to advise on the duration and extent of oversight required during excavation. CoA E171 states that works within the vicinity of a find must not recommence until the relevant requirements of the HARD&EM or advice on unexpected finds from the Excavation Director have been met.

Historical Context

The following summary of historical development of the portion of the study area encompassing the White Bay compound site has been extracted from section 4.4.4, section 5.5 and section 6.7.4 of Appendix U (Technical working paper: Non-Aboriginal heritage) of the EIS (hereafter referred to as the Technical working paper).¹

The White Bay site compound was originally part of the 550-acre Balmain Estate granted to the colony's principal surgeon, William Balmain, in 1800. The southern portion of the heritage study area occupies reclaimed land which was once part of the estuary of Rozelle Bay.

Industrialisation of Rozelle

In the early nineteenth century the waterfronts around White Bay and Blackwattle Bay proved attractive to industries that had been forced to relocate from inner Sydney. The first of these was the abattoir set up on Glebe Island in 1860, followed by other noxious industries. By the mid-late 1800s, the shoreline was well developed with a range of industries utilising the ready access to ships.

The White Bay Power Station

The closure of small-scale noxious industries in the early 20th century, including the abattoir on Lilyfield Road, led to the larger-scale industrialisation of the neighbourhood. The waterfront was levelled for the construction of wharves, including what became the Glebe Island Container terminal, and the Rozelle Bay wharves. The waterfront became dominated by various cargo handling enterprises including rail.

The White Bay Power Station was built by the NSW Rail Commissioners on a number of amalgamated residential lots and the reclaimed mudflats of White Bay. These properties were progressively resumed from 1911 and all previous structures and vegetation cleared from the site. The cutting and railway siding from the goods line to Glebe Island was constructed to assist with coal and plant delivery and ash disposal. The power station was originally built to power the rapidly expanding tramway network; but after becoming fully operational in 1917, it gradually produced more and more power for the electrified rail network, and then general use. It underwent multiple phases of modification and expansion after World War II and between 1950 and 1958, with additional structures added until a reduction in demand saw its closure in 1983. Although it was used as a substation for some time, it was decommissioned and later stripped of all elements except a representative sample of the power generation operational systems identified for heritage conservation. However, through its location, massing, design, machinery and associated archives the complex is still able to demonstrate the early power-generating technology in Sydney.

Establishment and use of the Rozelle Rail Yards: 1916–1996

In June 1916, the Rozelle Rail Yards (then known as the Rozelle Marshalling Yard) was created as part of the Goods Railway Line. The Rozelle Marshalling Yard was designed as a holding yard for traffic proceeding to Darling Harbour, which was Sydney's main goods yard at this time. Following the closure of the Glebe Island Abattoir, grain and coal handling facilities and wharves were developed at White Bay near the Rozelle Marshalling Yard facility.

¹ GML Heritage Pty Ltd WestConnex – M4-M5 Link Technical working paper: Non-Aboriginal Heritage, August 2017

The Rozelle Rail Yards were created by filling in much of the White Creek estuary, and through the quarrying of the rugged sandstone outcrops. This also removed what previous structures there were along the shoreline. The Crescent was built as a bridge, over the open channel of the Whites Creek Storm Water Channel.

By 1928 a large number of lines were operating from the yards, which consisted of a locomotive depot until World War II with an engine shed, 75-foot (23m) turntable, water columns and coal storage facilities. The Rozelle signal box, erected to control the rail connection from the eastern end of the yard, was removed in July 1931.

During World War II, the Rozelle Rail Yards became a storage area for the American Army and the locomotive depot was removed. Trains would sometimes turn up at the yard during the war years loaded with soldiers bound for active service overseas.

Since World War II the goods yard has held a variety of freight. Trainloads of wheat, barley, and other grains came in from numerous country branch lines and were transferred to silos for storage before being loaded onto the ships. Coal exports from the 1960s saw many trains loaded with coal move through an unloader and then move along to the departure road once emptied. During 1967, the railway from Dulwich Hill to Rozelle was electrified. This allowed the movement of electrically-hauled freight trains from the Blue Mountains and Gosford to Rozelle.

Archaeological Context

In order to facilitate the management of archaeological remains, the Technical working paper divided portions of the M4-M5 Link project footprint into Historical Archaeological Management Units (HAMU's).² An assessment of archaeological survival within each HAMU was then undertaken. Based on this assessment the potential for archaeological remains to survive within each HAMU was designated as either nil, low, moderate or high. A preliminary heritage significance assessment for each HAMU was also completed. Each HAMU was ascribed either local or state heritage value in relation to the potential archaeological resources.

The White Bay Power Station is located within HAMU 7. The assessment of archaeological potential and significance undertaken for the Technical working paper has been summarised in Table 1.

Table 1: Summary of archaeological potential and significance in HAMU 7

HAMU 7	White Bay Power Station
Listed archaeological items	White Bay Power Station is a listed heritage item of State significance, with significant archaeological components of the system known to exist both within and outside the SHR curtilage.
Archaeological potential	<p>There are extant archaeological elements associated with the White Bay Power Station including:</p> <ul style="list-style-type: none"> • Water channels associated with the southern penstock • The specific location of the channels is unknown.

² Ibid

HAMU 7

White Bay Power Station

Significance assessment The water channels are excluded from the SHR curtilage for White Bay Power Station, and, are not identified in the 2013 Conservation Management Plan (CMP).³ They are closely associated with the southern penstock, which is graded 'high significance' in the White Bay Power Station CMP as an element of the substantially intact cooling water system, which was integral to the operation of the complex. The channels play an important role in strengthening and supporting the significance of the place and are therefore considered an element of high significance.

Significance level State

The White Bay site compound is located directly adjacent to the eastern boundary of the SHR curtilage of the White Bay Power Station. The White Bay Power Station CMP identifies this area as the historical coal yards associated with the power station, and assesses this area as having little/neutral heritage significance (see hatched area in Figure 1).

As the White Bay site compound is located outside the EIS study area, it was subject to assessment in the 2018 SPIR. Surviving archaeological elements associated with the White Bay Power Station include water channels associated with the northern and southern penstocks, the specific location of which are unknown. Aerial photography from 1943 shows an open channel running east from the northern penstock to White Bay to the north of the site. It is likely that this channel would have continued a westerly alignment to the White Bay Power Station and therefore it is considered unlikely that there are archaeological remains beneath the White Bay civil site. The northern penstock is located adjacent to the northern end of the White Bay site compound and the southern penstock is located within the Rozelle Rail Yards some distance to the south west of the White Bay site compound.

Proposed Works

The White Bay site compound will assist in addressing concerns raised by the community, stakeholders and DP&E regarding trucks queuing on local roads and the lack of provision of construction workforce parking by the project, through the provision of a dedicated truck marshalling area and additional construction workforce parking.

The site currently consists of hardstand with formalised access and is utilised for truck marshalling purposes for other major infrastructure projects (i.e. Sydney Metro). Works required at this site are therefore minor. Key construction activities to be carried out within the White Bay site compound are illustrated in Figure 2 and would include:

- Provision of additional parking areas (no excavation)
- Introduction of temporary guards hut and amenities
- New light tower
- Construction of a chainwire fence and gate around the perimeter.

Should additional activities be required that differ significantly from the proposed works (such as excavation works), an update to this document would be required.

³ Design 5 Architects *White Bay Power Station Conservation Management Plan* 2004

Figure 1: Grading of heritage significance for elements of the White Bay Power Station. The hatched area designates the site of the historic coal yards associated with the power station, assessed as having little/neutral heritage significance. Source Westconnex – M4-M5 Link SPIR; White Bay Power Station CMP

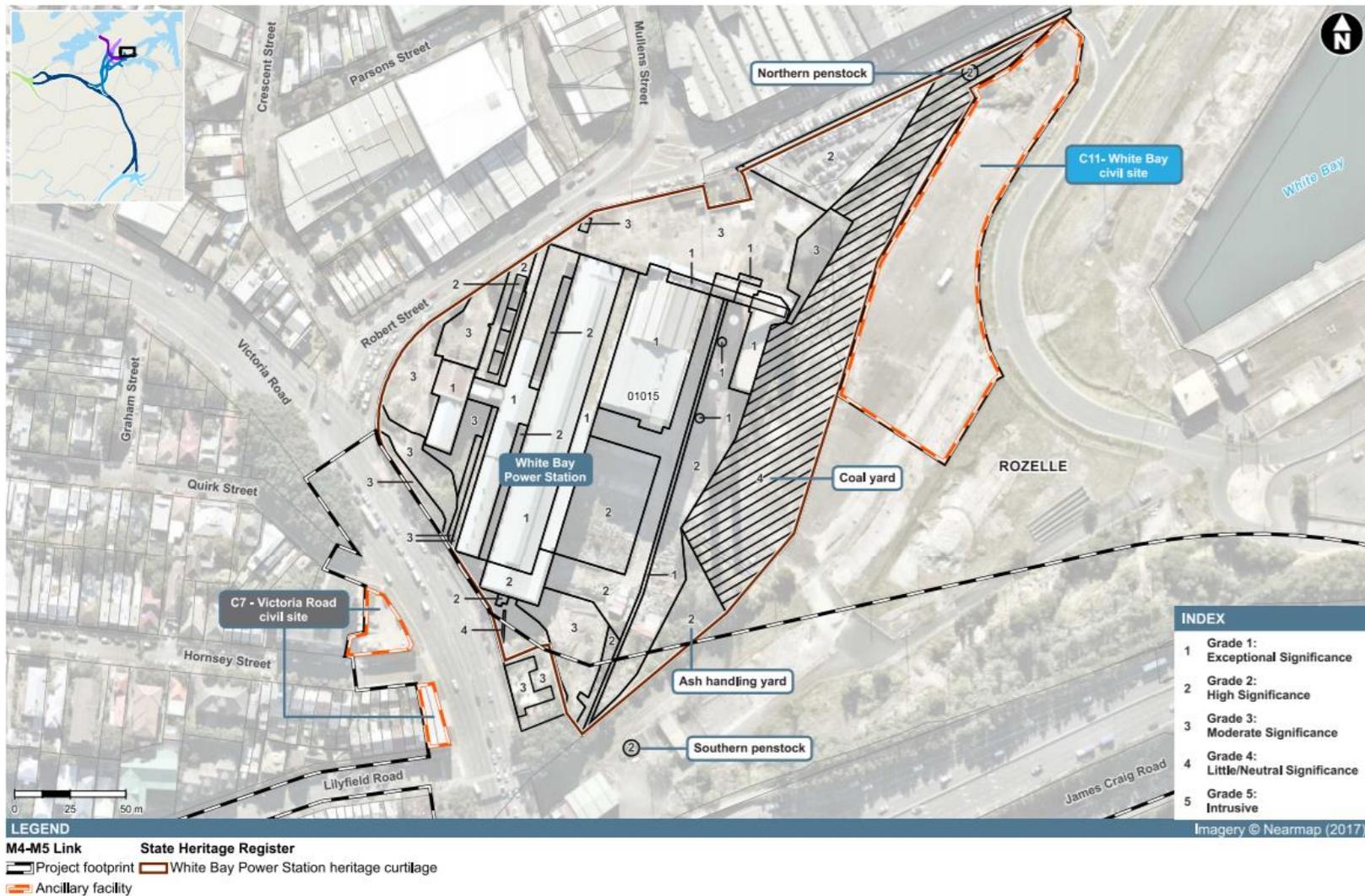
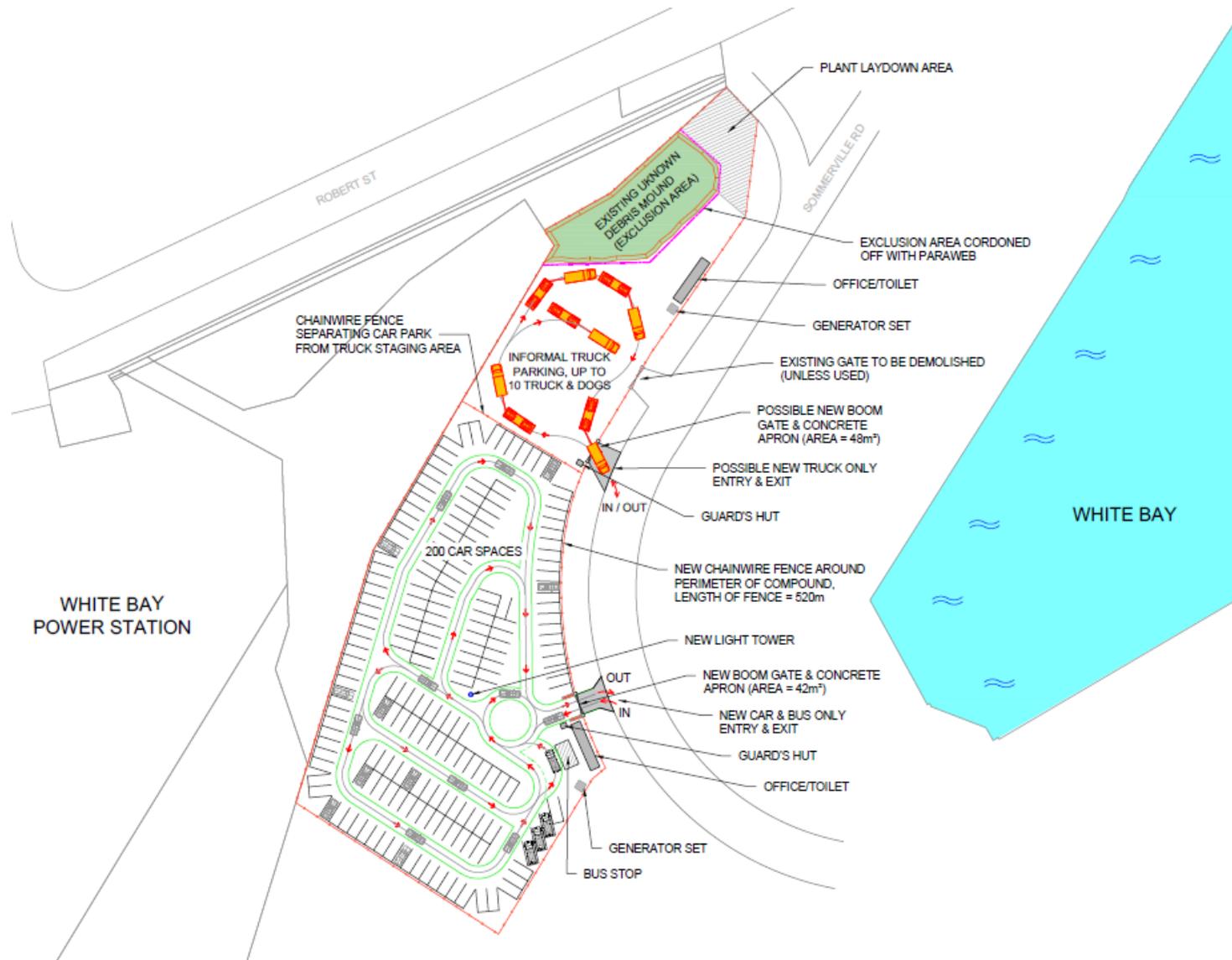


Figure 2: Plan of proposed works



Archaeological Impact Assessment

Excavation required to prepare the site for use during construction would be limited to impacts associated with the construction of a chainwire fence and gate around the carparking site. This excavation is unlikely to disturb any remaining features of archaeological significance associated with the coal yards used as part of the White Bay Power Station operation or water channels associated with the southern penstock.

The White Bay civil site is not within the listed heritage curtilage of the White Bay Power Station and will not directly impact on any of the associated items of significance. The proposed excavation works required for the establishment of the site compound, therefore, are unlikely to impact on significant or substantial archaeological remains.

Archaeological Management

As the White Bay site compound is unlikely to contain a significant archaeological resource, it is proposed that management of the potential archaeological resource include the following processes. These are discussed in more detail under the relevant sections.

- Heritage induction
- Unexpected finds procedure

Heritage induction

Archaeological heritage would be included in the general project induction for all personnel. At a minimum, this would include an overview of the projects and employee obligations, archaeological management and the role of the archaeological team.

Unexpected Finds Procedure

Unexpected archaeological finds within the White Bay site compound would be managed under the Roads and Maritime Services Unexpected Heritage Finds Procedure (March 2015).

Archaeological Excavation Report

As required by the Unexpected Finds Procedure, should an unexpected heritage find be made during excavation works, the Excavation Director would complete preliminary recording and assessment of the find. This document would also outline appropriate management of the find.

In accordance with CoA E172, a final Archaeological Excavation Report, including artefact analysis and the identification of a final repository of any finds, would be prepared and submitted to the Secretary within 12 months of completing the archaeological investigations. The Archaeological Excavation Report will also be submitted to the Heritage Council of NSW, the local library and the local Historical Society.

Archaeological Team

The archaeological team would comprise:

- Excavation Director – Jenny Winnett (Principal, Artefact Heritage)
- Site Director – Josh Symons (Principal, Artefact Heritage)
- Archaeologists – Adele Zubrzycka (Senior Heritage Consultant, Artefact Heritage), Duncan Jones (Senior Heritage Consultant, Artefact Heritage), HollyMae Steane Price (Heritage Consultant, Artefact Heritage), Jessica Horton (Graduate Heritage Consultant, Artefact Heritage) and other subconsultants as needed.

The Excavation Director meets the requirements of CoE 168 and NAH05.