

EXTENT

**HERITAGE ADVISORS
TO AUSTRALIA AND
THE ASIA PACIFIC**

Incorporating AHMS and Futurepast

Moorebank Intermodal Terminal Development (Package 1)

Aboriginal Archaeological Salvage Strategy

Final

CPB Contractors Pty Ltd

7 March 2017

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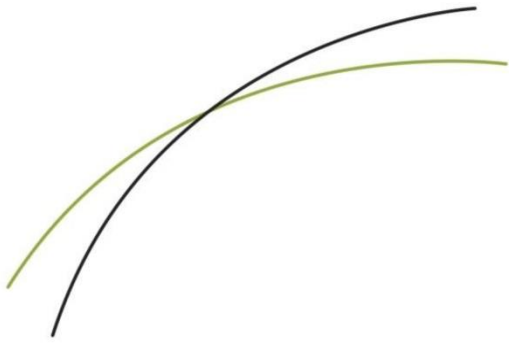
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PROJECT NAME: Moorebank Intermodal Terminal Development (Package 1)

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AOS	7.3.17	D	Minor edits	

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1 INTRODUCTION

Since 2011, Extent Heritage Pty Ltd (formerly AHMS Pty Ltd) has been involved in the Aboriginal heritage assessment of the SIMTA Intermodal Facility, a proposed transport hub situated on Moorebank Avenue, Moorebank, NSW.¹ Extent's involvement included preliminary and desktop assessment for the Concept Approval (AHMS, 2012), and a formal Aboriginal Heritage Impact Assessment (AHIA) (AHMS, 2015a) as part of the Project Approval. This latter assessment included on-site investigation, including test excavations focussing on the proposed rail corridor. Both reports included consultation with Aboriginal stakeholders.

The AHIA identified one area, MA14, on the western bank of Georges River as having the potential to contain significant Aboriginal heritage deposits (**Figure 1**). Specifically, a single test pit in this area recovered a small number of artefacts (n=13) within a 1m deep sand deposit. Dating of the deposit suggested some of the Aboriginal objects were of significant antiquity (about 18,000 years old). Based on these findings, the AHIA recommended that an archaeological salvage of this area be undertaken prior to the development.

Stage 1 of the SIMTA Intermodal Facility has recently been approved by Department of Planning and Environment (DPE) on 18 December 2015 (SSD 6766), with a formal Instrument of Approval issued on 12 December 2016. Stage 1 includes the rail corridor containing MA14, and the first stage of the transport hub itself (southeast corner of the DNSDC). CPB Contractors (CPB) has been awarded the Stage 1 pre-construction, and has engaged Extent to undertake the archaeological requirements associated with the approval.

Condition C15 of the approval states the following:

C.15 Prior to the commencement of pre-construction and construction activities affecting Aboriginal site MA14, the Applicant shall:

- a) develop a detailed salvage strategy, prepared in consultation with OEH (Aboriginal heritage) and the Aboriginal stakeholders. The investigation program shall be prepared to the satisfaction of the Secretary; and
- b) undertake any further archaeological excavation works recommended by the results of the Aboriginal archaeological investigation program.

Within twelve months of completing the above work, unless otherwise agreed by the Secretary, the Applicant shall submit a report containing the findings of the excavations, including artefact analysis and Aboriginal Site Impacts Recording Forms (ASIR), and the identification of final storage location for all Aboriginal objects recovered (testing and salvage), prepared in consultation with the Aboriginal stakeholders, the OEH (Aboriginal heritage) and to the satisfaction of the Secretary.

Note: where archaeological testing has occurred as part of the Environmental Assessment and the results are included in the documents listed in condition A1 the sites tested must still form part of the final report prepared under C15(b).

This document includes a detailed salvage methodology as outlined in (a) above, and details of the consultation undertaken in its development with the Aboriginal stakeholders and Office of Environment and Heritage (OEH). This document is based on a similar methodology already presented and reviewed as part of the AHIA.

¹ Please note that this site is situated to the west of Moorebank Avenue, and was formerly the Defence National Storage and Distribution Centre (DNSDC), and should not be confused with the other terminal within the School of Military Engineering, or MIC Site.

2 ABORIGINAL CONSULTATION

Aboriginal consultation continued from the earlier stages of the project, and included the following registered Aboriginal parties (RAPs):

- Tharawal LALC (TLALC).
- Darug Aboriginal Cultural Heritage Assessment (DACHA).
- Cubbitch Barta Native Title Claimant Aboriginal Corporation (CBNTCAC).
- Darug Custodian Aboriginal Corporation (DCAC).
- Darug Tribal Aboriginal Corporation (DTAC).
- Darug Land Observations (DLO).
- Darug Aboriginal Landcare Inc (DALI).
- Tocomwall.

Consultation included the distribution of the salvage strategy (this report in letter format) in March 2016 (**Appendix 1**). This salvage strategy *included* the relocation of the salvage excavation as outlined in **Section 3.1** below. A period of three weeks was provided for feedback on the strategy, during which time meetings were held with each RAP to discuss the document and wider project.

During these meetings all RAPs were supportive of the salvage strategy and sought no substantial amendments. No objections were raised in relation to the minor relocation of the proposed salvage location. However, questions were raised about the nature of the soil profile in this new location; and the decision of when to stop excavating the salvage area, since the definition of ‘culturally sterile’ proposed was vague and could result in works ceasing before the cultural deposit (>50cm) was reached. A summary of the outcomes of the meetings was provided to all RAPs via e-mail, along with additional information on geotechnical information showing the soil profile was the same, and confirmation that excavation would continue to depths below the original finds (**Appendix 2**). The definition of ‘culturally sterile’ has been modified in subsequent sections of the salvage strategy to reflect this. One written response was received from DCAC through this process, and has been included in **Appendix 2**.

The salvage strategy was distributed to OEH for comment on the 21 December 2016. On 17 January 2017, OEH indicated that they had no comments or amendments required (**Appendix 1 and 2**).

A consultation log and any comments from this process are included in **Appendix 1** of this document.

3 PREVIOUS FINDINGS

Based on the AHIA (AHMS, 2015a), the following provides a brief section of the previous excavations and findings at MA14. (MA14 was identified based on the findings of a single test pit, #3, within a wider grid of excavations along the rail corridor. The findings below, therefore, frequently refer to test pit #3 in the wider discussion of MA14.)

MA14 consisted of a levee bank situated on the ridgeline overlooking, and some 150m west of, Georges River, and extending across the rail corridor construction zone (**Figure 1**). The deposit was considered to have fluvial origins based on particle size analysis. The particle size data from test pit #3 suggests a poorly sorted stratigraphy of silt and fine gravels, both more likely to be from fluvial rather than aeolian deposition. Further it is considered likely the unit represents a single fluvial event, with little evidence of multiple phases or land-surfaces within the sequence. These data suggest that at some points in the past, the Georges River flooded these areas, which are ~14m above its surface level today.

Excavations recovered 13 Aboriginal objects from test pit #3. Artefacts were found throughout the soil profile, but primarily in spits 3 and 8/9 (30 and 85cm below surface, respectively). The lack of size sorting and different raw materials between these levels suggest at least two different periods of occupation in the past. The artefacts in the upper layers were typologically of middle to late Bondaian age (3-0.2ka), and included backed artefacts and thumbnail scrapers. The artefacts in the lower deposits had the characteristics of the core and tool scraper tradition, and suggest that they may be >5ka. The small size of the assemblage made any further interpretation of the past use of the area unfeasible.

Three OSL ages were recovered from test pit #3. The ages indicate that the sand sheet began forming at ~60ka. Two further OSL ages indicate that the upper assemblage was probably in the order of 3-4,000 years old, while the lower artefacts were ~18ka. This latter deposit represents some of the oldest cultural material recovered in the Sydney Basin, but the *in situ* nature of the artefacts has yet to be proven.

Based on these findings, MA14 was considered of local significance, but with potential to be of State importance if further material cultural could be recovered.

3.1 Revised Salvage Location and Other Modifications

The recommendations of the AHIA (AHMS, 2015a) were for archaeological salvage to be undertaken, and centred on test pit #3. However, following the final design of the rail corridor, which moved southward, it was determined that test pit #3, and at least parts of the proposed salvage excavation were situated outside of the impact footprint. Any works around test pit #3 would therefore have been an additional impact to the rail corridor (rather than within it), and also resulted in removal of a number of trees within an Ecologically Endangered Community (EEC).

For this reason, the salvage excavation was proposed for relocation to an area within the rail corridor impact area, some 10m south of test pit #3 (**Figure 2**). Thereby avoiding unnecessary impacts to the MA14 deposit outside the rail corridor, and minimising disruption of the EEC vegetation. The revised location is still within the curtilage of the MA14 Aboriginal site (**Figure 1**), within sight of test pit #3, on the same ridge top landform, and geotechnical information indicates it contains the same sandy soil profile. The site is also within the same EEC vegetation, reveals no evidence of disturbance through past activities, and therefore has a similar potential to contain cultural deposits as those around test pit #3. Based on a number of recent archaeological investigations, Aboriginal sites along the major water tributaries are all consistently large, often between 100 and 400m² in size (e.g. AHMS, 2015b). The relocated salvage area would therefore still have a high likelihood of being within the same archaeological site as test pit #3. In addition, the revised location is still partially within the footprint of the original salvage

area (i.e. the northern portion of the revised salvage area, overlaps the southern portion of the original location), so recovery of some of the deposit originally proposed for recovery will still occur.

Overall, the proposed relocation will result in less impact to MA14, since the salvage area is within the rail corridor, rather than outside of it. Where the salvage area to remain around test pit #3, and outside the impact corridor, it would result in a further 100m² of disturbance to MA14 than is currently required.

4 MITIGATION MEASURE - ABORIGINAL ARCHAEOLOGICAL SALVAGE

This section is based on the mitigation measures proposed in the AHIA (AHMS, 2015a), and reviewed during the Project Approval process. With the exception of minor amendments to the excavation methods, the section remains unchanged. The rationale for the salvage excavation has also been omitted, and can be found in Section 8 of the AHIA.

4.1 Research Objectives

The proposed salvage excavation has the following research objectives:

- Using fine resolution excavation and environmental analyses to further characterise the archaeological deposits relating to the prehistoric Aboriginal occupation of MA14. This includes a greater understanding of resource exploitation; identification of any change through time in spatial and chronological phases of activity; and site formation processes.
- To use the findings of MA14 to further understand the wider occupation and activity of Aboriginal people in southwest Sydney.
- To obtain the largest possible assemblage of Aboriginal objects, for detailed documentation and long term curation, within the spatial limits of the site and the financial/time constraints of the project.
- To allow greater cultural association between the site and the Aboriginal stakeholders (i.e. a form of cultural salvage) through involvement in the excavation, and options for the interpretation of the results, should the community decide that this is appropriate.
- To ensure that the development can proceed with a minimised risk of unknown or unexpected significant Aboriginal objects/features being harmed during construction.

4.2 Excavation Methodology

The proposed methodology is broadly consistent with the recently completed excavation, in order to ensure that the results are comparable. For example, this methodology was used by Extent in the recent archaeological salvage excavation at Fernadell Precinct, Pitt Town (AHIP # 1129099; Williams et al., 2014), Tarro-Beresfield water main renewal (AHIP #C0000616) and 21 Hassall Street, Parramatta (AHIP #C0001505). The use of the results in the post-excavation analysis and reporting showed that the methodology provided meaningful information, which could allow for long term curation with the Australian Museum (based on verbal discussions); data acceptable for international publication; and able to assist in wider education and interpretive outcomes.

The methodology would consist of up to 100 m² focussed to an area ~10m south of test pit #3 (which is no longer within the impact area). The excavation would be conducted with a series of hold points where additional excavation would only be undertaken if significant Aboriginal cultural material is being recovered and/or information on the research aims are continuing to be addressed. The decision to continue would be made by the excavation director in consultation with the RAPs and CPB, and should include the ongoing presence of undisturbed or deep sand, the presence of Aboriginal objects (ideally in high numbers (>10/m²)), and/or any archaeological features of interest (such as hearths, knapping events, etc). The initial hold point would be 36m², a further hold point would occur at 49m², and a final hold point at 81m².

All excavation would be undertaken manually, using shovels, mattocks and trowels, etc, by a team of archaeologists and Aboriginal stakeholders. The number of the team is to be 9, with a field program proposed for approximately 5-6 weeks. Excavations would be undertaken in contiguous 1m² test pits and in 5 cm spits up to the total area permitted. Each test pit would be dug discretely with AHD heights being obtained every four spits to ensure vertical integrity. Each test pit would be given an alpha-numeric label for identification purposes. A standard site recording form will be used for each spit of each excavation unit (1m²). Details will include site name, date, site recorder, spit number and depth, square ID, description of finds, description of soil, sketch plan of excavation (if relevant to show feature) and a bucket tally. Excavation would be undertaken to basal clays or culturally sterile deposits (<5 artefacts per spit in three consecutive spits - in this situation the top of the uppermost spit would be used as the basal depth to be reached. It is considered that this depth would be unlikely to exceed 1m below surface based on previous excavations.

Sediment from each 5 cm spit would be bucketed separately and sieved through 3mm mesh. Any Aboriginal objects recovered from the sediments would be retained in a plastic bag with the relevant test pit alpha-numeric code written upon it.

During, or immediately following, completion of the excavation, a range of soil and chronological samples would be taken. Soil and environmental samples would be taken at regular intervals through the soil profile (probably in the order of 2-5cm) and retained in labelled plastic bags for subsequent analysis. Radiocarbon and/or OSL samples would be taken in areas where Aboriginal objects are found, and generally try to bracket the deposit (to provide a maximum and minimum age). Material for radiocarbon analysis may also be undertaken opportunistically if archaeological features containing charcoal or other dateable material are evident.

All test pits, and the final open area, would be documented using photographic records, written descriptions and scaled drawings.

If discrete high-density artefact concentrations or cultural features, such as hearths, are revealed during the excavation, these will be excavated and recorded (by photography and planning). The locations of in-situ artefacts in such features may also be individually recorded.

A surveyor will be engaged to plan the locations of the salvage excavation areas, and establish a site datum, in order to record the level of deposits and features. A scaled photographic record will be kept, along with scaled drawings and written descriptions of the site and any findings.

For these excavations, the following methods would be adopted:

- The Salvage Area would be spatially located using a hand-held Leica RTK CS10/GS08 survey grade Differential GPS device (or equivalent).
- All test pits would be dug manually using shovels, mattocks, trowels and other hand tools as required.
- All sediment would be placed in buckets, and documented (number of buckets per spit). All sediment would then be wet-sieved through a 3mm mesh, and any cultural material recovered for analysis and curation.
- All excavation would be undertaken in 5cm spits to the depth until basal clays or culturally sterile deposits reached.
- Reduced levels of the top and bottom of the test pit, and at the top of each fourth spit would be documented using a dumpy level against a known elevation. Other levels may be taken as required.

- All Aboriginal objects and other archaeological material would be appropriately labelled and bagged for subsequent analysis. Preliminary analysis would occur on-site during the field investigations to allow results to guide the excavations as they proceed.
- Additional samples for dating, soil, and/or palaeo-climatic information may also be taken where appropriate.
- Soil profiles would be recorded in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (OEH, 2010), including scaled drawings, photographs, written descriptions, etc.
- Where the above methodology proves unfeasible or unsuitable, the proposed methodology may be revised at the discretion of the excavation director in consultation with the Aboriginal stakeholders and CPB based on the specific circumstances of the area, archaeological site, timeframes and/or other issues.

4.3 Analysis and Reporting

The post-excavation analysis (incorporating data from the salvage program and the previous testing program) would be designed to address the research objectives, along with other relevant questions that may arise based on the results of the excavation. Results of the analysis would be presented in relation to comparative site data where possible and where useful in addressing the research questions. Post-excavation analysis would involve the following components:

Stone Artefact Analysis

A qualified lithics specialist would undertake descriptive and functional recording of recovered artefacts. The analysis would be consistent with that undertaken during the test excavation post-excavation analysis in order to facilitate data comparison. Specifically, the analysis would aim to determine the following:

- Source information. What raw material resources were used; where did they come from; and what does this tell us about Aboriginal use of the region in the past?
- Stone reduction technology. How was the stone worked and used? Does this change over time? Can the function of the site be inferred from the artefact assemblage? What does this tell us about Aboriginal occupation, use, settlement and activities undertaken through time in this region?
- Post-depositional influences. What post-depositional influences have impacted on the assemblage, and what does this tell us about the integrity and significance of the site?
- Site chronology. When was the site occupied? Was the assemblage the product of repeated occupations or a single event? Is there spatial patterning in the assemblage, and what does this tell us about repeated use, activities and/or occupation of the region through time?
- Landforms. Is it possible to differentiate between occupation of different landforms based on the spatial patterning of the assemblage?

A program of conjoin analysis (re-fitting) on a sample of artefacts may be undertaken if higher density concentrations (greater than 30 artefacts per square metre) are found during the excavation. As described above, scope has been provided for 3D recording of individual artefacts within discrete artefact concentrations or other cultural features.

Analysis of the vertical and horizontal patterning of artefact distribution will be undertaken using the data derived from excavation. This would attempt to provide information about the stone reduction strategies used at the site, temporal change, and the extent and nature of post-depositional influences.

Geomorphology

Geomorphological analysis and reporting was undertaken as part of the report, and it is probable that the results of this work would apply equally to the salvage excavation. However, should significant variations in geomorphology be discovered, a specialist could be engaged to inspect and report upon these.

Dating

If suitable features and/or deposits are discovered, samples would be taken for dating, by radiocarbon or OSL analysis, depending on the nature of the sample.

Reporting

The results of the salvage excavation and all previous testing would be analysed, and presented in an excavation report. The report would be provided to the RAPs as a draft for review, and as a final version, incorporating any RAP comments received on the draft. The final version would be lodged with OEH. An Aboriginal Site Impact Recording Form would also be completed and lodged with OEH.

In accordance with Condition of Approval C.15, the report would be submitted to DPE within 12 months of completing the salvage works.

4.4 Storage of Aboriginal Objects

All Aboriginal objects recovered will be securely stored at the Extent office for analysis.

The final location of the Aboriginal objects² will depend on the amount of material found, their significance, and the wishes of the RAPs. The final location will be determined during the development of the report outlined in **Section 4.3**; and the agreed location included in the report as a recommendation. Based on the findings of the AHIA (AHMS, 2015a) and feedback from the RAPs, the following long term management of Aboriginal objects is proposed (in preferential order):

Option 1: Reburial on site

Reburial of the assemblage is an option where the property owner agrees, and can ensure the care of the Aboriginal objects in perpetuity at the reburial location. This Option requires that a Management Plan be prepared in consultation with the RAPs to describe how the reburial site will be protected.

Option 2: Deposition with the Australian Museum

Depending on the nature and significance of the assemblage recovered, it may be possible to deposit the objects with the Australian Museum. The assemblage would be assessed for accession according to the Archaeological Collection Deposition Policy (Australian Museum, January 2012) and the Protocols for the Deposition of Archaeological Material (Australian Museum, January 2012). It is important to note that while the assemblage may be assessed as significant under several criteria, the Museum will further assess the assemblage in line with their capacity to house the collection, and there is no legislative requirement for the Museum to accept the assemblage.

² The archaeological assemblage includes the Aboriginal objects recovered from both the test excavations undertaken to inform the approval (and outlined in AHMS, 2015a), and any further objects recovered from the salvage program.

Acceptance of the assemblage by the Museum will depend upon the significance of the material and the Museum's capacity to accept it. The assemblage must have an appropriate level of significance against at least one of the following criteria:

- Social or cultural value to the Aboriginal community.
- Research potential.
- Capacity to enhance the geographic, temporal and/or thematic coverage of the Australian Museum archaeology collections.
- Public program and educational value to the Australian Museum.

The significance thresholds are not specified. It is not possible to assess the significance of an assemblage, or apply to the Museum for deposition, until after the excavation and analysis has been completed.

5 REFERENCES

AHMS (2012) Aboriginal Cultural Heritage Assessment: SIMTA Moorebank Intermodal Terminal Facility. Unpublished Report for Hyder Consulting Pty Ltd.

AHMS (2015a) SIMTA Intermodal Terminal, Moorebank – Stage 1. Aboriginal Heritage Impact Assessment. Unpublished Report for Hyder Consulting Pty Ltd.

AHMS (2015b) Water Related Infrastructure for the First and Second Release North West Growth Centre Precincts: Aboriginal Archaeological Excavation Report. Unpublished Report for Lend Lease/Sydney Water.

Williams, A.N., Atkinson, F., Lau, M., Toms, P. (2014) A Glacial cryptic refuge in southeast Australia: Human occupation and mobility from 36,000 years ago in the Sydney Basin, New South Wales. *Journal of Quaternary Science*, 29(8): 735-748.

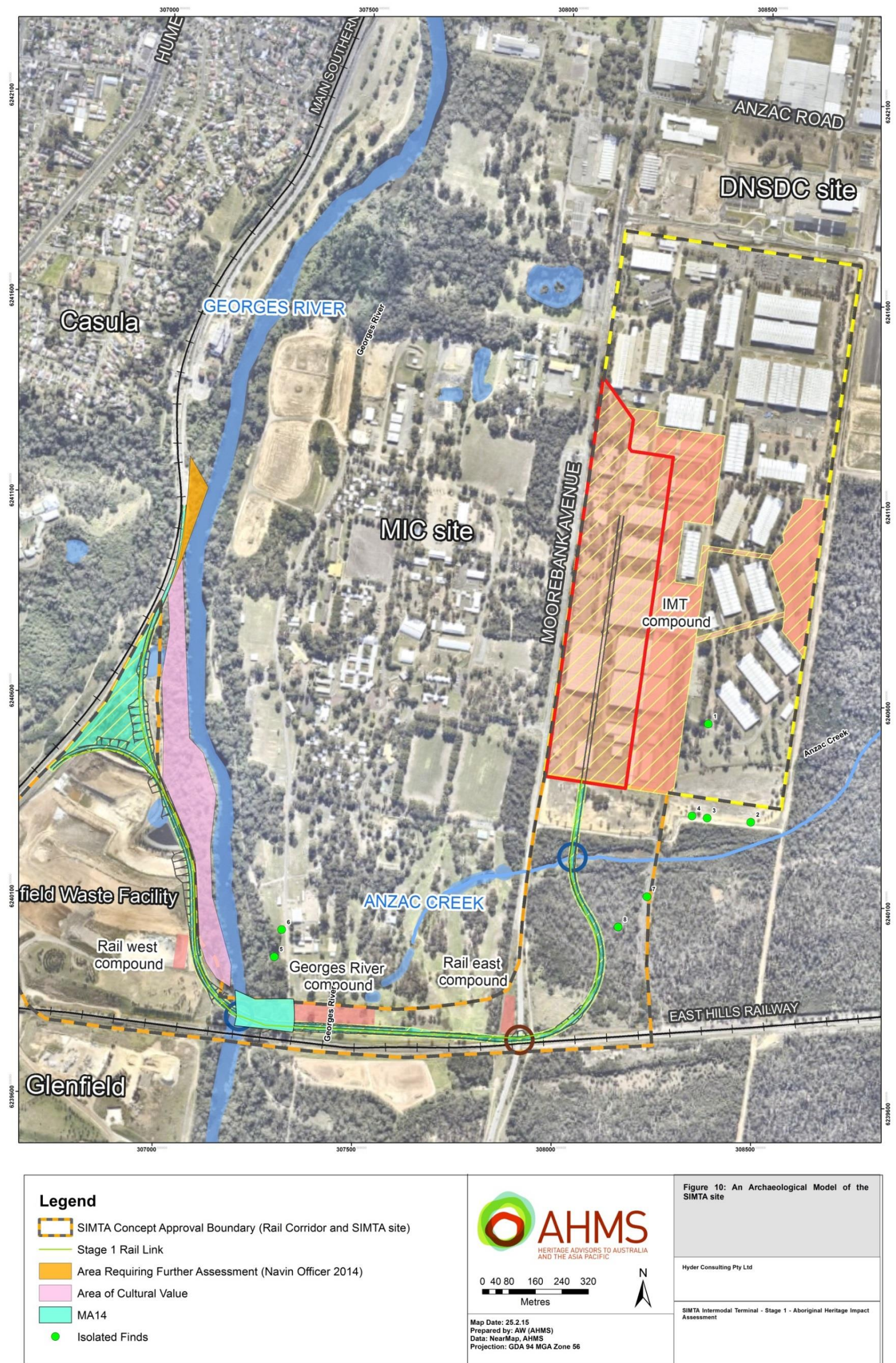


Figure 1. Map showing the location of MA14 on the banks of Georges River.



Figure 2. The proposed archaeological salvage would be situated just south of test pit 3, within the impact area (approximate location shown here in pink).

Appendix 1: Aboriginal Consultation Log

Agency	Contact	Date	Details	AHMS Contact
OEH	Susan Harrison	25.2.16	Distributed salvage strategy for review and comment. Sought their preferred method of consultation.	Alan Williams
Cubbitch Barta Native Title Claimant Aboriginal Corporation (CBNTC)	Glenda Chalker	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Darug Aboriginal Cultural Heritage Assessment (DACHA)	Gordon Morton	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Darug Aboriginal Landcare Inc (DALI)	Des Dyer	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Darug Custodian Aboriginal Corporation (DCAC)	Leanne Watson	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Darug Land Observations (DLO)	Gordon Workman	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Darug Tribal Aboriginal Corporation (DTAC)	Denise Newham	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Tharawal LALC	Heritage Officer	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Tocomwall	Scott and Danny Franks	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
DTAC	Denise Newham	25.2.16	Acknowledged receipt and expressed an interest in meeting.	Alan Williams
DCAC	Justine Coplin	2.3.16	Acknowledged receipt and expressed an interest in meeting.	Alistair Hobbs
Cubbitch Barta Native Title Claimant Aboriginal Corporation (CBNTC)	Glenda Chalker	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Darug Aboriginal Cultural Heritage Assessment (DACHA)	Celestine Everingham	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Darug Aboriginal Landcare Inc (DALI)	Des Dyer	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Darug Custodian Aboriginal Corporation (DCAC)	Leanne Watson	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Darug Land Observations (DLO)	Gordon Workman	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Darug Tribal Aboriginal Corporation (DTAC)	Denise Newham	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan

Agency	Contact	Date	Details	AHMS Contact
Tharawal LALC	Heritage Officer	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Tocomwall	Danny Franks	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Tocomwall	Danny Franks	7.3.16	Danny advised that methodology document did not list Tocomwall as a registered party for the consultation and field program. Amended methodology to reflect their involvement.	Ashley O'Sullivan
Tocomwall	Danny Franks	7.3.16	Forwarded Danny amended methodology to reflect Tocomwall involvement in the project.	Ashley O'Sullivan
DACHA	Celestine Everingham	8.3.16	Met with Celestine to discuss methodology and proposed works at Moorebank. Supportive of methodology.	Ashley O'Sullivan
DCAC	Justine Coplin	8.3.16	Met with Justine to discuss methodology and proposed works at Moorebank. Supportive of methodology.	Ashley O'Sullivan
Tocomwall	Danny Franks	10.3.16	Met with Danny and Chaz to discuss methodology and proposed works at Moorebank. Supportive of methodology.	Ashley O'Sullivan
Darug Tribal Aboriginal Corporation	John Reilly	10.3.16	Called John and left a message, advising that I have been trying to contact Denise in their office.	Ashley O'Sullivan
Darug Aboriginal Landcare Inc	Des Dyer	10.3.16	Called Des and was unable to leave a message.	Ashley O'Sullivan
Tharawal LALC	Heritage Officer	10.3.16	Called Tharawal but was unable to get through to their Heritage Office. Left a message.	Ashley O'Sullivan
DCAC	Justine Coplin	14.3.16	Received letter from Justine to confirm support of methodology for proposed works at Moorebank.	Ashley O'Sullivan
DLO	Anna O'Hara	15.3.16	Heard back from Anna regarding meeting, advised that this week sometime would be suitable to discuss methodology.	Ashley O'Sullivan
DLO	Anna O'Hara	16.3.16	Spoke with Anna from DLO regarding meeting, arranged a time on Friday to discuss methodology.	Ashley O'Sullivan
DTAC	John Reilly	18.3.16	Met with John Reilly from DTAC today to discuss methodology and proposed works at Moorebank. Supportive of methodology.	Ashley O'Sullivan
DLO	Anna O'Hara	18.3.16	Spoke with Anna on the phone today to discuss the methodology and proposed works at Moorebank. Supportive of methodology.	Ashley O'Sullivan
CBNTCAC	Glenda Chalker	19.3.16	Met with Glenda to discuss methodology and proposed works at Moorebank. Glenda raised some concerns about the depths that	Ashley O'Sullivan

Agency	Contact	Date	Details	AHMS Contact
			excavations were being undertaken to. Otherwise supportive of the methodology. Advised Glenda that we would address the depths being excavated to in later communication.	O'Sullivan
DTAC, DALI, DCAC, DLO, CBNTCAC, Tocomwall, Tharawal LALC	Various	8.4.16	Sent an email to all groups involved to advise them of outcomes of stakeholder meetings. Provided geotechnical information and advised groups that we would be excavating to depths below the original finds (80cm).	Ashley O'Sullivan
Tharawal LALC, DALI	Various	8.4.16	Contacted Tharawal LALC and DALI regarding the Moorebank Salvage Methodology and update on stakeholder meetings. Was unable to get in contact with either group.	Ashley O'Sullivan
DACHA	Celestine Everingham	8.4.16	Sent a letter to Celestine providing an update on the project as described above.	Ashley O'Sullivan
DTAC, DALI, DCAC, DLO, CBNTCAC, Tocomwall, Tharawal LALC, DACHA		31.5.2016	CHMP distributed to the RAPs via email (posted to DACHA) for opportunity to review and provide feedback. Request for responses to be provided by 14 June 2016.	Alistair Hobbs
CBNTCAC	Glenda Chalker	1.6.2016	Email response asking for hard copy to be sent. Copy posted by Ryan Danesh.	Alistair Hobbs
DLO	Jamie Workman	6.6.16	Provided comments on the CHMP seeking to be involved in monitoring of topsoil stripping, and proposing re-burial for any Aboriginal objects recovered.	Alan Williams
OEH	Susan Harrison	21.12.16	Provided the salvage strategy for review and comment	Alan Williams
OEH	Susan Harrison	17.1.17	Indicated that OEH had no comments or modifications to the strategy.	Alan Williams

Appendix 2: Aboriginal Consultation Correspondence

23 February 2016

«First_Name» «Last_Name»
«Company_Name»
«Address_Line_1»
«City» «State» «ZIP_Code»

**Re: Aboriginal Heritage Mitigation Measures – Moorebank Intermodal Terminal Development
(Package 1) – Information and Request for Feedback**

Dear «First_Name»,

Background

Since 2011, Extent Heritage Pty Ltd (formerly AHMS Pty Ltd) has been involved in the Aboriginal heritage assessment of the SIMTA Intermodal Facility, a proposed transport hub situated on Moorebank Avenue, Moorebank, NSW. (Please note that this site is situated to the west of Moorebank Avenue, and was formerly the Defence National Storage and Distribution Centre (DNSDC), and should not be confused with the other terminal within the School of Military Engineering, or MIC Site). Extent's involvement included preliminary and desktop assessment for the Concept Approval (AHMS, 2012), and a formal Aboriginal Heritage Impact Assessment (AHIA) (AHMS, 2015) as part of the Project Approval. This latter assessment included on-site investigation, including test excavations focussing on the proposed rail corridor. Both reports included consultation with Aboriginal stakeholders.

The AHIA identified one area, MA14, on the western bank of Georges River as having the potential to contain significant Aboriginal heritage deposits (**Figure 1**). Specifically, a single test pit in this area recovered a small number of artefacts (n=13) within a 1m deep sand deposit. Dating of the deposit suggested some of the Aboriginal objects were of significant antiquity (about 18,000 years old). Based on these findings, the AHIA recommended that an archaeological salvage of this area be undertaken prior to the development.

Stage 1 of the SIMTA Intermodal Facility has recently been approved by Department of Planning and Environment (DPE) on 18 December 2015 (SSD 6766). Stage 1 includes the rail corridor containing MA14, and the first stage of the transport hub itself (southeast corner of the DNSDC). CPB Contractors (CPB) has recently been awarded the Stage 1 pre-construction, and has engaged Extent to undertake the archaeological requirements associated with the approval.

The approval states the following as being required in relation to Aboriginal heritage:

- Prior to the commencement of pre-construction and construction activities affecting Aboriginal site MA14, the Applicant shall:

- a) develop a detailed salvage strategy, prepared in consultation with OEH (Aboriginal heritage) and the Aboriginal stakeholders. The investigation program shall be prepared to the satisfaction of the Secretary; and
 - b) undertake any further archaeological excavation works recommended by the results of the Aboriginal archaeological investigation program.
- Within twelve months of completing the above work, unless otherwise agreed by the Secretary, the Applicant shall submit a report containing the findings of the excavations, including artefact analysis and Aboriginal Site Impacts Recording Forms (ASIR), and the identification of final storage location for all Aboriginal objects recovered (testing and salvage), prepared in consultation with the Aboriginal stakeholders, the OEH (Aboriginal heritage) and to the satisfaction of the Secretary.

This document includes a detailed salvage methodology as outlined in (a) above for review by the Aboriginal stakeholders and Office of Environment and Heritage (OEH) before implementation. This document is based on a similar methodology already presented and reviewed as part of the AHIA. However, some minor modifications from the original have occurred to more accurately reflect the research aims, and more practically fit within the confines of the rail corridor. Of note, is the need to relocate the salvage excavations to an area within the rail corridor impact area, some 10m south of test pit #3 – the original focus for the works. The final construction design has moved the rail corridor further south, and while remaining within the curtilage of MA14, is no longer in the vicinity of test pit #3. To avoid unnecessary impact to the vegetation or cultural deposits around test pit #3, we now propose to move the salvage area into the impact area (**Figure 2**). This area is within sight of test pit #3, on the same landform, and has not visually been disturbed through past activities, and therefore has a similar potential to the deposits around test pit #3. The shape of the salvage area may also need modification to fit around a number of obstacles (mainly large trees and existing disturbance) that in some instances cannot be removed. This means that a 10x10m (100m²) square may not be feasible, but rather an amorphous shape extending around these features of a similar size may need to be considered. Finally, test pit size has been modified to focus on stratigraphic, rather than spatial accuracy, with the former considered to more important in resolving the significance and formative history of the site.

Given the salvage methodology has already been reviewed by Aboriginal stakeholders and DPE through the Project Approval process, and to fulfil the construction program for the project, we propose to finalise this document in three weeks (**15 March 2016**). At this stage, we will be offering to undertake meetings with key stakeholders to discuss the methodology within the next three weeks. Excavations are proposed to begin on the 21 March 2016, and will extend for up to 5-6 weeks dependent on findings.

Aboriginal Consultation

Aboriginal consultation will continue from the earlier stages of the project, and include the following registered Aboriginal parties:

- Tharawal LALC (TLALC).
- Darug Aboriginal Cultural Heritage Assessment (DACHA).
- Cubbitch Barta Native Title Claimant Aboriginal Corporation (CBNTCAC).
- Darug Custodian Aboriginal Corporation (DCAC).
- Darug Tribal Aboriginal Corporation (DTAC).

- Darug Land Observations (DLO).
- Darug Aboriginal Landcare Inc (DALI).
- Tocomwall.

We propose to undertake a meeting with each of the stakeholders listed above in the next three weeks to discuss the methodology. We also propose to have three positions on the excavation team to be made up of representatives from the Aboriginal stakeholders, totalling up to 75-90 person days (about 10-12 person days per organisation) if the full program is implemented. However, please note that the salvage excavations have a series of hold points, and if little or no cultural material is recovered, the field program would be much shorter, and participation less.

Previous Findings

Based on the AHIA (AHMS, 2015), the following provides a brief section of the previous excavations and findings at MA14. MA14 was identified based on the findings of a single test pit, #3, within a wider grid of excavations along the rail corridor. The findings below, therefore, frequently refer to test pit #3 in the wider discussion of MA14.

MA14 consisted of a levee bank situated on the ridgeline overlooking, and some 150m west of, Georges River, and extending across the rail corridor construction zone (**Figure 1**). The deposit was considered to have fluvial origins based on particle size analysis. The particle size data from test pit #3 suggests a poorly sorted stratigraphy of silt and fine gravels, both more likely to be from fluvial rather than aeolian deposition. Further it is considered likely the unit represents a single fluvial event, with little evidence of multiple phases or land-surfaces within the sequence. These data suggests that at some points in the past, the Georges River flooded these areas, which are ~14m above its surface level today.

Excavations recovered 13 Aboriginal objects from test pit #3. Artefacts were found throughout the soil profile, but primarily in spits 3 and 8/9 (30 and 85cm below surface, respectively). The lack of size sorting and different raw materials between these levels suggest at least two different periods of occupation in the past. The artefacts in the upper layers were typologically of middle to late Bondaian age (3-0.2ka), and included backed artefacts and thumbnail scrapers. The artefacts in the lower deposits had the characteristics of the core and tool scraper tradition, and suggest that they may be >5ka. The small size of the assemblage made any further interpretation of the past use of the area unfeasible.

Three OSL ages were recovered from test pit #3. The ages indicate that the sand sheet began forming at ~60ka. Two further OSL ages indicate that the upper assemblage was probably in the order of 3-4,000 years old, while the lower artefacts were ~18ka. This latter deposit represents some of the oldest cultural material recovered in the Sydney Basin, but the *in situ* nature of the artefacts has yet to be proven.

Based on these findings, MA14 was considered of local significance, but with potential to be of State importance if further material cultural could be recovered.

Mitigation Measure - Aboriginal Archaeological Salvage

This section is based on the mitigation measures proposed in the AHIA (AHMS, 2015), and reviewed during the Project Approval process. With the exception of minor amendments to the excavation methods, the section remains unchanged. The rationale for the salvage excavation has also been omitted, and can be found in Section 8 of the AHIA.

Research Objectives

The proposed salvage excavation has the following research objectives:

- Using fine resolution excavation and environmental analyses to further characterise the archaeological deposits relating to the prehistoric Aboriginal occupation of MA14. This includes a greater understanding of resource exploitation; identification of any change through time in spatial and chronological phases of activity; and site formation processes.
- To use the findings of MA14 to further understand the wider occupation and activity of Aboriginal people in southwest Sydney.
- To obtain the largest possible assemblage of Aboriginal objects, for detailed documentation and long term curation, within the spatial limits of the site and the financial/time constraints of the project.
- To allow greater cultural association between the site and the Aboriginal stakeholders (i.e. a form of cultural salvage) through involvement in the excavation, and options for the interpretation of the results, should the community decide that this is appropriate.
- To ensure that the development can proceed with a minimised risk of unknown or unexpected significant Aboriginal objects/features being harmed during construction.

Excavation Methodology

The proposed methodology is broadly consistent with the recently completed excavation, in order to ensure that the results are comparable. For example, this methodology was used by Extent in the recent archaeological salvage excavation at Fernadell Precinct, Pitt Town (AHIP # 1129099; Williams et al., 2014), Tarro-Beresfield water main renewal (AHIP #C0000616) and 21 Hassall Street, Parramatta (AHIP #C0001505). The use of the results in the post-excavation analysis and reporting showed that the methodology provided meaningful information, which could allow for long term curation with the Australian Museum (based on verbal discussions); data acceptable for international publication; and able to assist in wider education and interpretive outcomes.

The methodology would consist of up to 100 m² focussed to an area ~10m south of test pit #3 (which is no longer within the impact area). The excavation would be conducted with a series of hold points where additional excavation would only be undertaken if significant Aboriginal cultural material is being recovered and/or information on the research aims are continuing to be addressed. The decision to continue would be made by the excavation director in consultation with the RAPs and CPB, and should include the ongoing presence of undisturbed or deep sand, the presence of Aboriginal objects (ideally in high numbers (>10/m²)), and/or any archaeological features of interest (such as hearths, knapping events, etc). The initial hold point would be 36m², a further hold point would occur at 49m², and a final hold point at 81m².

All excavation would be undertaken manually, using shovels, mattocks and trowels, etc, by a team of archaeologists and Aboriginal stakeholders. The number of the team is to be 9, with a field program proposed for approximately 5-6 weeks. Excavations would be undertaken in contiguous 1m² test pits and in 5 cm spits up to the total area permitted. Each test pit would be dug discretely with AHD heights being obtained every four spits to ensure vertical integrity. Each test pit would be given an alpha-numeric label for identification purposes. A standard site recording form will be used for each spit of each excavation unit (1m²). Details will include site name, date, site recorder, spit number and depth, square ID, description of finds, description of soil, sketch plan of excavation (if relevant to show feature) and a

bucket tally. Excavation would be undertaken to basal clays or culturally sterile deposits (<5 artefacts per spit in three consecutive spits - in this situation the top of the uppermost spit would be used as the basal depth to be reached. It is considered that this depth would be unlikely to exceed 1m below surface based on previous excavations.

Sediment from each 5 cm spit would be bucketed separately and sieved through 3mm mesh. Any Aboriginal objects recovered from the sediments would be retained in a plastic bag with the relevant test pit alpha-numeric code written upon it.

During, or immediately following, completion of the excavation, a range of soil and chronological samples would be taken. Soil and environmental samples would be taken at regular intervals through the soil profile (probably in the order of 2-5cm) and retained in labelled plastic bags for subsequent analysis. Radiocarbon and/or OSL samples would be taken in areas where Aboriginal objects are found, and generally try to bracket the deposit (to provide a maximum and minimum age). Material for radiocarbon analysis may also be undertaken opportunistically if archaeological features containing charcoal or other dateable material are evident.

All test pits, and the final open area, would be documented using photographic records, written descriptions and scaled drawings.

If discrete high-density artefact concentrations or cultural features, such as hearths, are revealed during the excavation, these will be excavated and recorded (by photography and planning). The locations of in-situ artefacts in such features may also be individually recorded.

A surveyor will be engaged to plan the locations of the salvage excavation areas, and establish a site datum, in order to record the level of deposits and features. A scaled photographic record will be kept, along with scaled drawings and written descriptions of the site and any findings.

For these excavations, the following methods would be adopted:

- The Salvage Area would be spatially located using a hand-held Leica RTK CS10/GS08 survey grade Differential GPS device (or equivalent).
- All test pits would be dug manually using shovels, mattocks, trowels and other hand tools as required.
- All sediment would be placed in buckets, and documented (number of buckets per spit). All sediment would then be wet-sieved through a 3mm mesh, and any cultural material recovered for analysis and curation.
- All excavation would be undertaken in 5cm spits to the depth until basal clays or culturally sterile deposits reached.
- Reduced levels of the top and bottom of the test pit, and at the top of each fourth spit would be documented using a dumpy level against a known elevation. Other levels may be taken as required.
- All Aboriginal objects and other archaeological material would be appropriately labelled and bagged for subsequent analysis. Preliminary analysis would occur on-site during the field investigations to allow results to guide the excavations as they proceed.
- Additional samples for dating, soil, and/or palaeo-climatic information may also be taken where appropriate.

- Soil profiles would be recorded in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (OEH, 2010), including scaled drawings, photographs, written descriptions, etc.
- Where the above methodology proves unfeasible or unsuitable, the proposed methodology may be revised at the discretion of the excavation director in consultation with the Aboriginal stakeholders and CPB based on the specific circumstances of the area, archaeological site, timeframes and/or other issues.

Analysis and Reporting

The post-excavation analysis would be designed to address the research objectives, along with other relevant questions that may arise based on the results of the excavation. Results of the analysis would be presented in relation to comparative site data where possible and where useful in addressing the research questions. Post-excavation analysis would involve the following components:

Stone Artefact Analysis

A qualified lithics specialist would undertake descriptive and functional recording of recovered artefacts. The analysis would be consistent with that undertaken during the test excavation post-excavation analysis in order to facilitate data comparison. Specifically, the analysis would aim to determine the following:

- Source information. What raw material resources were used; where did they come from; and what does this tell us about Aboriginal use of the region in the past?
- Stone reduction technology. How was the stone worked and used? Does this change over time? Can the function of the site be inferred from the artefact assemblage? What does this tell us about Aboriginal occupation, use, settlement and activities undertaken through time in this region?
- Post-depositional influences. What post-depositional influences have impacted on the assemblage, and what does this tell us about the integrity and significance of the site?
- Site chronology. When was the site occupied? Was the assemblage the product of repeated occupations or a single event? Is there spatial patterning in the assemblage, and what does this tell us about repeated use, activities and/or occupation of the region through time?
- Landforms. Is it possible to differentiate between occupation of different landforms based on the spatial patterning of the assemblage?

A program of conjoin analysis (re-fitting) on a sample of artefacts may be undertaken if higher density concentrations (greater than 30 artefacts per square metre) are found during the excavation. As described above, scope has been provided for 3D recording of individual artefacts within discrete artefact concentrations or other cultural features.

Analysis of the vertical and horizontal patterning of artefact distribution will be undertaken using the data derived from excavation. This would attempt to provide information about the stone reduction strategies used at the site, temporal change, and the extent and nature of post-depositional influences.

Geomorphology

Geomorphological analysis and reporting was undertaken as part of the report, and it is probable that the results of this work would apply equally to the salvage excavation. However, should significant variations in geomorphology be discovered, a specialist could be engaged to inspect and report upon these.

Dating

If suitable features and/or deposits are discovered, samples would be taken for dating, by radiocarbon or OSL analysis, depending on the nature of the sample.

Reporting

The results of the salvage excavation would be analysed, and presented in an excavation report. The report would be provided to the RAPs as a draft for review, and as a final version, incorporating any RAP comments received on the draft. The final version would be lodged with OEH. An Aboriginal Site Impact Recording Form would also be completed and lodged with OEH.

Storage of Aboriginal Objects

All Aboriginal objects recovered will be securely stored at the Extent office for analysis. Arrangements will be discussed with the RAPs regarding the long-term management of the objects following analysis.

Option 1: Deposition with the Australian Museum

Depending on the nature and significance of the assemblage recovered, it may be possible to deposit the objects with the Australian Museum. The assemblage would be assessed for accession according to the Archaeological Collection Deposition Policy (Australian Museum, January 2012) and the Protocols for the Deposition of Archaeological Material (Australian Museum, January 2012). It is important to note that while the assemblage may be assessed as significant under several criteria, the Museum will further assess the assemblage in line with their capacity to house the collection, and there is no legislative requirement for the Museum to accept the assemblage.

Acceptance of the assemblage by the Museum will depend upon the significance of the material and the Museum's capacity to accept it. The assemblage must have an appropriate level of significance against at least one of the following criteria:

- Social or cultural value to the Aboriginal community.
- Research potential.
- Capacity to enhance the geographic, temporal and/or thematic coverage of the Australian Museum archaeology collections.
- Public program and educational value to the Australian Museum.

The significance thresholds are not specified. It is not possible to assess the significance of an assemblage, or apply to the Museum for deposition, until after the excavation and analysis has been completed.

Option 2: Reburial on site

Reburial of the assemblage is an option where the property owner agrees, and can ensure the care of the Aboriginal objects in perpetuity at the reburial location. This Option requires that a Management Plan be prepared in consultation with the RAPs. This Plan outlines how the reburial site will be protected.

Option 3: Care and Control Agreement

The third option is for one of the RAPs to accept the assemblage, in accordance with section 85A (1) (c) of the NPW Act. This would be done in accordance with a Care and Control Agreement developed in consultation with all of the RAPs and submitted for approval to the Office of Environment and Heritage. If deposition of the assemblage in a Keeping Place is required, a written commitment would be produced by the proponent in conjunction with the RAPs addressing the nature of the Keeping Place, and how it would be funded, maintained and administered. Should there be disagreement regarding the proposed custodian of the assemblage, this would be determined and/or arbitrated by the Office of Environment and Heritage.

Timeframes

We propose the following broad timeframes:

- Distribution of the salvage strategy to OEH and Aboriginal stakeholders: 23 February 2016
- Consultation period of salvage strategy: 23 February – 15 March 2016.
- Finalise salvage strategy: 15-18 March 2016.
- Initiate salvage excavations: 21 March 2016.
- Excavate up to hold point 1: 21 March -31 March 2016.
- Excavate up to hold point 2 (if required): 1- 5 April 2016.
- Excavate up to hold point 3 (if required): 6 – 18 April 2016.
- Excavate to completion (if required) – 19-22 April 2016.
- Undertake post excavation analysis and reporting – March – May 2016.
- Distribution and finalisation of the report – May – July 2016.

Information Sought

Extent would appreciate your review of the above methodology, and any feedback you may have. We will shortly be contacting you to organise a meeting to discuss the project with your organisation.

If you wish to provide feedback, please address it to Alan Williams at Extent Heritage (A: 2/729 Elizabeth Street, Waterloo, NSW 2017; E: awilliams@extent.com.au).

Yours sincerely



Dr. Alan Williams MAACAI

Aboriginal Heritage Team Leader

References

AHMS (2012) Aboriginal Cultural Heritage Assessment: SIMTA Moorebank Intermodal Terminal Facility. Unpublished Report for Hyder Consulting Pty Ltd.

AHMS (2015) SIMTA Intermodal Terminal, Moorebank – Stage 1. Aboriginal Heritage Impact Assessment. Unpublished Report for Hyder Consulting Pty Ltd.

Williams, A.N., Atkinson, F., Lau, M., Toms, P. (2014) A Glacial cryptic refuge in southeast Australia: Human occupation and mobility from 36,000 years ago in the Sydney Basin, New South Wales. *Journal of Quaternary Science*, 29(8): 735-748.

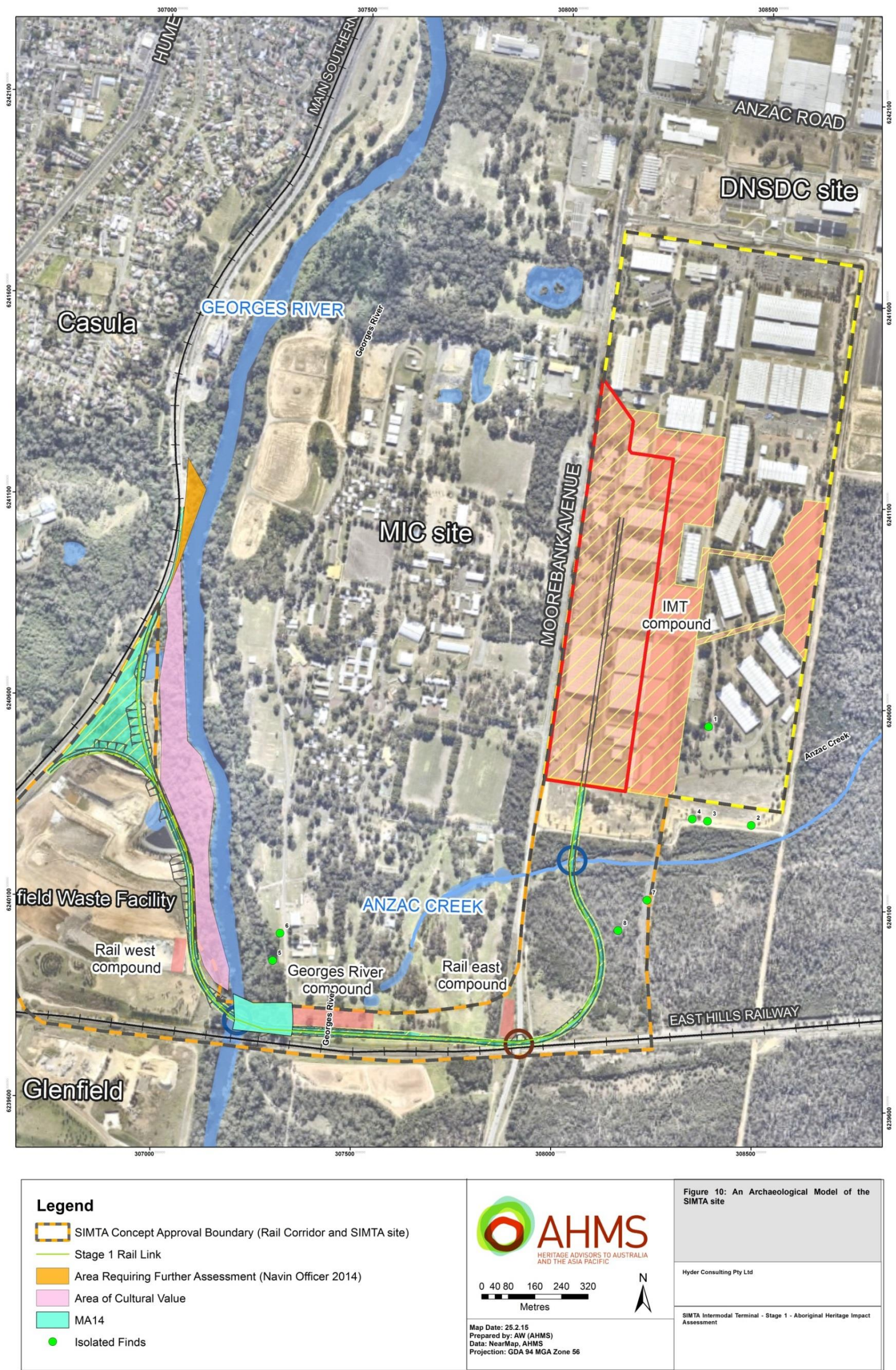


Figure 1. Map showing the location of MA14 on the banks of Georges River.



Figure 2. The proposed archaeological salvage would be situated just south of test pit 3, within the impact area (approximate location shown here in pink).

From: Ashley O'Sullivan
Sent: Friday, 8 April 2016 10:02 AM
To: Ashley O'Sullivan
Subject: Update: Moorebank Intermodal Terminal Development - Aboriginal Heritage

Hi Everyone,

I just wanted to touch base with you all and provide a quick update on the progress of the project. We haven't yet received the go ahead to start on site works as they are waiting for their approvals, so as a result we are in a bit of a limbo period at the moment. Unfortunately I can see it being one of those projects where the client will give the go ahead and then expect us to be on site the following week. But we'll cross that bridge when we get there.

I've met with almost all the groups involved in this project now, and we've provided feedback to the client on the methodology. The primary concern that was raised was the depth we would be stopping and the provision for excavation to stop after 3 culturally sterile spits. We have received geotechnical information from the client that suggest it is unlikely we will reach bedrock in the planned salvage area. As the original testing program found artefacts at 80cm, some 50cm below any other artefacts found, please be assured that we'll be implementing a methodology that reflects these findings and this will likely represent a minimum depth we excavate to. As always, any decisions made on stopping excavation at a certain depth will be made in conjunction with the stakeholders on site.

That's all the extra information I have for now and as soon as we have approval from the client, I'll be in touch again.

See you all soon,
Ashley

Ashley O'Sullivan | Heritage Advisor
EXTENT Heritage Pty Ltd
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MOBILE: 0415770163 Leanne Watson
0414962766 Justine Coplin
EMAIL: mulgokiwi@bigpond.com / justinecoplin@optusnet.com.au

Attention: Extent

Subject: Aboriginal Heritage Mitigation Measures - Moorebank Intermodal Terminal Development

Dear Ashley

Our group is a non-profit organisation that has been active for over forty years in Western Sydney, we are a Darug community group with over three hundred members. The main aim in our constitution is the care of Darug sites, places, wildlife and to promote our culture and provide education on the Darug history.

Darug Custodian Aboriginal Corporation have received and reviewed the report for Moorebank Intermodal Terminal methodology.

We support the recommendations set out in this report.

Please contact us with all further enquiries on the above contacts.

Regards

Justine Coplin

21 December 2016

Office of Environment and Heritage
PO Box 644
Parramatta NSW 2124

Attn: **Susan Harrison (Team Leader)**

**Re: Aboriginal Heritage Mitigation Measures – Moorebank Intermodal Terminal Development
(Package 1) – Archaeological Salvage Strategy**

Dear Susan,

Background

Since 2011, Extent Heritage Pty Ltd (formerly AHMS Pty Ltd) has been involved in the Aboriginal heritage assessment of the SIMTA Intermodal Facility, a proposed transport hub situated on Moorebank Avenue, Moorebank, NSW. (Please note that this site is situated to the west of Moorebank Avenue, and was formerly the Defence National Storage and Distribution Centre (DNSDC), and should not be confused with the other terminal within the School of Military Engineering, or MIC Site). Extent's involvement included preliminary and desktop assessment for the Concept Approval (AHMS, 2012), and a formal Aboriginal Heritage Impact Assessment (AHIA) (AHMS, 2015) as part of the Project Approval. This latter assessment included on-site investigation, including test excavations focussing on the proposed rail corridor. Both reports included consultation with Aboriginal stakeholders.

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Stage 1 of the SIMTA Intermodal Facility has recently been approved by Department of Planning and Environment (DPE) on 18 December 2015 (SSD 6766), with a formal Instrument of Approval issued on 12 December 2016. Stage 1 includes the rail corridor containing MA14, and the first stage of the transport hub itself (southeast corner of the DNSDC). CPB Contractors (CPB) has been awarded the Stage 1 pre-construction, and has engaged Extent to undertake the archaeological requirements associated with the approval.

The approval states the following as being required in relation to Aboriginal heritage:

- Prior to the commencement of pre-construction and construction activities affecting Aboriginal site MA14, the Applicant shall:

- a) develop a detailed salvage strategy, prepared in consultation with OEH (Aboriginal heritage) and the Aboriginal stakeholders. The investigation program shall be prepared to the satisfaction of the Secretary; and
- b) undertake any further archaeological excavation works recommended by the results of the Aboriginal archaeological investigation program.
- Within twelve months of completing the above work, unless otherwise agreed by the Secretary, the Applicant shall submit a report containing the findings of the excavations, including artefact analysis and Aboriginal Site Impacts Recording Forms (ASIR), and the identification of final storage location for all Aboriginal objects recovered (testing and salvage), prepared in consultation with the Aboriginal stakeholders, the OEH (Aboriginal heritage) and to the satisfaction of the Secretary.

This document includes a detailed salvage methodology as outlined in (a) above for review by the Aboriginal stakeholders and Office of Environment and Heritage (OEH) before implementation. This document is based on a similar methodology already presented and reviewed as part of the AHIA. However, some minor modifications from the original have occurred to more accurately reflect the research aims, and more practically fit within the confines of the rail corridor. Of note, is the need to relocate the salvage excavations to an area within the rail corridor impact area, some 10m south of test pit #3 – the original focus for the works. The final construction design has moved the rail corridor further south, and while remaining within the curtilage of MA14, is no longer in the vicinity of test pit #3. To avoid unnecessary impact to the vegetation or cultural deposits around test pit #3, we now propose to move the salvage area into the impact area (**Figure 2**). This area is within sight of test pit #3, on the same landform, and has not visually been disturbed through past activities, and therefore has a similar potential to the deposits around test pit #3. The shape of the salvage area may also need modification to fit around a number of obstacles (mainly large trees and existing disturbance) that in some instances cannot be removed. This means that a 10x10m (100m²) square may not be feasible, but rather an amorphous shape extending around these features of a similar size may need to be considered. Finally, test pit size has been modified to focus on stratigraphic, rather than spatial accuracy, with the former considered to more important in resolving the significance and formative history of the site.

Given the salvage methodology has already been reviewed by Aboriginal stakeholders and DPE through the Project Approval process, and to fulfil the construction program for the project, we propose to finalise this document by early February 2017. Excavations are proposed to begin in mid-February 2017, and will extend for up to 5-6 weeks dependent on findings.

Aboriginal Consultation

Aboriginal consultation will continue from the earlier stages of the project, and include the following registered Aboriginal parties (RAPs):

- Tharawal LALC (TLALC).
- Darug Aboriginal Cultural Heritage Assessment (DACHA).
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- Darug Tribal Aboriginal Corporation (DTAC).
- Darug Land Observations (DLO).

- Darug Aboriginal Landcare Inc (DALI).
- Tocomwall.

A copy of this methodology, and subsequent meetings was undertaken with the RAPs in March and April 2016. A consultation log and any comments from this process are included in **Appendix 1** of this document. In brief, the RAPs were supportive of the methodology, and sought no substantive changes.

It is proposed that three positions on the excavation team to be made up of representatives from the Aboriginal stakeholders, totalling up to 75-90 person days (about 10-12 person days per organisation) if the full program is implemented.

Previous Findings

Based on the AHIA (AHMS, 2015), the following provides a brief section of the previous excavations and findings at MA14. MA14 was identified based on the findings of a single test pit, #3, within a wider grid of excavations along the rail corridor. The findings below, therefore, frequently refer to test pit #3 in the wider discussion of MA14.

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Research Objectives

The proposed salvage excavation has the following research objectives:

- Using fine resolution excavation and environmental analyses to further characterise the archaeological deposits relating to the prehistoric Aboriginal occupation of MA14. This includes a greater understanding of resource exploitation; identification of any change through time in spatial and chronological phases of activity; and site formation processes.
- To use the findings of MA14 to further understand the wider occupation and activity of Aboriginal people in southwest Sydney.
- To obtain the largest possible assemblage of Aboriginal objects, for detailed documentation and long term curation, within the spatial limits of the site and the financial/time constraints of the project.
- To allow greater cultural association between the site and the Aboriginal stakeholders (i.e. a form of cultural salvage) through involvement in the excavation, and options for the interpretation of the results, should the community decide that this is appropriate.
- To ensure that the development can proceed with a minimised risk of unknown or unexpected significant Aboriginal objects/features being harmed during construction.

Excavation Methodology

The proposed methodology is broadly consistent with the recently completed excavation, in order to ensure that the results are comparable. For example, this methodology was used by Extent in the recent archaeological salvage excavation at Fernadell Precinct, Pitt Town (AHIP # 1129099; Williams et al., 2014), Tarro-Beresfield water main renewal (AHIP #C0000616) and 21 Hassall Street, Parramatta (AHIP #C0001505). The use of the results in the post-excavation analysis and reporting showed that the methodology provided meaningful information, which could allow for long term curation with the Australian Museum (based on verbal discussions); data acceptable for international publication; and able to assist in wider education and interpretive outcomes.

The methodology would consist of up to 100 m² focussed to an area ~10m south of test pit #3 (which is no longer within the impact area). The excavation would be conducted with a series of hold points where additional excavation would only be undertaken if significant Aboriginal cultural material is being recovered and/or information on the research aims are continuing to be addressed. The decision to continue would be made by the excavation director in consultation with the RAPs and CPB, and should include the ongoing presence of undisturbed or deep sand, the presence of Aboriginal objects (ideally in high numbers (>10/m²)), and/or any archaeological features of interest (such as hearths, knapping events, etc). The initial hold point would be 36m², a further hold point would occur at 49m², and a final hold point at 81m².

All excavation would be undertaken manually, using shovels, mattocks and trowels, etc, by a team of archaeologists and Aboriginal stakeholders. The number of the team is to be 9, with a field program proposed for approximately 5-6 weeks. Excavations would be undertaken in contiguous 1m² test pits and in 5 cm spits up to the total area permitted. Each test pit would be dug discretely with AHD heights being obtained every four spits to ensure vertical integrity. Each test pit would be given an alpha-numeric label for identification purposes. A standard site recording form will be used for each spit of each excavation unit (1m²). Details will include site name, date, site recorder, spit number and depth, square ID, description of finds, description of soil, sketch plan of excavation (if relevant to show feature) and a

bucket tally. Excavation would be undertaken to basal clays or culturally sterile deposits (<5 artefacts per spit in three consecutive spits - in this situation the top of the uppermost spit would be used as the basal depth to be reached. It is considered that this depth would be unlikely to exceed 1m below surface based on previous excavations.

Sediment from each 5 cm spit would be bucketed separately and sieved through 3mm mesh. Any Aboriginal objects recovered from the sediments would be retained in a plastic bag with the relevant test pit alpha-numeric code written upon it.

During, or immediately following, completion of the excavation, a range of soil and chronological samples would be taken. Soil and environmental samples would be taken at regular intervals through the soil profile (probably in the order of 2-5cm) and retained in labelled plastic bags for subsequent analysis. Radiocarbon and/or OSL samples would be taken in areas where Aboriginal objects are found, and generally try to bracket the deposit (to provide a maximum and minimum age). Material for radiocarbon analysis may also be undertaken opportunistically if archaeological features containing charcoal or other dateable material are evident.

All test pits, and the final open area, would be documented using photographic records, written descriptions and scaled drawings.

If discrete high-density artefact concentrations or cultural features, such as hearths, are revealed during the excavation, these will be excavated and recorded (by photography and planning). The locations of in-situ artefacts in such features may also be individually recorded.

A surveyor will be engaged to plan the locations of the salvage excavation areas, and establish a site datum, in order to record the level of deposits and features. A scaled photographic record will be kept, along with scaled drawings and written descriptions of the site and any findings.

For these excavations, the following methods would be adopted:

- The Salvage Area would be spatially located using a hand-held Leica RTK CS10/GS08 survey grade Differential GPS device (or equivalent).
- All test pits would be dug manually using shovels, mattocks, trowels and other hand tools as required.
- All sediment would be placed in buckets, and documented (number of buckets per spit). All sediment would then be wet-sieved through a 3mm mesh, and any cultural material recovered for analysis and curation.
- All excavation would be undertaken in 5cm spits to the depth until basal clays or culturally sterile deposits reached.
- Reduced levels of the top and bottom of the test pit, and at the top of each fourth spit would be documented using a dumpy level against a known elevation. Other levels may be taken as required.
- All Aboriginal objects and other archaeological material would be appropriately labelled and bagged for subsequent analysis. Preliminary analysis would occur on-site during the field investigations to allow results to guide the excavations as they proceed.
- Additional samples for dating, soil, and/or palaeo-climatic information may also be taken where appropriate.

- Soil profiles would be recorded in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (OEH, 2010), including scaled drawings, photographs, written descriptions, etc.
- Where the above methodology proves unfeasible or unsuitable, the proposed methodology may be revised at the discretion of the excavation director in consultation with the Aboriginal stakeholders and CPB based on the specific circumstances of the area, archaeological site, timeframes and/or other issues.

Analysis and Reporting

The post-excavation analysis would be designed to address the research objectives, along with other relevant questions that may arise based on the results of the excavation. Results of the analysis would be presented in relation to comparative site data where possible and where useful in addressing the research questions. Post-excavation analysis would involve the following components:

Stone Artefact Analysis

A qualified lithics specialist would undertake descriptive and functional recording of recovered artefacts. The analysis would be consistent with that undertaken during the test excavation post-excavation analysis in order to facilitate data comparison. Specifically, the analysis would aim to determine the following:

- Source information. What raw material resources were used; where did they come from; and what does this tell us about Aboriginal use of the region in the past?
- Stone reduction technology. How was the stone worked and used? Does this change over time? Can the function of the site be inferred from the artefact assemblage? What does this tell us about Aboriginal occupation, use, settlement and activities undertaken through time in this region?
- Post-depositional influences. What post-depositional influences have impacted on the assemblage, and what does this tell us about the integrity and significance of the site?
- Site chronology. When was the site occupied? Was the assemblage the product of repeated occupations or a single event? Is there spatial patterning in the assemblage, and what does this tell us about repeated use, activities and/or occupation of the region through time?
- Landforms. Is it possible to differentiate between occupation of different landforms based on the spatial patterning of the assemblage?

A program of conjoin analysis (re-fitting) on a sample of artefacts may be undertaken if higher density concentrations (greater than 30 artefacts per square metre) are found during the excavation. As described above, scope has been provided for 3D recording of individual artefacts within discrete artefact concentrations or other cultural features.

Analysis of the vertical and horizontal patterning of artefact distribution will be undertaken using the data derived from excavation. This would attempt to provide information about the stone reduction strategies used at the site, temporal change, and the extent and nature of post-depositional influences.

Geomorphology

Geomorphological analysis and reporting was undertaken as part of the report, and it is probable that the results of this work would apply equally to the salvage excavation. However, should significant variations in geomorphology be discovered, a specialist could be engaged to inspect and report upon these.

Dating

If suitable features and/or deposits are discovered, samples would be taken for dating, by radiocarbon or OSL analysis, depending on the nature of the sample.

Reporting

The results of the salvage excavation would be analysed, and presented in an excavation report. The report would be provided to the RAPs as a draft for review, and as a final version, incorporating any RAP comments received on the draft. The final version would be lodged with OEH. An Aboriginal Site Impact Recording Form would also be completed and lodged with OEH.

Storage of Aboriginal Objects

All Aboriginal objects recovered will be securely stored at the Extent office for analysis. Arrangements will be discussed with the RAPs regarding the long-term management of the objects following analysis.

Option 1: Deposition with the Australian Museum

Depending on the nature and significance of the assemblage recovered, it may be possible to deposit the objects with the Australian Museum. The assemblage would be assessed for accession according to the Archaeological Collection Deposition Policy (Australian Museum, January 2012) and the Protocols for the Deposition of Archaeological Material (Australian Museum, January 2012). It is important to note that while the assemblage may be assessed as significant under several criteria, the Museum will further assess the assemblage in line with their capacity to house the collection, and there is no legislative requirement for the Museum to accept the assemblage.

Acceptance of the assemblage by the Museum will depend upon the significance of the material and the Museum's capacity to accept it. The assemblage must have an appropriate level of significance against at least one of the following criteria:

- Social or cultural value to the Aboriginal community.
- Research potential.
- Capacity to enhance the geographic, temporal and/or thematic coverage of the Australian Museum archaeology collections.
- Public program and educational value to the Australian Museum.

The significance thresholds are not specified. It is not possible to assess the significance of an assemblage, or apply to the Museum for deposition, until after the excavation and analysis has been completed.

Option 2: Reburial on site

Reburial of the assemblage is an option where the property owner agrees, and can ensure the care of the Aboriginal objects in perpetuity at the reburial location. This Option requires that a Management Plan be prepared in consultation with the RAPs to describe how the reburial site will be protected.

Option 3: Care and Control Agreement

The third option is for one of the RAPs to accept the assemblage, in accordance with section 85A (1) (c) of the NPW Act. This would be done in accordance with a Care and Control Agreement developed in consultation with all of the RAPs and submitted for approval to the Office of Environment and Heritage. If deposition of the assemblage in a Keeping Place is required, a written commitment would be produced by the proponent in conjunction with the RAPs addressing the nature of the Keeping Place, and how it would be funded, maintained and administered. Should there be disagreement regarding the proposed custodian of the assemblage, this would be determined and/or arbitrated by the Office of Environment and Heritage.

Timeframes

Consultation with the Aboriginal stakeholders has already occurred. At this stage, we propose to finalise the salvage strategy in early February 2017, with excavations to begin shortly after. Assuming, a 5-6 week program, the excavations would be completed by mid-April 2017. It is likely that the post-excavation analysis and reporting would take several months, and be delivered by ~August 2017.

Information Sought

Extent would appreciate your review of the above methodology, and any feedback you may have.

If you wish to provide feedback, please address it to Alan Williams at Extent Heritage (A: 3/73 Union Street, Pyrmont, NSW 2009; E: awilliams@extent.com.au).

Yours sincerely



Dr. Alan Williams FSA MAACAI • Aboriginal Heritage Team Leader

References

AHMS (2012) Aboriginal Cultural Heritage Assessment: SIMTA Moorebank Intermodal Terminal Facility. Unpublished Report for Hyder Consulting Pty Ltd.

AHMS (2015) SIMTA Intermodal Terminal, Moorebank – Stage 1. Aboriginal Heritage Impact Assessment. Unpublished Report for Hyder Consulting Pty Ltd.

Williams, A.N., Atkinson, F., Lau, M., Toms, P. (2014) A Glacial cryptic refuge in southeast Australia: Human occupation and mobility from 36,000 years ago in the Sydney Basin, New South Wales. *Journal of Quaternary Science*, 29(8): 735-748.

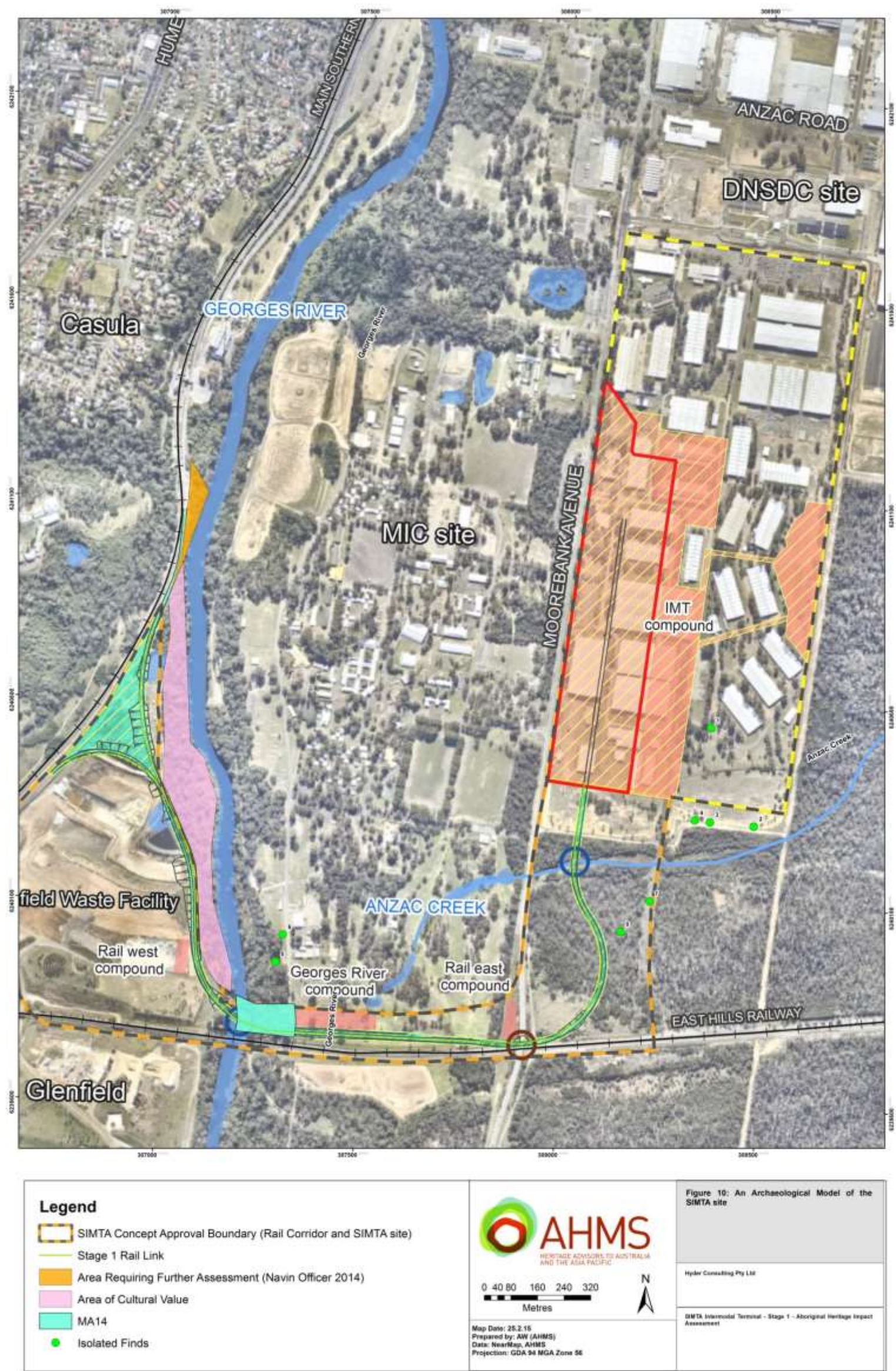


Figure 1. Map showing the location of MA14 on the banks of Georges River.



Figure 2. The proposed archaeological salvage would be situated just south of test pit 3, within the impact area (approximate location shown here in pink).

Appendix 1: Aboriginal Consultation

Agency	Contact	Date	Details	AHMS Contact
OEH	Susan Harrison	25.2.16	Distributed salvage strategy for review and comment. Sought their preferred method of consultation.	Alan Williams
Cubbitch Barta Native Title Claimant Aboriginal Corporation (CBNTC)	Glenda Chalker	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Darug Aboriginal Cultural Heritage Assessment (DACHA)	Gordon Morton	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Darug Aboriginal Landcare Inc (DALI)	Des Dyer	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Darug Custodian Aboriginal Corporation (DCAC)	Leanne Watson	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Darug Land Observations (DLO)	Gordon Workman	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Darug Tribal Aboriginal Corporation (DTAC)	Denise Newham	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Tharawal LALC	Heritage Officer	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
Tocomwall	Scott and Danny Franks	25.2.16	Distributed salvage strategy for review and comment. Sought their availability to meet and discuss the project.	Alan Williams
DTAC	Denise Newham	25.2.16	Acknowledged receipt and expressed an interest in meeting.	Alan Williams
DCAC	Justine Coplin	2.3.16	Acknowledged receipt and expressed an interest in meeting.	Alistair Hobbs
Cubbitch Barta Native Title Claimant Aboriginal Corporation (CBNTC)	Glenda Chalker	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Darug Aboriginal Cultural Heritage	Celestine	4.3.16	Contacted to set up meeting to discuss the methodology and field	Ashley

Agency	Contact	Date	Details	AHMS Contact
Assessment (DACHA)	Everingham		program.	O'Sullivan
Darug Aboriginal Landcare Inc (DALI)	Des Dyer	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Darug Custodian Aboriginal Corporation (DCAC)	Leanne Watson	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Darug Land Observations (DLO)	Gordon Workman	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Darug Tribal Aboriginal Corporation (DTAC)	Denise Newham	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Tharawal LALC	Heritage Officer	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Tocomwall	Danny Franks	4.3.16	Contacted to set up meeting to discuss the methodology and field program.	Ashley O'Sullivan
Tocomwall	Danny Franks	7.3.16	Danny advised that methodology document did not list Tocomwall as a registered party for the consultation and field program. Amended methodology to reflect their involvement.	Ashley O'Sullivan
Tocomwall	Danny Franks	7.3.16	Forwarded Danny amended methodology to reflect Tocomwall involvement in the project.	Ashley O'Sullivan
DACHA	Celestine Everingham	8.3.16	Met with Celestine to discuss methodology and proposed works at Moorebank. Supportive of methodology.	Ashley O'Sullivan
DCAC	Justine Coplin	8.3.16	Met with Justine to discuss methodology and proposed works at Moorebank. Supportive of methodology.	Ashley O'Sullivan
Tocomwall	Danny Franks	10.3.16	Met with Danny and Chaz to discuss methodology and proposed works at Moorebank. Supportive of methodology.	Ashley O'Sullivan
Darug Tribal Aboriginal Corporation	John Reilly	10.3.16	Called John and left a message, advising that I have been trying to contact Denise in their office.	Ashley O'Sullivan

Agency	Contact	Date	Details	AHMS Contact
Darug Aboriginal Landcare Inc	Des Dyer	10.3.16	Called Des and was unable to leave a message.	Ashley O'Sullivan
DCAC	Justine Coplin	14.3.16	Received letter from Justine to confirm support of methodology for proposed works at Moorebank.	Ashley O'Sullivan
DLO	Anna O'Hara	15.3.16	Heard back from Anna regarding meeting, advised that this week sometime would be suitable to discuss methodology.	Ashley O'Sullivan
DLO	Anna O'Hara	16.3.16	Spoke with Anna from DLO regarding meeting, arranged a time on Friday to discuss methodology.	Ashley O'Sullivan
DTAC	John Reilly	18.3.16	Met with John Reilly from DTAC today to discuss methodology and proposed works at Moorebank. Supportive of methodology.	Ashley O'Sullivan
DLO	Anna O'Hara	18.3.16	Spoke with Anna on the phone today to discuss the methodology and proposed works at Moorebank. Supportive of methodology.	Ashley O'Sullivan
CBNTCAC	Glenda Chalker	19.3.16	Met with Glenda to discuss methodology and proposed works at Moorebank.	Ashley O'Sullivan
DTAC, DALI, DCAC, DLO, CBNTCAC, Tocomwall, Tharawal LALC	Various	8.4.16	Sent an email to all groups involved to advise them of outcomes of stakeholder meetings. Provided geotechnical information and advised groups that we would be excavating to depths below the original finds (80cm).	Ashley O'Sullivan
DACHA	Celestine Everingham	8.4.16	Sent a letter to Celestine providing an update on the project as described above.	Ashley O'Sullivan
DTAC, DALI, DCAC, DLO, CBNTCAC, Tocomwall, Tharawal LALC, DACHA		31.5.2016	CHMP distributed to the RAPs via email (posted to DACHA) for opportunity to review and provide feedback. Request for responses to be provided by 14 June 2016.	Alistair Hobbs
CBNTCAC	Glenda Chalker	1.6.2016	Email response asking for hard copy to be sent. Copy posted by Ryan Danesh.	Alistair Hobbs



DARUG CUSTODIAN
ABORIGINAL
CORPORATION

PO BOX 81 WINDSOR 2756
PHONE: 0245775181 FAX: 0245775098
MOBILE: 0415770163 Leanne Watson
0414962766 Justine Coplin
EMAIL: mulgokiwi@bigpond.com / justinecoplin@optusnet.com.au

Attention: Extent

Subject: Aboriginal Heritage Mitigation Measures - Moorebank Intermodal Terminal Development

Dear Ashley

Our group is a non-profit organisation that has been active for over forty years in Western Sydney, we are a Darug community group with over three hundred members. The main aim in our constitution is the care of Darug sites, places, wildlife and to promote our culture and provide education on the Darug history.

Darug Custodian Aboriginal Corporation have received and reviewed the report for Moorebank Intermodal Terminal methodology.

We support the recommendations set out in this report.

Please contact us with all further enquiries on the above contacts.

Regards

Justine Coplin

From: [Alistair Hobbs](#)
To: [Ashley O'Sullivan](#)
Subject: FW: Moorebank Intermodal Terminal Dev Stage 1 - CHMP for review.
Date: Tuesday, 21 June 2016 5:00:31 PM
Attachments: [image001.jpg](#)
[CPB RALP No 1 CHMP Review Sheet-160426.xlsx](#)
[N01031-EN-PLN-0021-B-Heritage Management Plan-160517 Combined.pdf](#)

From: Alistair Hobbs
Sent: Tuesday, 31 May 2016 5:00 PM
To: Alistair Hobbs
Subject: Moorebank Intermodal Terminal Dev Stage 1 - CHMP for review.

Hi everyone,

As you will be aware, Extent Heritage is currently involved in the Aboriginal heritage mitigation works for the Moorebank Intermodal Terminal Development Stage 1 project. As part of the ongoing heritage work for the project, a salvage program is proposed for site MA14 and is currently awaiting approval for commencement.

Also as part of the condition of approval for the work, the development of a Construction Heritage Management Plan (CHMP) was required prior to works being conducted. To comply with Aboriginal community consultation guidelines and keep you updated on the project, I have attached a copy of the CHMP for you to review and should you wish, provide feedback. If you could provide any responses in the next couple of weeks (by 14 June 2016) it would be much appreciated. If you have any further questions or queries please don't hesitate to contact Alan Williams or myself on 02 9555 4000.

Many thanks,

Alistair Hobbs | Heritage Advisor
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P: 02 9555 4000 M: 0437 241 221

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6th June 2016

Alistair Hobbs
Extent Heritage Pty Ltd
3/73 Union Street
PYRMONT NSW 2009

Dear Alistair,

**RE: MOOREBANK INTERMODAL TERMINAL DEVELOPMENT
STAGE 1 – RALP No. 1**

Construction Heritage Management Plan

Darug Land Observations Pty Ltd has reviewed the proposed draft Construction Heritage Management Plan, and supports the heritage management plan for SIMTA's Moorebank Intermodal Terminal Development consisting of a 2.8 kilometre rail line, along with its required infrastructure, to connect the Import-Export Terminal and the Interstate Terminals to the Southern Sydney Freight Line (SSFL), which is capable of accommodating trains up to 1,800m in length.

In relation to the long-term storage of recovered artefacts, if any, Darug Land Observations Pty Ltd strongly believes that recovered artefacts should be re-buried on Country (the study area).

Furthermore, Darug Land Observations Pty Ltd would be involved in the monitoring of the topsoil removal and all other form of works to be carried out on the site.

Yours sincerely,

Jamie Workman
Darug Land Observations Pty Ltd

Uncle Gordon Workman
Darug Elder

From: Susan Harrison <Susan.Harrison@environment.nsw.gov.au>
Sent: Tuesday, 17 January 2017 3:53 PM
To: Alan Williams
Cc: Richard Bonner
Subject: Moorebank Intermodal (SSD 6766) - Salvage Strategy - Request for Comment

Follow Up Flag: Follow up
Flag Status: Flagged

OEH has reviewed the proposed salvage strategy and has no comments to make.

Thank you
Susan Harrison

Susan Harrison
Senior Team Leader Planning, Greater Sydney
Regional Operations Group
Office of Environment and Heritage
PO Box 644
Parramatta NSW 2124
T: 9995 6864
W: www.environment.nsw.gov.au

From: Alan Williams [<mailto:awilliams@extent.com.au>]
Sent: Wednesday, 21 December 2016 3:45 PM
To: Susan Harrison <Susan.Harrison@environment.nsw.gov.au>
Cc: Noonan, Adam <Adam.Noonan@cpbcon.com.au>; Pathammavong, Sam <Sam.Pathammavong@cpbcon.com.au>; Ashley O'Sullivan <aosullivan@extent.com.au>
Subject: Moorebank Intermodal (SSD 6766) - Salvage Strategy - Request for Comment

Dear Susan,

As you will be aware from correspondence (much) earlier in the year, Extent Heritage has been engaged by CPB Contractors to undertake the archaeological salvage works for the proposed intermodal hub at Moorebank (SSD 6766) . After nearly a year, we have finally received the Instrument of Approval for the project, and the heritage requirements remain unchanged from the draft version distributed in December 2015. As part of the archaeological mitigations, we must consult with OEH on the salvage strategy (Condition C15a).

Therefore please find attached a copy of the salvage strategy that was developed earlier this year, and has already been subject to discussion with the Aboriginal stakeholders. Can you please identify whether you wish to review the document and/or provide comments? At this stage, we are hoping to begin work in February, so a response by this time would be greatly appreciated. I am happy to come and meet with you or your team to discuss if that's easier?

Thanks
AI

Dr. Alan Williams FSA MAACAI | Aboriginal Heritage Team Leader
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See my latest research article on the population history of Australia at:
<http://rspb.royalsocietypublishing.org/content/280/1761/20130486.short?rss=1>

See my latest research article on human refuges during the Last Glacial Maximum at:
<http://www.sciencedirect.com/science/article/pii/S0305440313002215>

See my latest research article on the identification of one of the earliest sites in Australia as part of compliance-based excavations in northwest Sydney at:
<http://onlinelibrary.wiley.com/doi/10.1002/jqs.2742/abstract>

See my latest research article on correlations between Aboriginal populations and landscape burning across Australia:
<http://www.sciencedirect.com/science/article/pii/S0031018215002400>

See my latest research article on the emergence of complex societies in Aboriginal Australia over the last 10,000 years:
<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0128661>

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