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Project Number: HN000056-A

ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT TOMAGO RESOURCE RECOVERY FACILITY

FINAL 11/11/2020 WITH ABORIGINAL CONSULTATION FOR PUBLIC EXHIBITION

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Executive Summary

Heritage Now has been engaged by Jackson Environment and Planning on behalf of REMONDIS Australia Pty Ltd to prepare an Aboriginal Cultural Heritage Assessment Report for the proposed Tomago Resource Recovery Facility and Truck Parking Depot, located at 21D & 21F School Drive, Tomago. The assessment is required as part of the Environmental Impact Statement and Development Application process.

The Project Area is located at 21D and 21F School Drive, Tomago (Lots 8 and 11 DP 270328, and part of Lot 301 DP 634536) approximately 12 km north west of Newcastle.

REMONDIS intends to relocate their existing truck parking depot and resource recovery facility in Thornton to Tomago. This facility will involve the processing of waste, including hazardous materials. The proponent also intends to construct a truck parking depot at the vacant lot of 21F School Drive.

The AHIMS search results showed that there were no previously registered Aboriginal sites within the Project Area and background research showed that the area had been previously disturbed.

The Project Area was surveyed on 10 July 2020. The survey was attended by Bec Young from Mur-Roo-Ma, Richard Kime from Worimi LALC, Aidyn Lilley from Nur-Run-Gee, and Tessa Boer-Mah and Crystal Phillips from Heritage Now.

No Aboriginal sites or potential archaeological deposits were identified during the survey. No further archaeological investigation is required for the Project Area.

Aboriginal consultation has been undertaken in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010). The report draft was sent to all Registered Aboriginal Parties with 28 days to provide feedback. Those who responded agreed with the recommendations provided in this report.

The works are to proceed in accordance with the recommendations below.

Recommendation 1

All on-site personnel are to be made aware of their obligations under the *National Parks and Wildlife Act 1974*, through an onsite induction or other suitable format.

Recommendation 2

In the unlikely event that Aboriginal or suspected Aboriginal archaeological material is uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is to contact the heritage consultant to make an assessment as to whether the material is classed as Aboriginal object/s under the *National Parks and Wildlife Act* and advise on the required management and mitigation measures. Works are not to re-commence in the cordoned off area until heritage clearance has been given and/or the required management and mitigation measures have been implemented.

Recommendation 3

In the unlikely event that human remains, or suspected human remains are uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is

to contact the NSW Police to establish whether the area is a crime scene. If it is not a crime scene and the remains likely to be Aboriginal, then Heritage NSW is to be notified via the Environment Line on 131555 and management measures are to be devised in consultation with RAPs. Works are not to recommence in the area until the management measures have been implemented.

Acronyms, Terms and Definitions

Acronym	Definition
ACHA	Aboriginal Cultural Heritage Assessment
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
BCD-DPIE	Biodiversity Conservation Division – Department of Planning Industry and Environment
DECCW	Department of Environment, Climate Change and Water
DP	Deposited Plan
EP&A	Environmental Planning and Assessment
ESD	Ecologically Sustainable Development
ICOMOS	International Council on Monuments and Sites
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
NPW	National Parks and Wildlife
NSW	New South Wales
OEH	Office of Environment and Heritage
PAD	Potential Archaeological Deposit
RAP	Registered Aboriginal Party

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1 Introduction

Heritage Now has been engaged by Jackson Environment and Planning on behalf of REMONDIS Australia Pty Ltd to prepare an Aboriginal Cultural Heritage Assessment Report for the proposed Tomago Resource Recovery Facility and Truck Parking Depot, located at 21D & 21F School Drive, Tomago. The assessments are required as part of the Environmental Impact Statement and the Development Application process.

The aim of the ACHA is to identify Aboriginal cultural heritage values through consultation with Registered Aboriginal Parties (RAPs). The ACHA enables those values to be respected throughout the process through the identification of appropriate mitigation measures to avoid and/or minimise harm to Aboriginal cultural heritage and values.

1.1 Project Area

The Project Area is located at 21D and 21F School Drive, Tomago (Lots 8, and 11 DP 270328) approximately 12 km north west of Newcastle. The total area of the Project Area is 39021 m^2 (Figure 1).

1.2 Project Proposal

REMONDIS intends to relocate their existing truck parking depot and resource recovery facility in Thornton to Tomago. This facility will involve the processing of waste, including hazardous materials. The proponent also intends to construct a truck parking depot at the vacant lot of 21F School Drive (Figure 2), as well as upgrade of the facility infrastructure.

1.3 Project Methodology

This ACHA report has been prepared in accordance with, but not limited to, the *National Parks and Wildlife Act 1974*, the *National Parks and Wildlife Regulations 2009*, the *Environmental Planning and Assessment Act 1979*, *Port Stephens Local Environmental Plan 2013*. The following guidelines and codes of practice have been used in preparing this ACHA report:

- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011).
- Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW, 2010c)
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010b).

In accordance with the guidelines this report has outlined the:

- The Project Area and proposed activity (project proposal) (Section 1.2 and 6.1)
- the Aboriginal consultation process (Section 3 and Appendix 1),
- provided relevant background information (Section 4.1 and 4.2),
- undertaken an assessment of cultural heritage values (Section 5),
- undertaken an impact assessment, including consideration of avoidance and/or mitigating harm (Section 6), and
- provided recommendations (Section 7).

1.4 Authorship and Copyright

This report was prepared by Crystal Phillips and Trisha Palconit, Heritage Consultants at Heritage Now, and Tessa Boer-Mah, Principal Heritage Consultant at Heritage Now.

Heritage Now Pty Ltd retains the copyright of this report.

Figure 1: Project Area

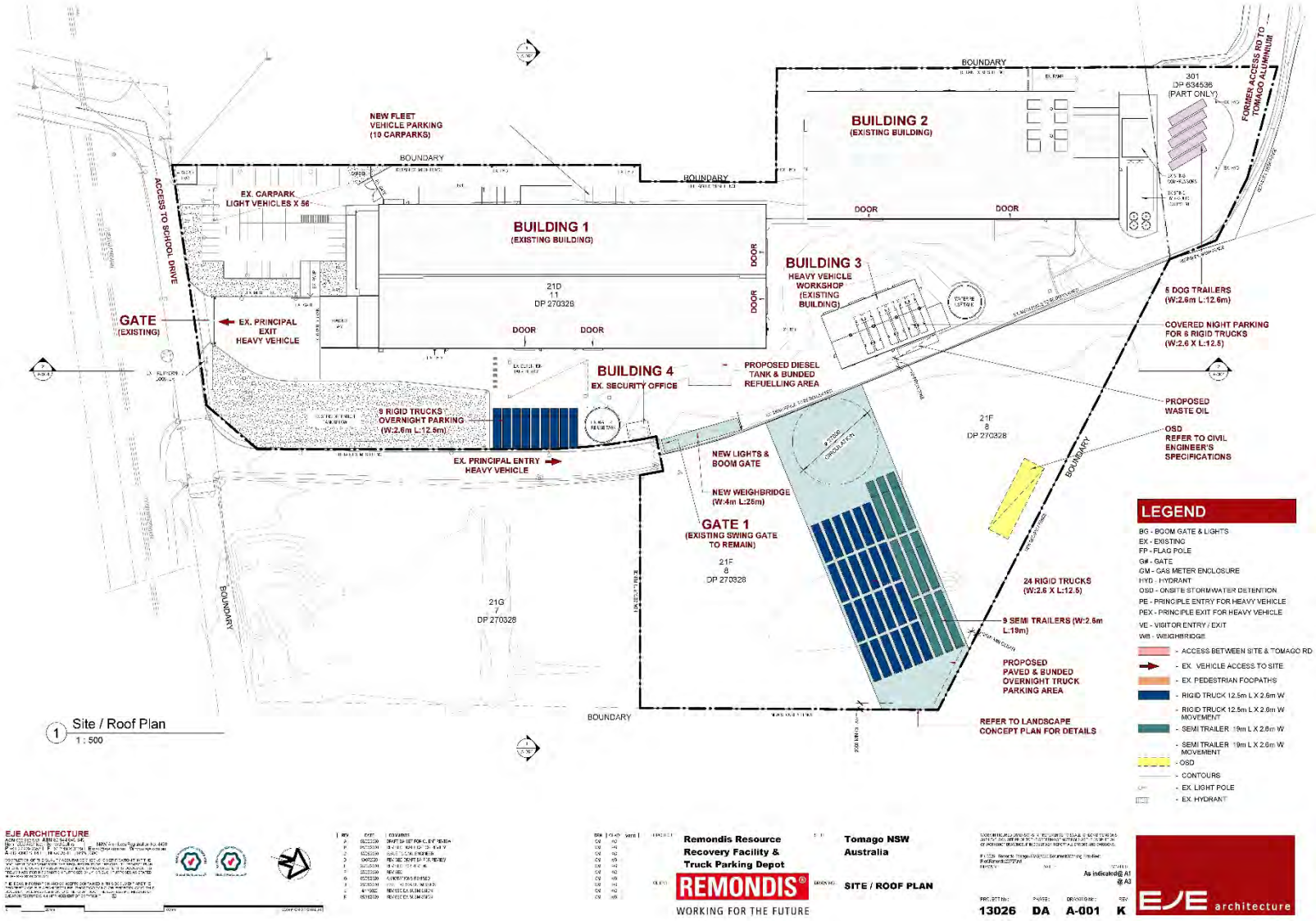

Figure 2: Project Proposal, addition of truck parking depot to south

2 Legislative Context

This section provides an outline of the Acts, Regulations and guidelines under which this assessment has been undertaken. It is for information purposes only and should not be taken as legal advice.

2.1 National Parks and Wildlife Act 1974

This Act contains the provisions for protecting Aboriginal objects in NSW. Aboriginal objects are protected regardless of whether they are in their original context (location) or not and it is an offence to harm an Aboriginal object regardless of whether you know it is an Aboriginal object or not. Protection under Section 86 of the Act is as follows:

- s86(1) A person must not harm or desecrate an object that the person knows is an Aboriginal object.
- s86(2) A person must not harm an Aboriginal object.
- s86(3) A person must not harm or desecrate an Aboriginal place.

Penalties for harming Aboriginal objects or Places range from $80,000-$800,000 for individuals and $330,000-$1,650,000 for corporations and may also include imprisonment. Under Section 87 there are certain defences from prosecution, these include that harm was authorised under an Aboriginal Heritage Impact Permit (AHIP) and actions were in accordance with the AHIP, that due diligence was exercised in relation to Aboriginal object/s and/or the activity was classified as low impact.

Under Section 89A Aboriginal object/s must be reported to the Office of Environment and Heritage (OEH) within a reasonable timeframe, unless it has previously been recorded and submitted to the Aboriginal Heritage Information Management System (AHIMS). Penalties for failure to report an Aboriginal object range from $16,500 for individuals and $33,000 for corporations.

2.2 National Parks and Wildlife Regulations 2009

This Regulation provides a framework for exercising due diligence and provides codes of practice in respect to Aboriginal objects (Section 80A) as well as defences for carrying out certain low impact activities (Section 80B). The Regulation also outlines requirements for Aboriginal consultation (Section 80C), particularly in relation to an Aboriginal Heritage Impact Permit. Under the Regulation the following codes of practice and guidelines are recognised, amongst others:

- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW, 2010a),
- *NSW Minerals Industry Due Diligence Code of Practice for the Protection of Aboriginal Objects* (Minerals Council),
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents*. (DECCW, 2010b),
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011), and
- *Code of Practice for Archaeological Investigation of Aboriginal objects in NSW* (DECCW, 2010c).

2.3 Aboriginal Land Rights Act 1983

This Act provides land rights to Aboriginal people through the Local Aboriginal Land Councils. It outlines a process for claiming unused Crown Land in NSW and for creating land use. It also allows for agreements to permit traditional hunting, fishing and gathering.

2.4 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment (EP&A) Act* provides triggers for undertaking environmental and heritage assessments as part of the wider land use planning framework. This Act has three main parts of direct relevance to Aboriginal cultural heritage. Namely, Part 3 which governs the preparation of planning instruments, Part 4 which relates to development assessment proves for local government (consent) authorities and Part 5 which relates to activity approvals by governing (determining) authorities. Planning decisions within Local Government Areas (LGAs) are guided by *Local Environmental Plans* (LEPs). Each LGA is required to develop and maintain an LEP that includes Aboriginal and historical heritage items which are protected under the *EP&A Act* and the *NPW Act*.

The Project Area is located within the Port Stephens Council LGA and falls under the Port Stephens LEP.

2.5 Port Stephens Local Environmental Plan 2013

The *Port Stephens LEP 2013* requires development consent to demolish, disturb, excavate or develop land on which an Aboriginal object is located or that is within an Aboriginal place of significance. Council must consider the effect of a proposal on an Aboriginal Place and any Aboriginal object located within an area of works. Council must inform the local Aboriginal community about the application where impacts to Aboriginal cultural heritage may occur. Protected heritage under the *LEP* is listed in Schedule 5.

There are no Aboriginal sites in the Project Area listed on the *LEP*.

3 Aboriginal Consultation

This section documents the Aboriginal Consultation that has been undertaken for the project in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010b) and will be referred to as the 'Aboriginal Consultation Requirements'. The four stages of Aboriginal consultation were undertaken and additional documentation is available in Appendix 1.

3.1 Stage 1

In accordance with Stage 1 of the Aboriginal Consultation Requirements requests for information on knowledge holders were send to the DPIE (now Heritage NSW) Hunter and Central Coast Office, the Worimi Local Aboriginal Land Council, the Registrar of Aboriginal Owners, Native Title Services, the Port Stephens Council and the Hunter office of Local Land Services. The National Native Title Tribunal only accepts searches of crown land for Aboriginal knowledge holders. There is no crown land in the Project Area.

Based on information collected from government agencies invitations for expressions of interest were sent to each knowledge holder to become a Registered Aboriginal Party for the Project.

A public notice was placed in the Port Stephens Examiner local newspaper.

As a result of the expressions of interest invitations and the public notice 10 Aboriginal representatives nominated to become Registered Aboriginal Parties for the Project (Table 1).

Table 1 Registered Aboriginal Parties

Organisation/Individual	Representative Name/s
A1 Indigenous Services	Carolyn Hickey
Didge Ngunawal Clan	Paul Boyd and Lilly Carroll
Mur-Roo-Ma Inc	Anthony Anderson and Bec Young
Nur-Run-Gee Pty Ltd	Leonard Anderson
Worimi Local Aboriginal Land Council	Jamie Merrick
Worimi Traditional Owners Indigenous Corporation	Candy Lee Tower
Individual	Carol Ridgeway-Bissett
Individual	Steve Talbott
Individual	Robert Syron
Confidential Registration	

3.2 Stages 2 and 3

In accordance with Stages 2 and 3 details of the project and the assessment methodology was sent out to the RAPs and opportunities for feedback were provided (Table 2). Opportunities for feedback were also provided during the fieldwork.

Table 2 Responses to Assessment Methodology by Registered Aboriginal Parties

Organisation/Individual	Representative Name/s	Response summary (full response in Appendix 1)
Mur-Roo Ma Inc	Anthony Anderson and Rebecca Young	Agreed with methodology
Confidential		Agreed with Methodology

3.3 Stage 4

The draft ACHA report was sent to the RAPs and 28 days were provided for comment. The responses received are summarised in Table 3.

Table 3 Responses to Draft Aboriginal Cultural Heritage Assessment

Organisation/Individual	Representative Name/s	Response summary (full response in Appendix 1)
Mur-Roo Ma Inc	Anthony Anderson and Rebecca Young	Agrees with the recommendations in the report
Worimi Local Aboriginal Land Council	Jamie Merrick	Agrees with the recommendations in the report

3.4 Summary

As a result of the Aboriginal consultation process 10 Registered Aboriginal Parties were identified. Feedback from the Aboriginal consultation has been incorporated into the assessment of significance and the development of heritage management and mitigation strategies for the Project.

4 Archaeological Assessment

The archaeological assessment outlines the environmental and heritage context for the Project Area. It also reports on the archaeological survey.

4.1 Environmental Context

This section provides the environmental context for the assessment of past Aboriginal occupation in the Project Area.

4.1.1 Geology and Soils

The Project Area is located within the Hunter sub-region of the Sydney Basin Bioregion. The geology of the Project Area consists of sand, beach ridges and low-level windblown dunes (Gorbert & Chesnut, 1975).

The soils in the Project Area consist of an A1 Horizon with brownish back sand from 0-0.2 m, followed by an A2 Horizon with reddish grey sand from 0.2-0.8 m. The B Horizon is a black sandy loam from 0.8 – 1.2 m. The Bm horizon consists of large amounts of coffee rock from 1.2-.15m (McInnes-Clarke, 1998)

The Stockton Bight within which the Project Area is located is an important geological and archaeological area (Boyd and Roy 1995) as it contains Pleistocene age sand deposits (10,000-60,000 years old and in some cases, older). Holocene sand deposits are relatively recent, being less than 10,000 years old. The Project Area is within the Holocene age sand deposits (Figure 3).

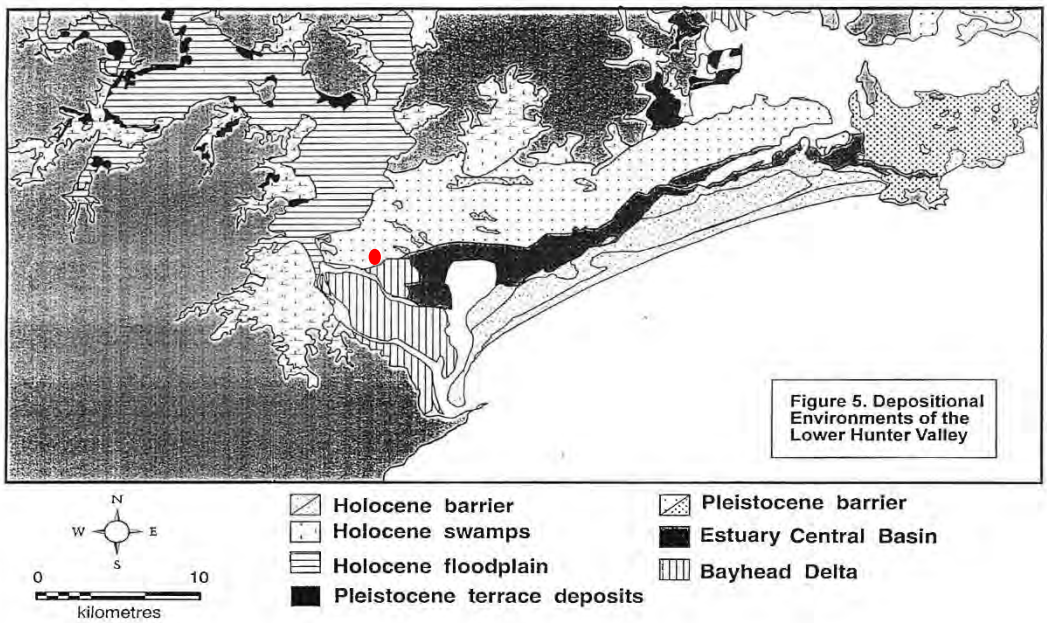

Figure 3 Holocene and Pleistocene deposits in the Stockton Bight (location of the Project Area in red)

4.1.2 Topography and Hydrology

The Project Area is located in a low-lying area, approximately 6 m above sea level (AHD). Although only 6 m above sea level, this is at higher elevation than some of the surrounding landscape. It is approximately 450 m from the nearest stream, and 850 m from the Hunter River. Although the Project Area is some distance from water Tomago is known to contain large amounts of ground water (Hunter, 2001, p. 104). This distance from the major river and slightly higher elevation would make the Project Area less subject to flooding than the surrounding landscape.

4.1.3 Flora and Fauna

This section is intended to give a general overview of the flora and fauna that may have been used by Aboriginal people in the past. The information has been supplied for understanding the past Aboriginal use of the landscape and is not intended for ecological assessment purposes.

Past vegetation in the Project Area is most likely classed as Coastal Dune Dry Sclerophyll Forests based on Keith (2006). They are open eucalypt forests and woodlands 10-25 m tall with prominent and diverse sclerophyll shrub understorey and open groundcover of sclerophyll sedges.

Most common canopy species in this class include Sydney red gum and red bloodwood. Sydney peppermint is often present in the gullies, while brown stringybark broad-leaved scribbly gum, narrow-leaved scribbly gum silvertop ash are common on the ridges. Old man banksia and Christmas bush may grow into small trees.

Common shrubs include flax-leaved wattle sunshine wattle, old man banksia, hairpin banksia, *Bossiaea heterophylla*, Epacris wallum heath, waxflower, grey spider- flower, pink spider flower, broad-leaved hakea, *Hakea gibbosa*, broad-leaved drumsticks, mountain devil, flaky-barked teatree, prickly broom-heath, Persoonia levis broad-leaved geebung, pine-leaved geebung, heath phyllota, and grass tree.

Common forbs include *Cassytha pubescens, Dampiera stricta*, bushy clubmoss, leafy purple-flag, *Xanthosia pilosa.*

These Coastal Dune Dry Sclerophyll Forests would have provided habitat for bats, possums, quolls, gliders, wallabies, and a variety of birds and reptiles.

4.1.4 Land Use

The Preliminary Contamination Assessment of the Project Area indicated that the land has been previously sand mined (JM Environments, 2020). Historical aerial photos indicate that the area was forested in 1954, but by 1974 (Figure 4) there is evidence for extensive sand mining which has substantially modified the land (JM Environments, 2020, pp. 46-47).

The land was then later used for industrial activity, including metal works. The Preliminary Contamination Assessment indicated that there were elevated levels of zinc and copper concentrations which are consistent with the use of sandblasting in the metal manufacturing process (JM Environments, 2020).

The land at 21D School Drive is currently used as a factory/warehouse facility. The land within 21F is currently a vacant block, however it has been disturbed by the previous industrial activity. Almost all vegetation has already been removed from the vacant block.

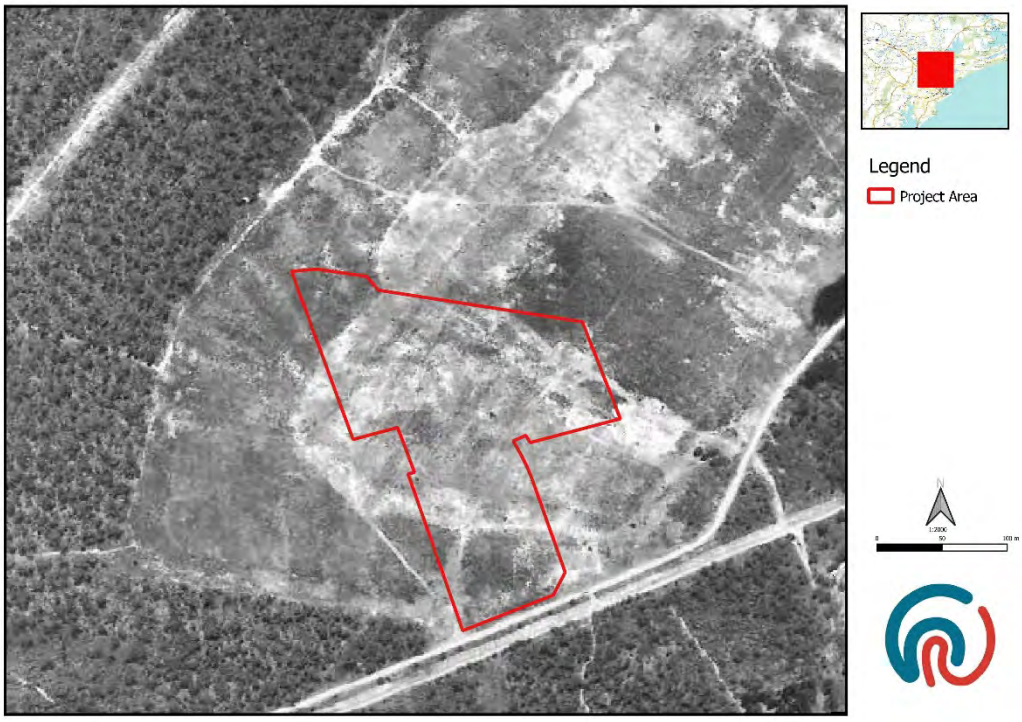

Figure 4 1974 Historic aerial of the Project Area locality (Source: JM Environments: Figure 12)

4.1.5 Synthesis

The land along the Hunter River is subject to flooding however, the Project Area's slightly higher elevation may have protected it from flooding events. Although over 400 m from the nearest stream, there is potential that ground water was present at the site. The combination of access to drinking water but less susceptibility to flooding would have made the Project Area a useful location for Aboriginal occupation. There would have also been floral and faunal resources for food, clothing, tools, and canoes. The sandy geology of the Project Area however is unlikely to have provided adequate source material for stone tools, and stone raw materials would have had to have been brought in from elsewhere. Despite its advantageous environmental location, the land use history demonstrates it is a highly disturbed the landscape, making the chances of finding in situ Aboriginal sites unlikely.

4.2 Heritage Context

A review of the archaeological, ethno-historical and post-contact history of an area provides contextual information for Aboriginal sites within the local and regional landscape. Previous archaeological research undertaken in the region as well as a review of environmental factors can inform predictive models for the locations of Aboriginal sites. Predictive models can be further refined by the consideration of the post-contact land use of the area which may identify potential sources of post-depositional disturbances that may have occurred.

4.2.1 Historic Records of Aboriginal Occupation

The Aboriginal people of Tomago are the Worimi people who spoke the Gathang language. The word 'Tomago' is said to derive from a Gathang word meaning 'sweet water', referring to the ground water resources in the Tomago sand beds (Hunter, 2001, p. 104). The traditional lands of the Worimi were bound by four rivers, the Hunter River to the south, Manning River to the north, and the Allyn and Patterson Rivers to the West (National Parks and Wildlife Service). The neighbouring Aboriginal groups were the Awabakal to the south, Birpai to the north, Wonnarua to the south west and the Geawegal to the north west (Horton, 1996).

The Worimi believe that the Ancestral Being Bayami created the land, formed the mountains and valleys, filled rivers with water, and created all living things. Every living thing Bayami made had a purpose.

Within Worimi country there were 18 ngurras, or groups within Worimi land (National Parks and Wildlife Service). The ngurra at Tomago is recorded as being the Garagual (Enright, 1932).

Clan membership was an important factor in social organisation in Worimi culture. Clan membership was attained through descent on the father's side. Each clan was associated with a totem, which usually took the form of an animal, including kangaroo, goanna, flying-fox and bandicoot, although water is also documented as a totem of the Worimi people (Sokoloff, 1976).

4.2.2 Regional Archaeological Background

Aboriginal occupation in Tomago has been dated to over 14,000 years. This date comes from a cultural layer identified in the Moffats Swamp Dune, north west of Tomago. However, these dates may be even older due to the different levels or preservation of some sites (AMBS, 2005).

Within the Port Stephens Council LGA many Worimi sites have been identified including 37 recorded ceremonial sites, 115 camp sites and 97 middens (Port Stephens Council, n.d.). The below outlines a selection of different aspects of material culture and archaeological evidence types which may be present within the locality.

Middens

Midden sites consist of accumulated deposits of fish, shellfish, birds and animals that Aboriginal people ate. In Worimi country some of these middens are metres thick. They can be found sandy beaches and dunes, as well as estuaries, swamps, creeks, rivers and lakes. Middens may also contain the remains of stone tools or fish hooks made of shell used by the Worimi.

Shields, Tools and Weapons

These items were made from a variety of natural resources including; stone, wood, bark, reeds, bone, animal sinew, bone and shell.

Hardwood species were important for hunting sticks, throwing sticks, digging sticks, boomerangs and clubs. Bark was removed to make vessels for food as well as canoes, shields, shelters, and bedding. Although these types of artefacts are unlikely to survive due the nature of the organic material, the modifications made to trees for their creation can survive as they often left a distinctive scar on the tree. Other evidence for the use of these plant materials has come from use wear analysis of stone artefacts.

Fishhooks were made from oyster and pearl shell, and documentary evidence indicates that these items were created by women (Sokoloff, 1976). Specimens of worked shell have also been found with traces of resin. These were most likely hafted on to spears.

Stone artefacts tend to survive better in the archaeological record than other organic materials. Tools were made from a variety of siliceous stone, including quartzite, silcrete, and chert (National Parks and Wildlife Service, n.d.). Stone may be ground to create tools such as hatchets, or flakes to create backed artefacts, retouched flakes, scrapers and adzes.

Burials

There is great variation of the burial practices of Aboriginal people in New South Wales. Worimi burials have been identified previously within sand dunes and some have been associated with midden sites (AMBS, 2005; Port Stephens Council, n.d.). According to Worimi tradition, a she oak was planted over the grave to identify the burial site.

4.2.3 Aboriginal Heritage Information Management System (AHIMS)

A search of the AHIMS database was completed in 02/06/2020 from latitude -32.855 to -32.7967 and longitude 151.6875 to 151.7687 (Appendix 1). The search produced a result of 39 sites. These sites were plotted according to the latitude and longitude coordinates provided in the extensive search (Figure 5). The most common site type are surface artefact sites accounting for 84.61% of sites (Table 4). This includes artefact scatters, isolated finds and artefact/s (sites where AHIMS has not specified the number of artefacts). Rarer sites include Potential Archaeological Deposits (PAD) (10.26%), art sites (2.56%) and scarred trees (2.56%).

Table 4: AHIMS site types summary

Site types	Number	Per cent
Artefact/s	18	46.15%
Artefact scatter	11	28.21%
PAD	4	10.26%
Isolated find	3	7.69%
Art	1	2.56%
Scarred tree	1	2.56%
PAD + Artefact	1	2.56%
Total	**39**	**100.00%**

Majority of sites are valid (84.62%). These means they have not been subject to an AHIP. Three sites have been destroyed, all of which were artefact scatters. Two artefact/s sites and one Artefact and PAD site have been partially destroyed. Table 5 summarises the status of the sites identified in the AHIMS search.

Table 5: Site Status

Corrected Site types	Destroyed	Partially Destroyed	Valid	Total
Artefact/s		2	16	18
Artefact scatter	3		8	11
PAD			4	4
Isolated find			3	3
Art			1	1
Scarred tree			1	1
PAD + Artefact		1		1
Total	**3**	**3**	**33**	**39**
Percent	**7.69%**	**7.69%**	**84.62%**	**100%**

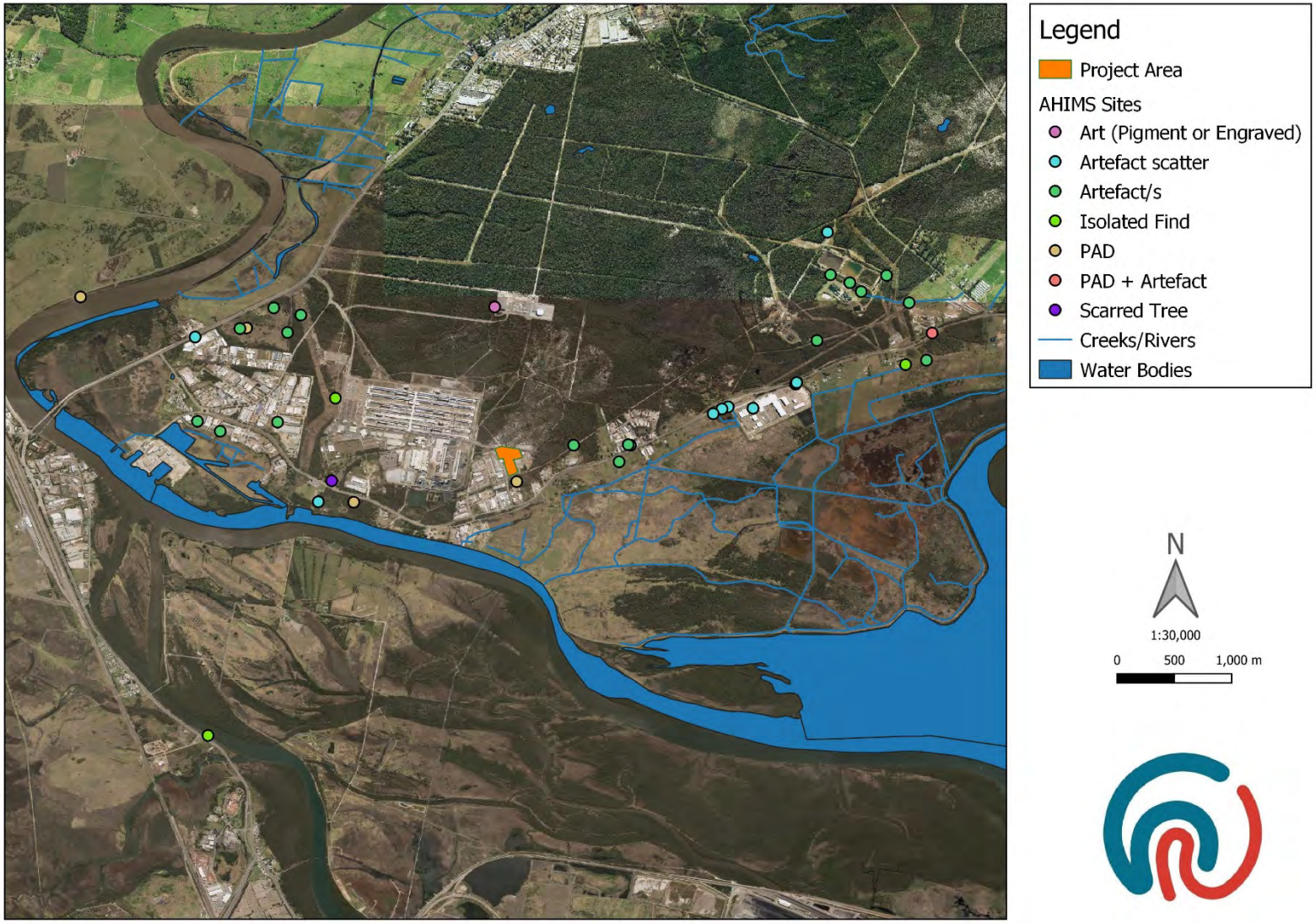

Figure 5: AHIMS Sites

4.2.4 Heritage Report Summaries

Heritage reports relevant to the Project Area have been summarised in this section to provide an understanding of the previous assessments that have been undertaken and the implications for Aboriginal site patterning.

RPS (2010) Construction Aboriginal Cultural Heritage Management Plan; Lot 32 DP 1014864 Masonite Road, Heatherbrae

RPS developed a Construction Aboriginal Heritage Management Plan for the development for a regional headquarters for Sandvik Australia for Lot 32 DP1014864 Masonite Road, Heatherbrae, approximately 4.5 km north of the Project Area. Their assessment identified a sand ridge as being sensitive as it would have provided an elevated area that would have been less susceptible to flooding (RPS, 2010, p. 17). However, the study area was over 2km from a reliable water source, which would have been a drawback to the location as a campsite. It was predicted that artefact sites would be the most likely site types to occur in the Project Area. Additionally, it was predicted that isolated finds rather than scatters would be more likely due to the lack of a permanent water source for a camp site (RPS, 2010, p. 18). Aboriginal Heritage Monitoring was to be done in the area by a team of Heritage Consultants and Aboriginal Stakeholders to mitigate impacts to potential sites. Based on the results of the AHIMS search, no sites were identified during the monitoring program.

Insite Heritage (2011) Archaeological Assessment for the Proposed Conductor and Rod Facility by Midal Cables International Pty Ltd at Tomago NSW

Insite Heritage prepared a cultural heritage assessment for a proposed conductor rod facility in Tomago, approximately 500 m north east of the current Project Area. Majority of the area was covered in imported gravels and fills. The area had been heavily disturbed by previous industrial activity. There was good visibility in the undisturbed sections of the study area however no Aboriginal cultural material was identified. The Aboriginal stakeholders involved with the survey indicated that they did not identify any specific cultural values in the area that would affect the development. Monitoring of earthworks by Aboriginal stake holders was advised.

Umwelt Environmental Consultants (2012) Report on salvage works conducted under AHIP #3382, Tomago, NSW

An assessment conducted by ERM identified 15 Aboriginal archaeological sites and seven PADs in association with the proposed route of 132 kV feeder for Ausgrid. Three of these sites and one PAD were identified by Umwelt as being associated with the western section of the approved 33 kV feeder AHIMS #38-0647, #38-4-0648, 38-4-0676 and 38-4-0679 (Umwelt Environmental Consultants, 2012, p. 4). All four sites are associated with a Pleistocene period landform. It was determined that the installation of 33kV poles was very likely to cause damage to these sites, including the PAD (AHIMS #38-4-0679). The three surface artefact sites contained broken flake piece and flakes, a backed artefact, broken blades and cores as well as fragments of cockle, oyster and pipi shell. It is likely they represent a single site, but there were separated based on varying levels of visibility (Umwelt Environmental Consultants, 2012, p. 3). An AHIP was obtained to complete test excavations at the location of two poles to be installed within the PAD. Trench 1 contained seven stone artefacts and oyster shells, while Trench 2 contained two stone artefacts (Umwelt Environmental Consultants, 2012, p. 4). Another permit was obtained to cover the surface artefacts and part of the PAD beneath a layer of sand, geotextile, tyre, aggregate and vegetation in order to provide a road surface.

Additionally, an AHIP was obtained to salvage any further artefacts uncovered with the excavation for the two poles. A total of 10 artefacts were uncovered all of Nobby's tuff, and were mostly broken flakes (Umwelt Environmental Consultants, 2012, pp. 8-10). It was recommended that all uncovered artefacts be reburied.

Baker (1994) Moffat's Swamp Dune: Final Report on Archaeoogical Site Salvage, Testing & Artefact Analysis

A significant site in the region approximately 20 km to the north east of the Project Area is Moffats Swamp. The Moffats Swamp is one of a series of swamps in the inner margin of the Newcastle Bight and contains a Pleistocene beach ridge. Artefacts were first identified during mining activity in 1992 and the site was subsequently investigated and excavated. Artefacts found consisted of mostly tuff (62%) and silcrete (35%) (Baker, 1994, p. 1). Radio-carbon dating of charcoal fragments dated the dune deposit from 6,000 to 17,000 years ago (Baker, 1994, pp. 62-63). Amongst the artefacts found were large tools known as 'Worimi Cleavers'. These tools have been previously identified in surface finds and are associated with Holocene assemblages. These early dates for 'Worimi Cleavers' at Moffats swamp suggest a continuity from the time of occupation of Moffats Swamp to more recent prehistory. Aboriginal people stopped camping at Moffats swamp Sea levels reached their present position around 6,500 years ago. This is supported by the carbon dating as well as the lack of backed artefacts which are associated with more recent Aboriginal material culture.

4.2.5 Predictive Model

The most common site type in the Tomago area are surface artefact sites including scatters and isolated finds. These sites tend to occur on land that is slightly elevated and at a short distance from a water source. Artefacts are most likely to be made of tuff or silcrete. Almost all sites are found within 500 m of a stream or swamp lands. The Project Area is approximately 400 m from a water source.

Swamp dunes are also a particularly sensitive landform, with dunes such as Moffats Swamp containing some of the highest artefact densities and oldest known dates for the region. The second most common site type are PADS. Where intact dune deposits occur within a short distance to water, PADs may be present. There is a PAD identified just 80 m from the Project Area (AHIMS #38-4-1139)

Other site types identified in the region include scarred trees, although they appear to be a rarer site type. The presence of a scarred tree in the Project Area appears unlikely due to the present use as an industrial site, however if older growth trees are present there is potential for scarred trees to occur.

Art sites have also been identified, but as they represent only 2.56% of sites identified in the AHIMS search, they are also considered a rare site type for the region

Synthesis

The site type most likely to appear in the Project Area are surface artefacts. Flakes are the most common artefact type found and tuff is the most frequently identified material type. There is potential for surface artefacts in the Project Area based on its elevation and distance from water.

4.3 Archaeological Survey

The survey was completed on 10 July 2020. The survey was attended by Bec Young from Mur-Roo-Ma, Richard Kime from Worimi LALC, Aidyn Lilley from Nur-Run-Gee, and Tessa Boer-Mah and Crystal Phillips from Heritage Now.

4.3.1 Survey Units

Survey Unit Summary

The Project Area was surveyed in one survey unit as the overall landscape was similar throughout (Figure 6). The survey focused on the currently undeveloped portion of the Project Area (Plate 1 and Plate 2).

The surveyed area had been largely disturbed through previous land use for sandmining and steel work industrial processes resulting in substantial modification (Plate 3). There was modern rubbish and debris found on large parts of the surface (Plate 4).

Visibility was good, as large areas of the soil have been exposed (Plate 5, Table 6). Only a small portion of the area was thickly vegetated on the north part of the Project Area (Plate 6). Vegetation was a mixture of native grasses and small trees and invasive species (Plate 7).

Table 6 Survey Coverage

Survey Unit	Landform	Survey Unit Area	Visibility %	Exposure %	Effective Coverage Area (m2)	Sample Fraction (%)	Number of Sites Identified
1	Coastal Plain	48455	50	50	12113.75	25	0

4.3.2 Aboriginal Sites Identified

No Aboriginal Sites were identified.

4.3.3 Aboriginal Consultation

Mur-Roo Ma raised that the Project Area has been heavily disturbed by previous land use and that the land within the Project Area was not archaeologically sensitive. They noted the landscape becomes increasingly more sensitive towards the Hunter River and that multiple sites have been found nearby where land has been less disturbed. Additionally, they identified that the land north of the Project Area boundary was less disturbed and that further investigation would be required there if the project was to extend beyond the current northern boundary. The other RAPs on site agreed with these comments.

4.3.4 Summary

No Aboriginal sites were identified and the RAPs who attended the survey agreed that the Project Area was not archaeologically sensitive.

Figure 6 Survey Units

5 Significance Assessment and Aboriginal Cultural Values

Cultural heritage refers to the tangible and intangible values that we choose to pass on to future generations. In order to identify the values worth passing on, a significance assessment needs to be undertaken. The significance assessment needs to: identify the range of values present across the Project Area and assess their importance.

5.1 Methodology

Identifying the Aboriginal cultural values is part of the significance assessment process and is guided by the Burra Charter and the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW.*

There are four recognised classes of values under the Burra Charter (Australia ICOMOS, 2013):

- Social,
- Historical,
- Aesthetic, and
- Scientific

Within this significance assessment, Aboriginal cultural values are captured within social, historical and aesthetic values. The archaeological values are contained within scientific values.

Social value refers to the spiritual, traditional, historical or contemporary associations that Aboriginal people have for place. Historical value refers to the associations of a place with a historically important person, event, phase or activity in the Aboriginal community. Aesthetic value refers to the sensory, scenic, architectural and creative aspects of the place.

Archaeological values refer to the importance of the landscape, area, place or object because of its rarity, representativeness and the extent to which it may inform our understanding of Aboriginal culture.

5.1.1 Aboriginal Cultural Values

Aboriginal cultural values are identified through the Aboriginal consultation process. Formal opportunities for the Aboriginal community to contribute to identifying cultural values are provided in the ACHA methodology review period, during fieldwork and during the draft report review period. In addition, RAPs are invited to provide feedback at anytime through the consultation process, by phone or in writing (email or letter).

5.1.2 Archaeological (Scientific) Values

Archaeological (scientific) values relate to whether the Project Area can contribute to our understanding of Aboriginal culture. Under the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, archaeological values are to be considered within the below sub-categories:

- Representativeness,

- Rarity,
- Research potential, and
- Educational potential.

5.2 Aboriginal Cultural Values of the Project Area

Feedback received has indicated that areas closer to the Hunter River and north of the Project boundary are more likely to contain evidence for Aboriginal occupation and thus would be more culturally sensitive. There are no specific cultural values associated with the Project Area, but it is important within the general context of the surrounding landscape.

5.3 Archaeological Values of the Project Area

This section assesses the archaeological values of the Project Area according to the criteria in the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*.

No archaeological values were identified in the Project Area.

5.4 Summary

No sites Aboriginal sites, Aboriginal cultural values or archaeological values were identified in the Project Area.

6 Impact Assessment and Mitigation

This section assesses the potential impact of the proposed works in relation to Aboriginal heritage values in the Project Area and provides options for mitigating the loss of Aboriginal cultural values.

6.1 Proposed Works

The proposed works include the construction of a Resource Recovery Facility and Truck parking Depot. These works will involve modifications to the existing warehouse building, clearing of the vacant block to build the truck depot as well as installation of associated services and access roads.

6.2 Impact Assessment

No Aboriginal sites were identified during site inspection. There will be no impacts to Aboriginal sites.

6.3 Mitigation

The below strategies have been developed to mitigate potential and inadvertent harm and/or loss of Aboriginal cultural values as a result of the proposed works.

All on-site personnel are to be made aware of their obligations under the *National Parks and Wildlife Act 1974*, this includes protection of Aboriginal sites and the reporting of any new Aboriginal, or suspected Aboriginal, heritage sites. This may be done through an onsite induction or other suitable format.

In the unlikely event that Aboriginal or suspected Aboriginal archaeological material is uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is to contact the heritage consultant to make an assessment as to whether the material is classed as Aboriginal object/s under the *National Parks and Wildlife Act* and advise on the required management and mitigation measures. Works are not to re-commence in the cordoned off area until heritage clearance has been given and/or the required management and mitigation measures have been implemented.

6.4 Sustainable Development

Under the NSW *Protection of the Environmental Administration Act 1991* Ecologically sustainable development principles (ESD) are to be considered in the assessment of environmental impacts; and this includes impacts to heritage. The consideration of ESD principles is required under the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales 2010.* In particular, the precautionary principle and the principle of inter-generational equity are to be considered where there are proposed impacts to the environment (which includes heritage).

6.4.1 Precautionary Principle

The precautionary principle states that if there are threats of serious or irreversible damage to the environment, then a lack of full scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation.

There are no threats of serious or irreversible damage to the environment as part of the Project proposal.

6.4.2 Inter-generational Equity & Cumulative Harm

The principle of inter-generational equity states that the present generation should ensure the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. Cumulative harm is understanding how the cumulative effects of the Proposal.

The Proposal does not diminish inter-generational equity and will not contribute to cumulative harm of Aboriginal objects.

6.5 Summary

No Aboriginal sites will be impacted by the proposed works and thus no further archaeological investigations are required. It is recommended that all on-site personnel are made aware of their obligations under the *National Parks and Wildlife Act* and that the procedure for assessment and management is implemented in the unlikely event that Aboriginal sites are identified during construction.

7 Conclusions and Recommendations

No Aboriginal sites were identified during the survey of the Project Area. No further archaeological investigation is required for the Project Area. The works are to proceed in accordance with the recommendations below.

Recommendation 1

All on-site personnel are to be made aware of their obligations under the *National Parks and Wildlife Act 1974*, through an onsite induction or other suitable format.

Recommendation 2

In the unlikely event that Aboriginal or suspected Aboriginal archaeological material is uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is to contact the heritage consultant to make an assessment as to whether the material is classed as Aboriginal object/s under the *National Parks and Wildlife Act* and advise on the required management and mitigation measures. Works are not to re-commence in the cordoned off area until heritage clearance has been given and/or the required management and mitigation measures have been implemented.

Recommendation 3

In the unlikely event that human remains, or suspected human remains are uncovered during the development, then works in that area are to stop and the area cordoned off. The project manager is to contact the NSW Police to establish whether the area is a crime scene. If it is not a crime scene and the remains likely to be Aboriginal, then Heritage NSW is to be notified via the Environment Line on 131555 and management measures are to be devised in consultation with RAPs. Works are not to recommence in the area until the management measures have been implemented.

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9 Plates

Plate 1 Survey Unit looking north east

Plate 2 Survey Unit, looking north west towards established buildings

Plate 3 Modification of the landscape

Plate 4 Debris on land surface

Plate 5 Large areas of ground surface exposure between grass

Plate 6 Area of thick vegetation near northern boundary, lantana pictured right

Plate 7 Example of native vegetation in the Project Area, broad-leaf hakea

Appendix 1 Aboriginal Consultation

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Appendix 2 AHIMS Search Results

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