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HERITAGE ADVISORS
TO AUSTRALIA AND
THE ASIA PACIFIC



Light Horse Business Hub, Eastern Creek NSW (SSD 9667)

Aboriginal Cultural Heritage Assessment Report

Prepared for Western Sydney Parklands Trust

March 2019 – Final Report

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Executive Summary

Extent Heritage Pty Ltd (Extent Heritage) has been commissioned by Western Sydney Parklands Trust (the proponent), to undertake an Aboriginal Cultural Heritage Assessment Report (ACHAR) of the Light Horse Business Hub (hereafter the 'study area') in advance of the proposed development. The proposed development is being assessed as a State Significant Development (SSD 9667), in accordance with Part 4 Division 4.7 of the *Environmental Planning and Assessment Act 1979*.

The ACHAR process, which included consultation with the Aboriginal community and surface investigations, identified eight archaeological sites within or adjacent to the study area. Of these, six would be affected by the proposed development, namely 45-5-2565 (IF2), 45-5-5183 (LIBH AS1), 45-5-2564 (IF1), 45-5-3264 (WSP17), 45-5-5185 (LIBH AS2) and 45-5-0756 (EC6 (Eastern Creek)). The development also has the potential to impact areas of moderate, high and very high archaeological potential, associated with slightly elevated creek flat and terrace landforms adjacent to major watercourses. These areas of archaeological potential are poorly defined and characterised, and are currently based entirely on desktop and modelling information. Comparable environments along other parts of Eastern Creek have recovered highly significant cultural deposits (e.g. Colebee Release Area, JMCHM 2006), and it is considered that there is potential for such sites to occur here.

Given this uncertainty, recommendations below have been made to ensure that further characterisation and suitable management/mitigation strategies can be developed of these poorly defined cultural deposits.

Recommendations

Based on the findings of the ACHAR, the following recommendations should be integrated into the Minister's conditions of approval for the project:

- Prior to ground disturbance, an Aboriginal heritage management plan (AHMP) must be developed by a heritage specialist in consultation with the RAPs and consent authority to provide the post-approval framework for managing Aboriginal and historical heritage within the study area. The AHMP should include the following information:
 - ◆ processes, timing, and methods for maintaining Aboriginal community consultation through the remainder of the project.
 - ◆ descriptions and methods of archaeological excavation that is required to define, characterise and assess all areas of very high, high and moderate archaeological potential within the impact footprint. All excavations should be undertaken in broad accordance with methodologies defined in OEH guidelines.
 - ◆ description and methods of post-excavation analysis of chronological, soil, and environmental samples that will be recovered as part of the test excavations outlined above. These would assist in the characterisation and significance of cultural deposits identified, and to inform the interpretation strategy.

- ♦ any additional mitigative measures that may be required following the characterisation of areas of archaeological potential, which may include archaeological salvage, project re-design, and/or other measures.
 - ♦ procedures for managing the unexpected discovery of Aboriginal objects and/or human remains during the project
 - ♦ procedures for the curation of Aboriginal objects and other cultural materials recovered as part of the ACHAR process and at any subsequent stages of excavation required as part of the AHMP
 - ♦ processes for reviewing, monitoring, and updating the AHMP as the project progresses.
- A Heritage Interpretation Strategy (HIS) must be developed by a heritage specialist to identify the interpretive values of the study area, and specifically Aboriginal heritage values across the study area, and to provide direction for potential interpretive installations and devices. This strategy should be made available for consultation and feedback with relevant stakeholders and RAPs. Following consultation and feedback on the strategy, a Heritage Interpretation Plan (HIP) will refine the strategy with content (visual and textual) and design details in order to allow the implementation stage. The outcomes of these reports must be undertaken prior to the issue of the occupation certificate (or equivalent). the interpretation strategy and interpretation plan must include consideration of three main components identified through the ACHAR process:
 - ♦ input and feedback from the RAPs.
 - ♦ the historical record of the study and its immediate environs.
 - ♦ the past cultural and environmental landscape, once informed by further works recommended to be undertaken as part of the AHMP.
 - Consultation should be maintained with the RAPs during the finalisation of the development proposal. This should focus on the development and implementation of the AHMP, long-term curation and management of the Aboriginal objects recovered through the archaeological excavation program, any mitigation measures that were implemented prior to, and during, the works, and the development of the interpretation strategy and plan.
 - A copy of the ACHAR should be lodged with AHIMS and provided to each of the RAPs.
 - Site Recording Forms and Site Impact Recording Forms should be developed for identified Aboriginal objects/sites/deposits within the study area and submitted to the AHIMS database.
 - If any element of the development is relocated outside the area assessed in this study, or if any alteration to the development plan is proposed that could result in additional impact to the potential cultural deposit, further assessment of the additional area(s) should be undertaken to identify and appropriately manage Aboriginal objects/sites/places that may be in the additional area(s).
 - The proponent should advise all relevant personnel and contractors involved in the design, construction, and operation of the development proposal of the relevant heritage considerations, legislative requirements, and recommendations identified in this report.

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1. Introduction

1.1 Project Description

Extent Heritage Pty Ltd (Extent Heritage) has been commissioned by Western Sydney Parklands Trust (the proponent), to undertake an Aboriginal Cultural Heritage Assessment Report (ACHAR) of the Light Horse Business Hub (hereafter the 'study area') in advance of the proposed development.

The proposed development is being assessed as a State Significant Development (SSD 9667), in accordance with Part 4 Division 4.7 of the *Environmental Planning and Assessment Act 1979*. The Secretary's Environmental Assessment Requirements for the project require that an Environmental Impact Statement (EIS) be prepared for the proposal, which includes the following requirements for Aboriginal heritage assessment:

an Aboriginal Cultural Heritage Assessment Report prepared in consultation with Aboriginal people and in accordance with Office of Environment and Heritage guidelines.

The Office of Environment and Heritage (OEH) provided additional advice with respect to the content of the ACHAR:

6. The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH 2011), and guided by the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW 2011).

7. Consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.

8. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.

The relevant guidelines specified for the preparation of the assessment were:

- ♦ Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011).
- ♦ Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010).
- ♦ Draft Guidelines for Aboriginal Cultural Impact Assessment and Community Consultation (Department of Planning 2005).
- ♦ Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010).

1.1.1 Aims and Objectives

This report describes the results of archaeological survey undertaken to identify the nature and significance of any physical remains of past Aboriginal occupation within the study area. The principle objectives of the investigation were to:

- ♦ Identify the type, nature and extent of any Aboriginal sites, objects, archaeological deposits, and potential archaeological deposits within the study area.
- ♦ Map the locations of known and potential Aboriginal sites, objects and deposits identified.
- ♦ Assess the significance of the study area.
- ♦ Assess and identify heritage constraints and opportunities and the potential impacts of the proposed development.
- ♦ Identify and recommend measures to mitigate any heritage impacts, and risks to the proposed development.

1.2 Legislative Context

There are several Commonwealth and State Acts (and associated regulations) that manage and protect Aboriginal cultural heritage. These are outlined in detail in **Appendix 1** and summarised in **Table 1**.

Table 1. Summary of legislative context for the project.

Legislation	Description	Relevant to Study area?	Details
Commonwealth			
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Protects Aboriginal places on the world, national and commonwealth registers.	No	There are no Indigenous heritage places within the study area listed on the World Heritage List, National Heritage List or the Commonwealth Heritage List.
<i>Native Title Act 1993</i>	Administers rights and interests over lands and waters by Aboriginal people. Provides for	No	The study area consists of freehold land, and cannot be subject to a claim under

Legislation	Description	Relevant to Study area?	Details
	negotiation and registration of Indigenous Land Use Agreements (ILUAs). Often used in NSW to identify relevant stakeholders for consultation.		this Act. There are no relevant entries for the study area on the National Native Title Register, Register of Native Title Claims or Register of ILUAs.
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>	Preserves and protects areas and objects of particular significance to Aboriginal people that are under threat from injury or desecration.	No	There are no areas or objects within the study area subject to a Declaration under the Act.
State (NSW)			
<i>Environmental Planning and Assessment Act 1979</i>	Requires environmental impacts, including to Aboriginal heritage, to be considered in land use planning. Provides for the development of environmental planning instruments, including State Environmental Planning Policies and Local Environmental Plans.	Yes	The proposed development is being assessed as an SSD project under Part 4 of this Act and is subject to project specific environmental assessment and reporting requirements. These requirements (SEARs) stipulate that Aboriginal heritage impact assessment is required (in accordance with standard OEH procedures and guidelines) to assess whether the project has the potential to impact on Aboriginal objects, sites, or places of Aboriginal heritage significance.
<i>National Parks and Wildlife Act 1974</i>	Provides blanket protection for all Aboriginal objects and declared Aboriginal places. Includes processes and mechanisms for development where Aboriginal objects are present, or where Aboriginal Places are proposed for harm.	Yes	While elements of this Act do not apply to SSD projects, the potential impact on Aboriginal objects must still be considered.
<i>Aboriginal Land Rights Act 1983</i>	Establishes Local Aboriginal Land Councils (LALCs). Allows transfer of ownership of vacant crown land to a Local Aboriginal Land Council. The Office of the Registrar, Aboriginal Land Rights Act 1983 (ORALRA), registers Aboriginal land claims and maintains the Register of Aboriginal Owners. Often used in NSW to identify relevant stakeholders for consultation.	No	The study area consists of freehold land, and cannot be subject to a claim under this Act. A request to search the Register of Aboriginal Owners was made to the ORALRA on 11 October 2018. The study area does not appear to have Registered Aboriginal Owners pursuant to Division 3 of the Act.

1.3 Study area

The study area is located 33km west of the Sydney CBD and is bound to the north by the M4 Western Motorway, to the east by Ferrers Road, and to the west by the Westlink M7 (Figure

1). The study area is owned and managed by the Western Sydney Parklands Trust. Its real property description is part of Lot 5 in Deposited Plan 804051 (475 Ferrers Road, Eastern Creek) and part of Lot 10 in Deposited Plan 1061237 (165 Wallgrove Road, Eastern Creek). It is located within the Blacktown City Council local government area, in the Parish of Rooty Hill, County of Cumberland.

1.3.1 Proposed Development

Western Sydney Parklands Trust intends to redevelop the study area to accommodate industrial and light industrial land use activities. This is in accordance with the *State Environmental Planning Policy (Western Sydney Parklands) 2009*, the Western Sydney Parklands Trust Plan of Management 2030 and the Western Sydney Parklands Trust Plan of Management 2020 supplement.

An indicative concept masterplan and subdivision plan has been prepared for the study area and includes indicative building development areas and site works (Figure 2 and Figure 3). Key features of this are the demolition of existing structures and bulk earthworks, the creation of approximately 29.5 hectares of developable Industrial zoned land and its associated access roads, bridge crossings, estate road, estate basin and infrastructure, as well as the realignment of Eskdale Creek. Provision has also been made for the demarcation and construction of flood compensation offset storage areas, though these are currently under consideration and may be subject to revision or removal.

Further detailed approvals will be sought for the construction of individual buildings, ancillary facilities and associated site works, which, if required, would be the subject of a separate heritage assessment.

Further details of the proposed works for this assessment are provided below in Section 9.1.

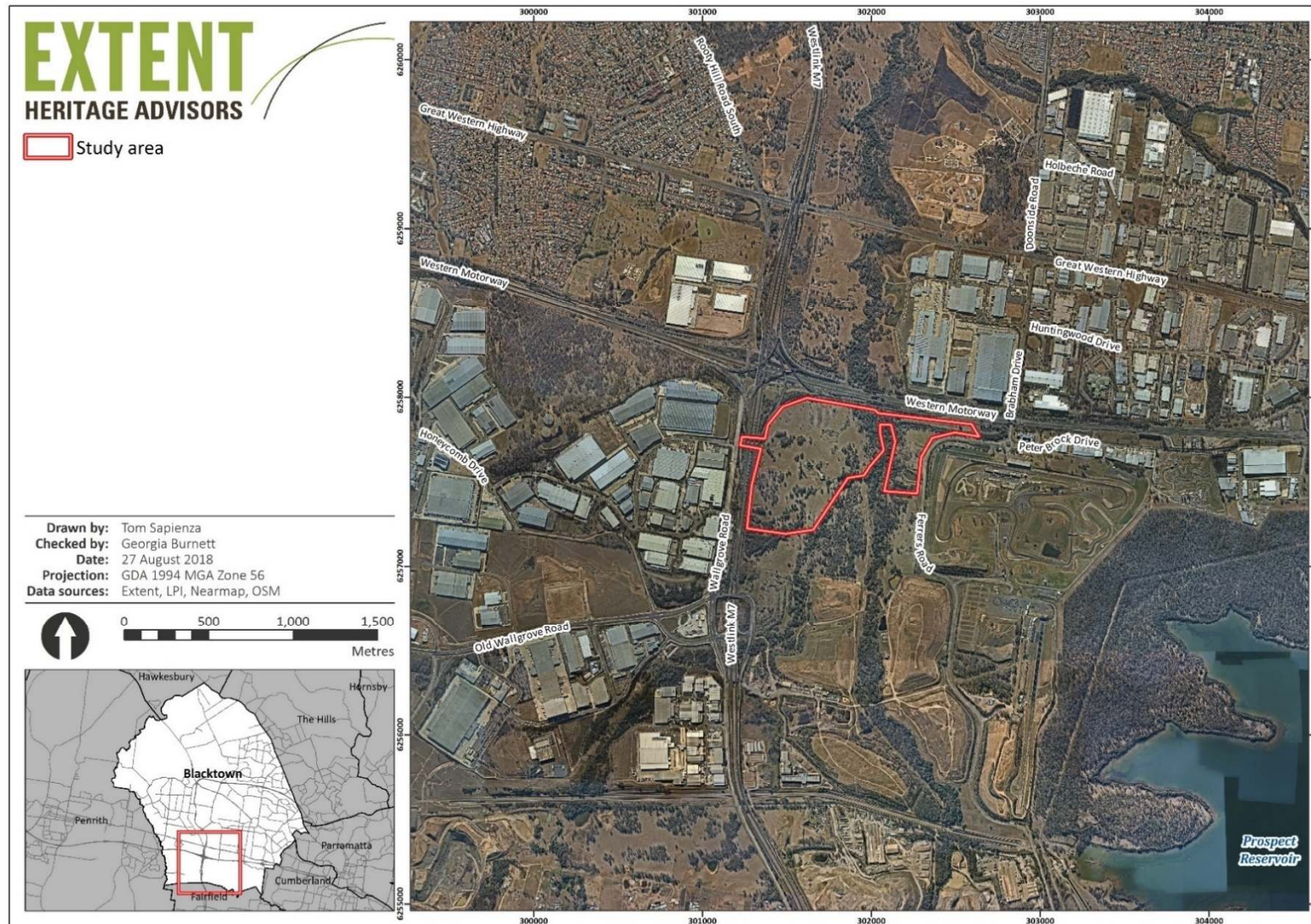


Figure 1. The study area.

DEVELOPMENT DATA			
OVERALL SITE AREA	336,287m ²		
LOT 8 (RESIDUAL) - ESTATE BIO-BASIN/OSD	21,511m ²		
ACCESS ROAD RESERVE	21,137m ²		
TOTAL DEVELOPABLE AREA (LOT 1 TO 7)	293,639m ²		
TOTAL BUILDING AREA	145,500m ²		
FLOOR SPACE RATIO	56.4%		
DEVELOPABLE LOT	W/H AREA	OFFICE AREA	TOTAL
LOT 1 SITE AREA (41,270m ²)	19,000	1,000	20,000
LOT 2 SITE AREA (34,141m ²)	16,900	800	17,700
LOT 3 SITE AREA (41,112m ²)	23,200	1,200	24,400
LOT 4 SITE AREA (38,686m ²)	21,450	1,000	22,450
LOT 5 SITE AREA (44,193m ²)	24,700	1,300	26,000
LOT 6 SITE AREA (38,406m ²)	20,000	1,000	21,000
LOT 7 SITE AREA (55,831m ²)	32,400	1,600	34,000
TOTAL	157,600	7,900	165,500
CARPARK PROVISIONS			
TOTAL CARPARK REQUIRED	723 spaces		
REQ. Warehouse 1 - 1 space/250sqm			
Office 1 space/45sqm			
TOTAL CARPARK PROVIDED	782 spaces		

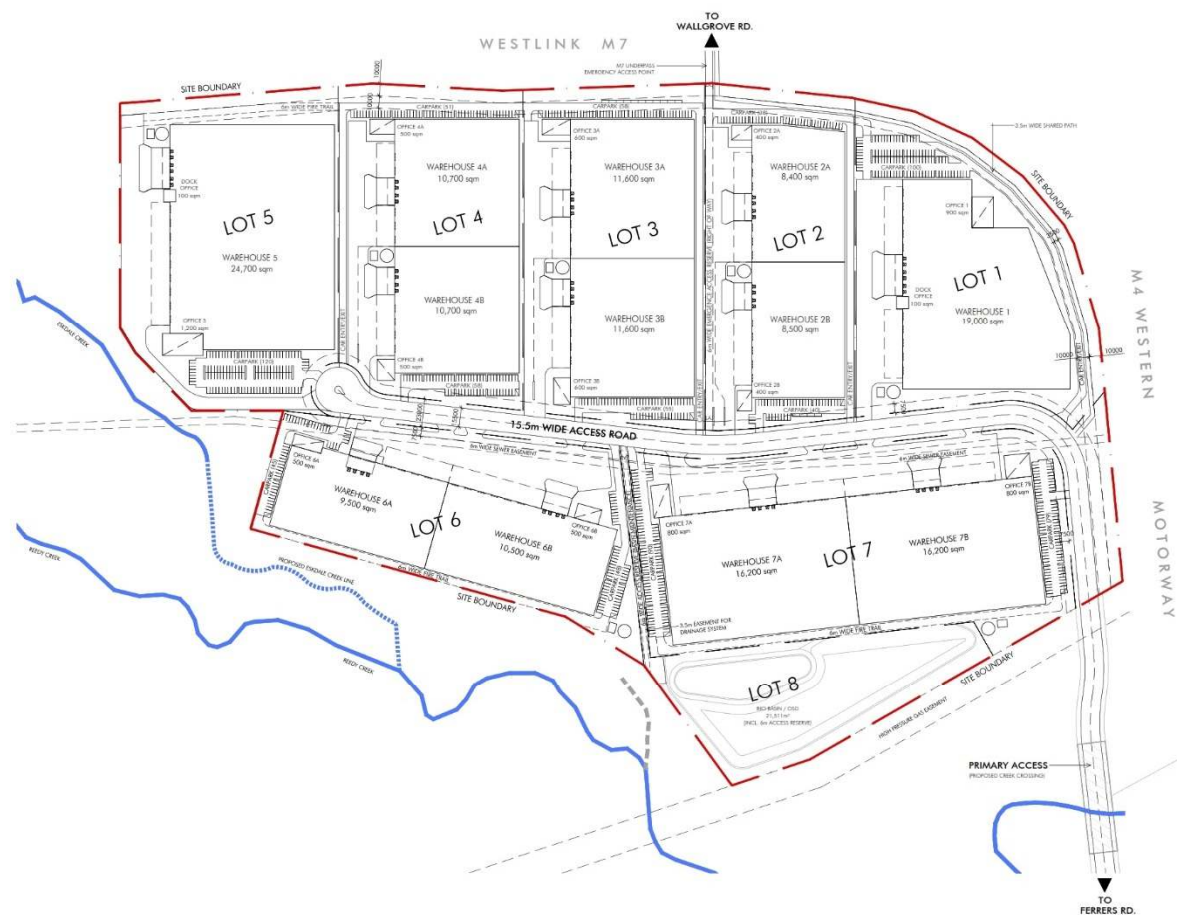


Figure 2. The Concept Masterplan for the proposed development. (Source: WSPT, March 2019)



Figure 3. The proposed development (Source: WSPT, March 2019).

2. Aboriginal Consultation

2.1 The Process

Aboriginal consultation for this project has been undertaken in accordance with procedures set out in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010). These guidelines identify a four-stage process of consultation, which includes:

Stage 1: Notification of project proposal and registration of interest

- Pre-Notification – Identification of the Aboriginal parties through contacting various government agencies.
- Notification – Contacting any Aboriginal community organisations identified to determine their interest (if any) in the project. This includes the placement of an advertisement in local print media seeking expressions of interest from Aboriginal community members.

Stage 2: Presentation of information about the proposed project

- Presentation of Project Information – Briefing registered Aboriginal parties (RAPs) about the project proposal and scope of the Aboriginal Cultural Heritage Assessment Report (ACHAR). This is usually undertaken through written correspondence and/or an on-site visit, and may undergo several iterations through the project lifetime as the nature of the assessment changes (e.g. field survey may lead to a requirement for test excavations).

Stage 3: Gathering information about cultural significance

- Seeking cultural information – Collection of information identifying any known Aboriginal objects of cultural value or places of cultural significance in the study area.
- Consultation protocols – Identification of any protocols that the RAPs would like adopted during the information gathering process, including how sensitive information will be managed.
- Potential impacts and mitigation measures – Discussion of potential impacts to heritage and appropriate mitigation options prior to developing the ACHAR. This is often undertaken onsite at the end of any field program and/or as part of the overall report review phase.

Stage 4: Review of draft Aboriginal cultural heritage assessment report

- Review of draft report – Review of the draft ACHAR by the RAPs, to provide comments on the overall findings, assessment of cultural significance and recommendations for management of Aboriginal heritage within the study area.

The consultation process for this project has two aims. Firstly, it is designed to comply with the OEH consultation procedures to obtain input on our proposed assessment methodology and comment on our assessment report and management recommendations. Secondly, to identify

cultural places and values that may be affected by the proposed future development of the study area through consultation with knowledge holders.

2.2 This Project

A complete log of actions and correspondence regarding Aboriginal community consultation is included in Appendix 2-1 and summarised in Table 2.

Overall, the consultation process identified 58 Aboriginal stakeholders in the region (Appendix 2-2). Of these, 21 registered an interest in the project (Appendix 2-3), and 4 participated in the survey.

Table 2. Summary of Aboriginal consultation for the project.

Consultation Stage	Description	Date Initiated	Date Completed	Details
1	Pre-Notification	11.10.18	26.10.18	Further correspondence and information in Appendix 2-4.
	Notification	02.11.18	13.12.18	Further correspondence and information in Appendix 2-5.
	Advertisement in <i>Blacktown Advocate</i>	05.11.18	05.11.18	Newspaper advert presented in Appendix 2-6.
2	Presentation of Information about the proposed project	14.12.18	16.01.19	Further correspondence and information in Appendix 2-7. Twelve responses received from RAPs.
3	Gathering information about cultural significance			
	Field Investigation	17.01.19	17.01.19	Four Aboriginal stakeholder groups (represented by five individuals) participated in the survey. Further details are provided in Section 6 and Appendix 2-7 below
4	Review of draft report, including impacts and mitigation options	27.02.19	27.03.19	<p>Nine Aboriginal stakeholder groups provided positive feedback and comments on the report. This feedback has been integrated into the report where relevant.</p> <p>Further details are provided in Section 2.3 and Appendix 2-8 below.</p>

2.3 Aboriginal Stakeholder Feedback

The ACHAR was distributed for a period of 28 days for review and comment by the RAPs (see Table 2). A follow up reminder of the finalisation of the report was also provided prior to the end of the comment period.

Appendix 2-8 includes any feedback received from the RAPs in relation to the report. Where relevant, such feedback has been integrated into the report, and is summarised below:

- Muragadi Heritage Indigenous Corporation, Darug Tribal Aboriginal Corporation, Barraby Cultural Services, Kamilaroi Yankuntjatjara Working Group, Yurrandaali Cultural Services, Yulay Cultural Services and Didge Ngunawal Clan provided brief email responses in support of the report recommendations.
- Darug Land Observations provided a letter response in support of the ACHAR and its recommendations. With respect to the long-term storage of any Aboriginal cultural material, they recommended that any artefacts impacted by the proposed development be reburied on country (within the Light Horse Business Hub site).
- Darug Custodian Aboriginal Corporation provided a letter outlining their organisation's connection to country, as well as raising concerns about the involvement of organisations potentially from other parts of the region. They supported the findings and recommendations of the report.
- Several of the RAPs have various levels of experience in archaeology, and cultural heritage management more broadly, and see this as part of their involvement in cultural maintenance and protection, and in caring for Country.
- The project was identified as an opportunity for Aboriginal community members to learn more about their heritage and about heritage management.
- In general, a preference was expressed for involvement in fieldwork, and that WSPT continue to consult with RAPs as the project progresses.
- No further comments or feedback was received during the report review period.

3. Existing Environment

3.1 Key Findings

- ♦ The study area is part of the Cumberland bio-subregion, which is characterised by low rolling hills and wide valleys on Triassic Wianamatta group shales and sandstones. The study area is characterised by gently sloping alluvial plains, with occasional terraces or levees providing low relief. It is underlain predominantly by Quaternary alluvium, with narrow sections of the east and west underlain by the Bringelly Shale unit of the Wianamatta Group shales.
- ♦ The study area is predominately located within the South Creek soil landscape, with small portions to the east and west situated in the Blacktown soil landscape. Both typically contain a sandy or clay loam topsoil and a clay loam sub-topsoil unit, overlaying heavy clay.
- ♦ The study area lies within the South Creek sub-catchment of the Hawkesbury-Nepean catchment area. Four creeks flow within the study area: a fourth order portion of Eastern Creek, a third order portion of Reedy Creek, a second order portion of Eskdale Creek and a first order unnamed creek that flows into a man-made waterhole. Eastern Creek in particular has been shown to be a key resource for past Aboriginal populations. Historical flooding is likely to have affected low-lying parts of the study area, particularly causing erosion of topsoils (and reworking or removal of any associated cultural material). However, with such extensive water resources, the presence of past Aboriginal activity is considered likely.
- ♦ Based on a review of past land disturbance and vegetation maps, only small stands of vegetation along Eastern Creek appear to have remained relatively unchanged over the last 70 years, and may contain regrowth or natural bushland vegetation elements.
- ♦ An analysis of past land use indicates that the study area has been subjected to varying degrees of historical disturbance. Impacts have occurred throughout the course of the twentieth century from agricultural and pastoral activities including orcharding, cultivation, and equestrian activities, Department of Defence activities, and water and gas pipeline infrastructure. The expected impact of these activities on the archaeological stratigraphy of the site is cultural materials found in disturbed contexts.

3.2 Geology, Geomorphology and Soils

The study area is located within the Sydney Basin Bioregion, on the central east coast of NSW. Bioregions are large, geographically distinct areas that are distinguished from one another based on differences in geology, landform patterns, climate, ecological features and plant and animal communities. Bioregions are often further classified into finer-scale subregions, with localised differences in geomorphology and vegetation (Thackway and Cresswell 1995).

The study area is part of the Cumberland subregion, which is characterised by low rolling hills and wide valleys on Triassic Wianamatta group shales and sandstones. The subregion is partly covered by Tertiary river gravels and sands, and Quaternary alluvium occurs along the main streams (NSW National Parks and Wildlife Service 2003). The gently undulating shale-based landscape of western Sydney naturally support grey box, forest red gum and narrow-leaved ironbark woodland with some spotted gum on the shale hills, and swamp box in low lying flood-prone areas (Morgan 2001).

3.2.1 Geology

The study area is underlain predominantly by Quaternary alluvium. Quaternary denotes the layer as forming during the most recent period of geological time (~2.58 Ma - ~0.012 Ma). Alluvium is characterised by gravels, sand, silt, and clay, and often contains organic matter that makes it a fertile soil. These deposits are generally formed by flooding of nearby watercourses, which facilitate the erosion of nearby rocks.

In narrow areas of the east and west sections of the study area, the landscape is underlain by the Bringelly Shale unit of the Wianamatta Group shales (Figure 4). The lithology of the Wianamatta Group shales is predominantly shale with sporadic thin lithic sandstones. The group was formed during the Late Triassic period (~237 Ma - ~201.3 Ma) as part of the coastal alluvial plain sequence (Jones and Clark 1991).

Bringelly Shale is the uppermost layer of the Wianamatta Group, and was formed by alluvial sediments during the Late Triassic period as the seas lowered due to increased aridity, probably during a single sea-level regression episode. The Bringelly Shale unit reaches maximum thicknesses of ~250m, and the unit rarely outcrops due to the deposition of overlying soils (Jones and Clark 1991; Geoscience Australia 2018). The lithology can be ordered or randomly distributed and commonly includes claystone and siltstone, laminate, sandstone, coal and highly carbonaceous claystone and tuff (Jones and Clark 1991). The unit is often carbonaceous and frequently contains fossilised roots and plant debris.

Silcrete is a raw material that was used extensively by Aboriginal people for the manufacturing of stone tools. While raw silcrete formations are not present within or immediately adjacent to the study area, silcrete associated with the St Mary's Formation and other Rickaby's Creek gravels are within 10km to the northwest (Doelman et al. 2015:496).

3.2.2 Geomorphology and soils

The study area is predominately located within the South Creek soil landscape with small portions of the study area to the east and west situated in the Blacktown soil landscape (Bannerman & Hazelton 1990) (Figure 5).

The local topography of the South Creek soil landscape is characterised by gently sloping alluvial plains, with occasional terraces or levees providing low relief. Slopes are often <5% and local relief <10 m. This soil landscape comprises the active floodplain of many drainage networks on the Cumberland Plain. This type of landscape restricts a number of archaeological site types, such as rock shelter and rock engravings, which require sharp exposed sandstone relief not common in these areas. Conversely, surface artefact scatters

and buried cultural material are likely to be more prevalent. Dominant soil materials in the South Creek soil landscape include brown apedal single grained loam and dull brown clay loam (A horizons) overlying bright brown clay (B horizon). Soil material along channels comprises friable to loose sandy loam (50 cm) and apedal massive clay loam (15 cm) overlying light-medium clay (70 cm). Sometimes swales are filled with sand splays. Low terraces comprise sandy clay loam (2-50 cm) overlying apedal massive clay loam (15 cm) and medium to heavy clay (60-85 cm). High terraces may contain up to 190 cm of stratified clay (light to medium) over shale bedrock.

The Blacktown soil landscape occurs extensively across the Cumberland subregion, and is characterised by low hills and rises with broad rounded crests and ridges on Wianamatta Group shales. This type of landscape restricts a number of archaeological site types, such as rock shelter and rock engravings, which require sharp exposed sandstone relief not common in these areas. Conversely, surface artefact scatters and buried cultural material are likely to be more prevalent. On crests, the landscape comprises shallow (<30cm) loam topsoil over 10-20cm of clay loam to silty clay loam, over moderately deep (<100cm) clay. On upper slopes and mid-slopes, the soils are shallow (<30cm) loam topsoil over 10-20cm of clay loam to silty clay loam, over shallow to deep (20-150cm) clay. On lower sideslopes, the soils are shallow (<30cm) loam topsoil over 10-30cm of clay loam to silty clay loam, over moderately deep to deep (40 to >140cm) clay. These types of residual soils are typically shallow, comprised of thin clay loam topsoil (A1 horizon) over heavy clays (B horizon), and usually <50cm deep. The heavy clay unit is generally considered to pre-date the Aboriginal colonisation of Australia, and therefore only the upper A1 horizon has the potential to contain Aboriginal objects. The shallow depth of Blacktown soils has direct implications for the subsurface presence and survivability of historical and Aboriginal deposits. The soils rarely are deep enough to have significant or even stratified cultural deposits. The shallow nature of these A1 deposits has implications for the potential for and survivability of Aboriginal objects, as even minor disturbance and/or de-vegetation will often result in the complete removal of the upper parts of the soil profile in which objects may occur.

Although the Blacktown soil landscape generally lacks the sort of subsurface deposits in which archaeological material is commonly found, there are a large number of Aboriginal artefacts recorded as surface finds on this soil landscape. This is due to soil deflation and erosion processes that have operated on Blacktown soils, and which have tended to expose (rather than bury) the former land surfaces on which stone artefacts were deposited.

3.3 Hydrology

The study area lies within the South Creek sub-catchment of the Hawkesbury-Nepean catchment area. Four watercourses flow within the study area: Eastern Creek, Reedy Creek, Eskdale Creek and an unnamed watercourse that flows into a man-made waterhole (Figure 6). At their closest points to the subject area, Eastern Creek is a fourth order watercourse, Reedy Creek is a third order watercourse, Eskdale Creek is a second order watercourse, and the unnamed creek is a first order watercourse.

The watercourses within the study area have been subject to some redirection or disturbance from historical activities. Notably, Eskdale Creek appears to have been diverted near its

confluence with Reedy Creek between 1965 and 1970 (Figure 9 and Figure 10). Also, based on historic aerials and topographic maps, the unnamed creek to the east of the study area probably extended further northeast (<500m) than its present-day extent.

The major watercourse, Eastern Creek, extends ~30km from below Sugarloaf Ridge, flowing north into South Creek. As well as providing water, Eastern Creek would have supported diverse marine, plant and animal resources. The presence of fresh water and diverse flora and fauna (discussed below) would have enabled both seasonal and more permanent use of the area over time. The natural resources implicate that Aboriginal groups could spend large amounts of time in, and within close proximity to, the study area.

Blacktown City Council has undertaken hydrological analysis across the LGA, and the results of those studies indicate that a large portion of the study area is within the local flood zone (Blacktown City Council 2018). This has implications for the survival of subsurface Aboriginal objects, as soil profiles in the study area are likely to have been impacted during past flood events.

3.4 Past Vegetation

From an Aboriginal heritage perspective, understanding areas of native vegetation is important for three reasons:

- ♦ Culturally modified trees may be found in these areas.
- ♦ These areas may have been subject to fewer disturbances in the post-contact period than other parts of the study area.
- ♦ Aboriginal representatives often feel that areas of native vegetation are important cultural values areas.

Remnant vegetation communities in the vicinity of the study area have been mapped by the NSW National Parks and Wildlife Service (NSW NPWS) (NSW NPSW 2002). This mapping program identified two vegetation communities within the study area: Shale Plains Woodland and, more predominately, Alluvial Woodland (Figure 7).

Prior to European settlement, Shale Plains Woodland covered extensive areas of the Cumberland Plain, and this vegetation community is still the most widely distributed community in the Cumberland Plain. It is an open eucalypt woodland, with an open shrub layer and grassy ground cover containing grey boxes, forest red gums and ironbarks. It tends to occur on flat to undulating terrain on Wianamatta Shale-derived soils, but can also occur on Holocene (10-0ka) alluvium in areas with good drainage.

Alluvial Woodland occurs exclusively along, or in close proximity to, minor watercourses in the Cumberland Plain, in soils derived from Wianamatta Shale. It occurs extensively along the Hawksbury-Nepean river system; in the study area, the woodland follows the courses of Eastern Creek and Reedy Creek. It includes native trees such as cabbage gum, forest red gum, and dense stands of Swamp Oak.

There is potential for the study area to retain some isolated stands of original vegetation (Alluvial Woodland). A partial aerial photograph of the study area from 1943 shows isolated stands of vegetation around Eastern Creek, particularly on the eastern side (Figure 8), while much of the remainder of the study area is cleared. These stands of vegetation coverage persist in the 1965, 1970, 1986, 1994, and 2009 aerials (Figure 9 - Figure 13).

3.5 Existing Disturbance

The study area has been the subject of various post-contact European land disturbances since the 19th century, and much of the information regarding historical land use at the study area is derived from the historical assessment currently being undertaken (Extent Heritage, in prep).

The first plans of the area were made in the early 1800s, and show the land portioned in 50 to 100 acre lots between five landowners. The relatively small parcels of the original land grants were consolidated by Richard Farrington between 1825 and 1826. In 1826, he sold a 420-acre block to Richard Brown and Edward Aspinall (*The Sydney Gazette and New South Wales Advertiser*, 1 March 1826; *The Sydney Gazette and New South Wales Advertiser*, 6 August 1827; Banksia Heritage 2003:7). This block, known as "Wallgrove" was then sold to Lieutenant Colonel Charles William Wall in 1827 (Curio Projects nd), who used it as a stopping point to fatten his stock when they were driven from Bathurst to the Sydney markets (Banksia Heritage 2003:7).

In 1833, the Wallgrove Estate was advertised for sale. It was listed as 460 acres of land with "about one hundred [acres] cleared, part in cultivation, and fenced into several small Paddocks...the Buildings consist[ed] of a good Cottage, well-adapted for a Family Residence, having seven good Rooms, a Dairy, and detached Kitchen, a Barn, three-stalled Stable, and other convenient Out-houses; also, an excellent Garden, well-stocked with the choicest Fruit Trees" (*The Sydney Herald*, 7 October 1833). The deed was thus transferred to Charles Roberts, who owned the Wallgrove Estate until his death in 1865. During his lifetime, Roberts kept stock. When it was advertised for sale in 1865, the improvements listed at Wallgrove included "a good Cottage Residence, with orchard and garden, and a number of out-offices, and the land ... subdivided into grazing and cultivation paddocks" (*Sydney Mail*, 16 December 1865).

The land was then passed to John Shand, a successful farmer and police magistrate. Shand and his wife raised five children on at Wallgrove and built a school (*The Sydney Morning Herald*, 22 October 1866), tannery and dairy (Shand 2012). The school and teacher's residence were likely updated c. 1871, when Shand put out a call for tenders for the erection of new buildings (*The Sydney Morning Herald*, 7 October 1871). After Shand moved to Redfern in 1890, the land was subdivided by his sons. In January of that year, the proposed subdivisions were advertised as "First-Class Small Farms and Tannery", with "superior" farms of various sizes. The land was "in large part cleared, open grazing land for a series of years". The Certificates of Title for the subdivided lots indicate that they were passed through a number of owners, primarily for pastoral activities.

On the western side of Eastern Creek, the property obtained by Joseph Hicks on 20 April 1918 was resumed by the Commonwealth of Australia in 1942 (CT 5252-172, 173, 174). This property became the location of the Wallgrove Army Camp. Overall the Army Camp, which spread across both sides of Wallgrove Road (west of the study area), had canvas accommodation for up to 5000 troops. Timber framed rectangular huts, known as P Huts, were also common structures within the camp (Banksia Heritage 2003). Development during this time included upgrading Wallgrove Road to bitumen and installing electricity, fresh water and street lights. Trees and plants were also cultivated at the camp (Curio Projects nd).

After World War II, the Army Camp was used to house the many post-war migrants to Australia, and it was at approximately this time that the sewerage treatment plant was also constructed. Many residents of the hostel worked on the Snowy Mountains Scheme and other state-based labour projects (Banksia Heritage 2003). Brick and tile factories were common throughout the local area, especially after World War II (Robyn Mills 1996). The property remained a military establishment until the 1970s (AMAC 1997), with the Australian Defence Force based in part of the camp until the 1990s (Curio Projects nd). A transmission station complex was established on site in the 1960s.

During the 1960s, plans were made for the Sydney to Newcastle Natural Gas Pipeline, as well as for the construction of the Western Motorway. The pipeline, which bisects the area, was completed in 1982 (*The Australian Pipeliner*, 7 September 2009). Construction on the motorway began in the late 1960s, and by December 1972 had been completed between Russell Street at Emu Plains and Wallgrove Road at Eastern Creek. Access to the freeway at Wallgrove Road was provided via a modified half-diamond, which marked the temporary eastern terminus of the freeway. Two years later, in April 1974, the motorway was extended eastwards to the Great Western Highway at Prospect. In June 1992, east-facing ramps were opened to traffic at Wallgrove Road, Eastern Creek, where previously only west facing ramps existed. The M7, including Light Horse Interchange, were opened by 2005.

3.5.1 Summary of Historical Ground Impacts

The following list summarises the historical impacts that may have caused some disturbance to potential artefact-bearing deposits. A map of these impacts is shown in Figure 14, and the definitions of the levels of disturbance are described in Table 3 below.

- ◆ Since ~1820s: agricultural and pastoral activities, likely vegetation clearance particularly in west, construction of various farming infrastructure.
- ◆ 1840s to early 1949: pastoral and agricultural activities.
- ◆ 1942 to 1990s: use by Defence Force and construction of army base infrastructure. Some regional infrastructure in 1970s (gas pipeline).
- ◆ 2001 to present: construction of various roadworks and limited infrastructure in preparation for greater development to follow.

Archaeologically, this may imply significant ground disturbance in the western portion of the study area. This does not preclude the presence of Aboriginal objects, but suggests they made be found in disturbed contexts. Limited evidence for disturbance near Eastern Creek is

available, and there is potential for isolated stands of remnant vegetation to exhibit cultural modification (e.g. scarred trees).

Table 3. Definitions of levels of historical disturbance within the study area (refer to Figure 14 below).

Level of Disturbance	Description
High	<p>Areas of significant ground surface disturbance, resulting in the total removal of soils and the truncation of any Aboriginal cultural deposits.</p> <p>These areas are associated with the M7 Motorway construction, gas pipeline installation, dam wall and major building construction, and other areas of cutting exceeding 50cm in depth.</p>
Moderate	<p>Areas of moderate ground surface disturbance, resulting in the partial removal of soils and the partial truncation of any Aboriginal cultural deposits.</p> <p>These areas are associated with minor building construction and levelling works, where cutting of between 30-50cm into the ground surface has been undertaken.</p>
Low	<p>Areas of limited ground surface disturbance due to basic landscape modification, resulting in the partial removal and/or reworking of soils and the reworking of any Aboriginal cultural deposits.</p> <p>These areas are associated with low-impact paths and walking tracks, where cutting does not exceed 30cm.</p>

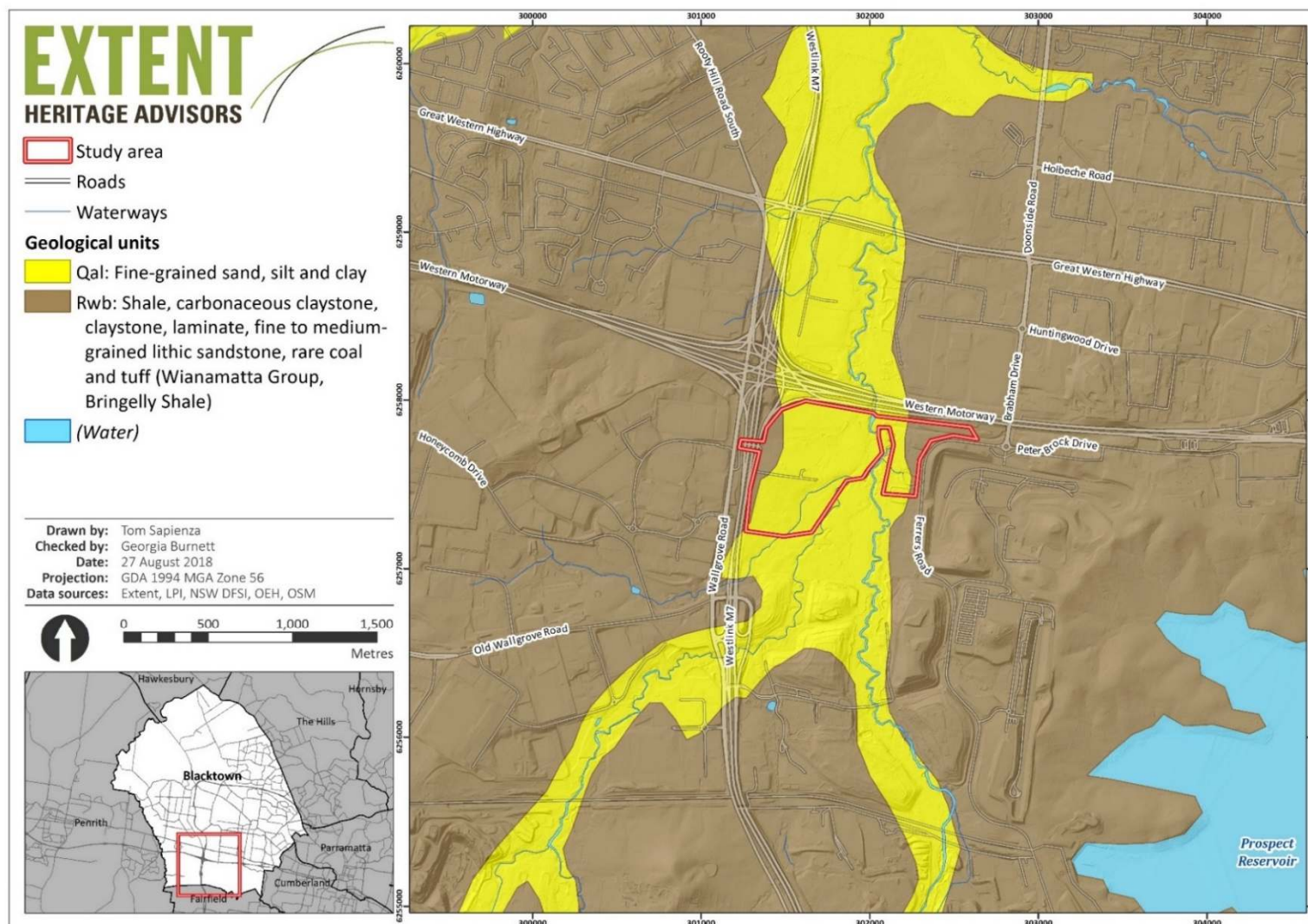


Figure 4. The geological landscape underlying the study area.

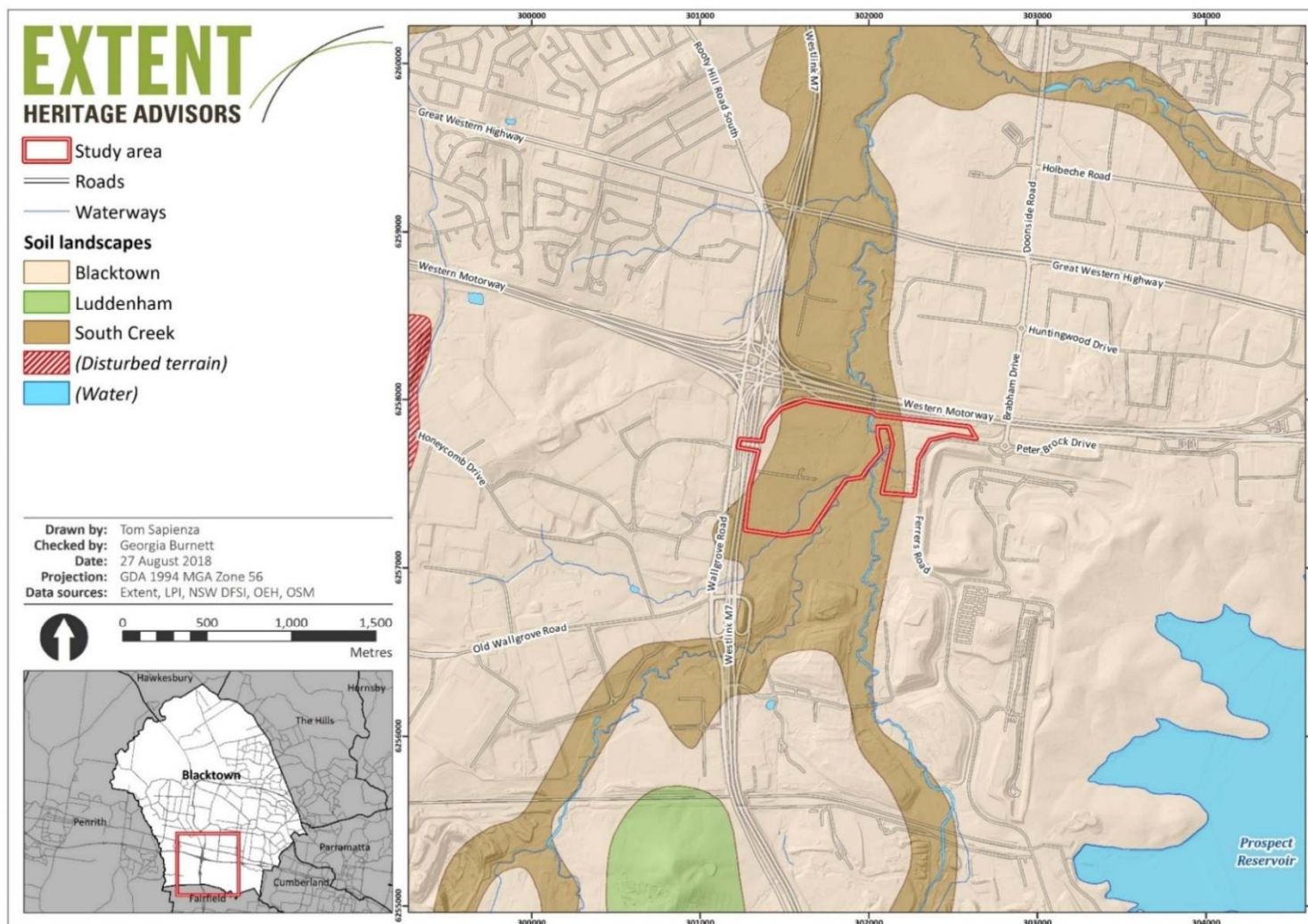


Figure 5. Soil landscape mapping for the region, undertaken by the Soil Conservation Service of NSW (Bannerman and Hazelton 1990). Note the mapping is based on aerial photographs and limited ground-truthing, and may not be accurate.

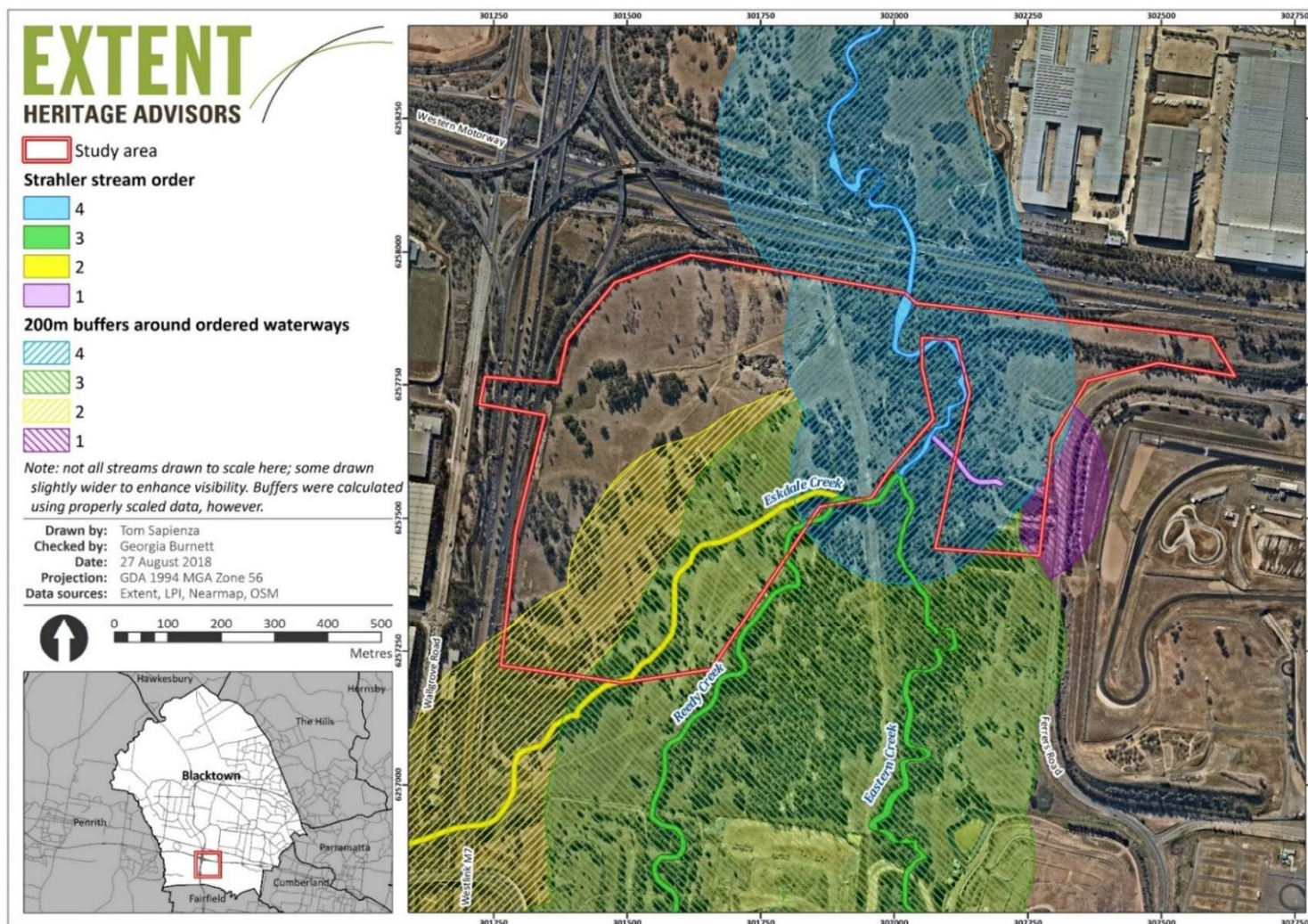


Figure 6. The hydrological landscape of the study area. Note land within 200m of water is considered to be archaeologically sensitive, according to OEH.

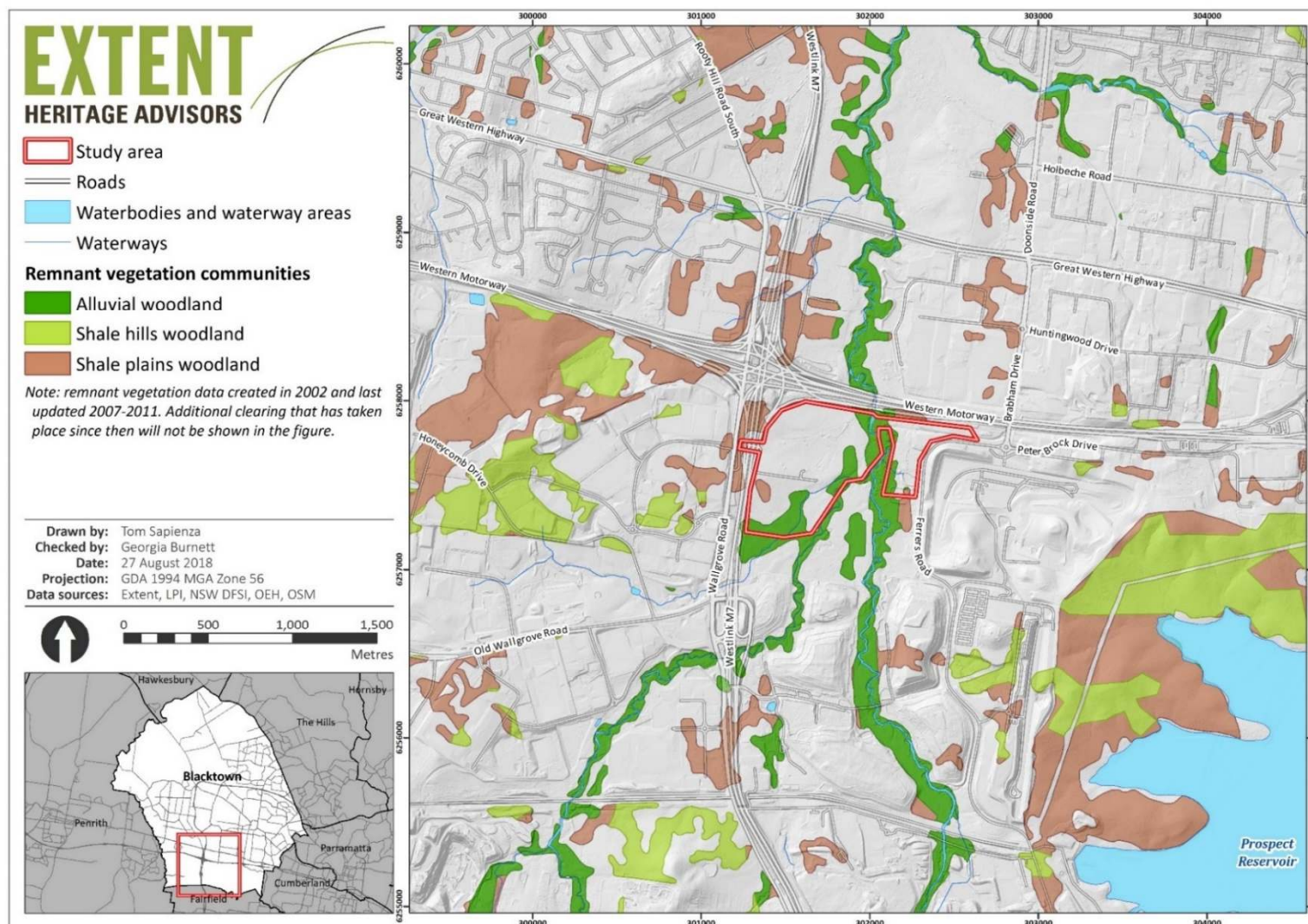


Figure 7. The study area showing remnant vegetation communities.

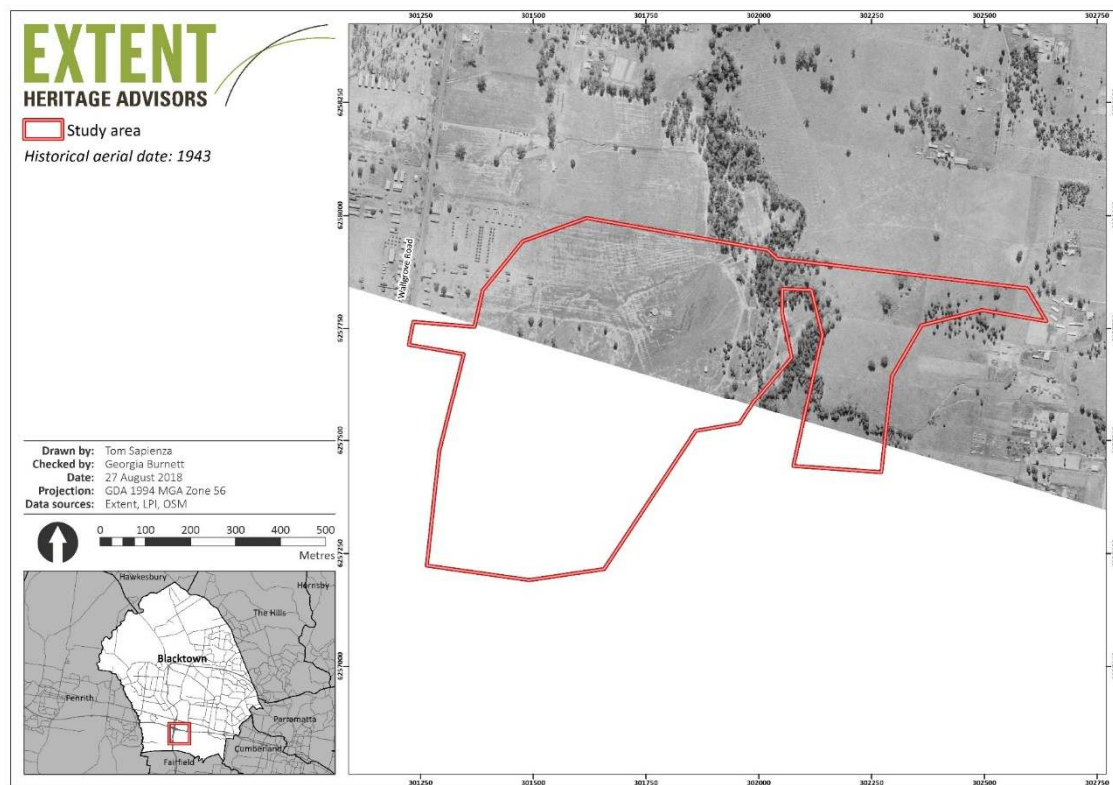


Figure 8. Partial aerial photograph of the study area in 1943.

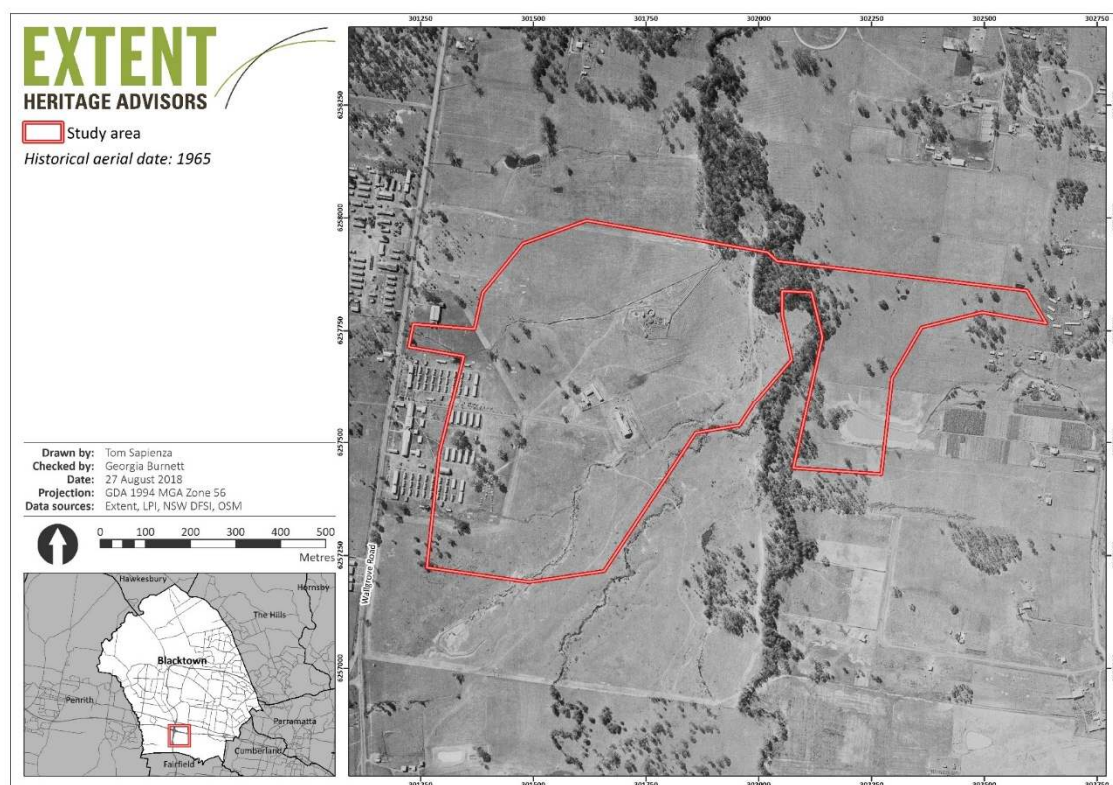


Figure 9. The study area in 1965.

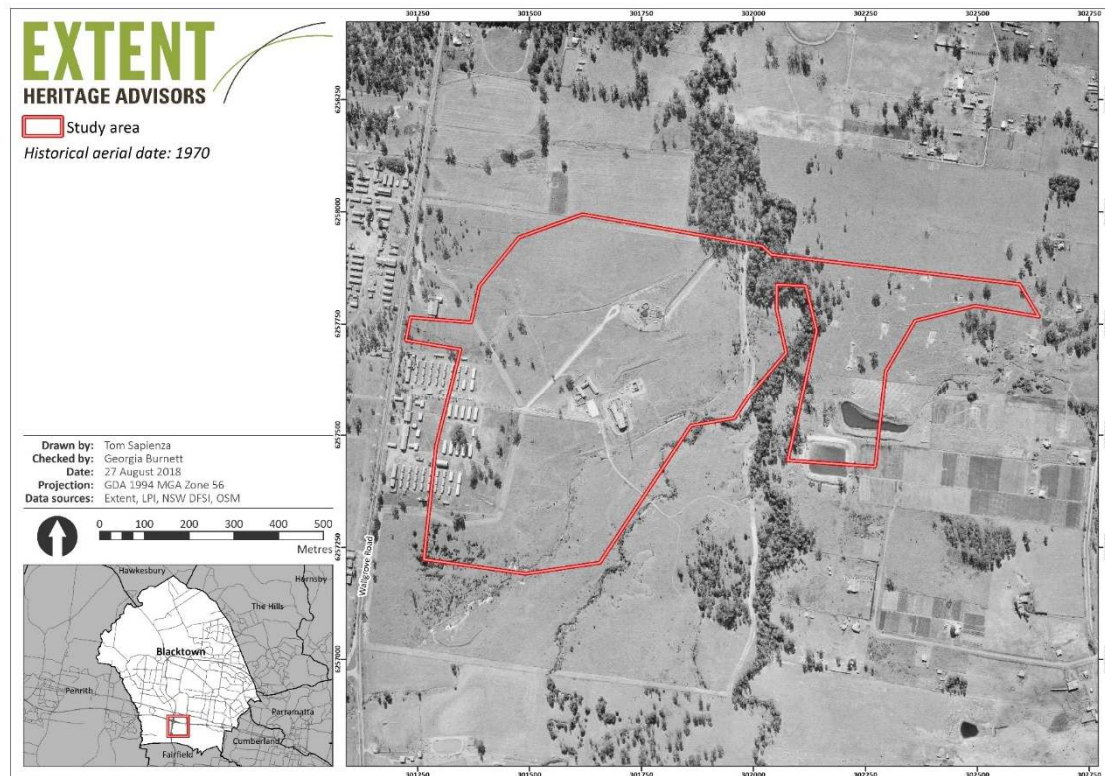


Figure 10. The study area in 1970.

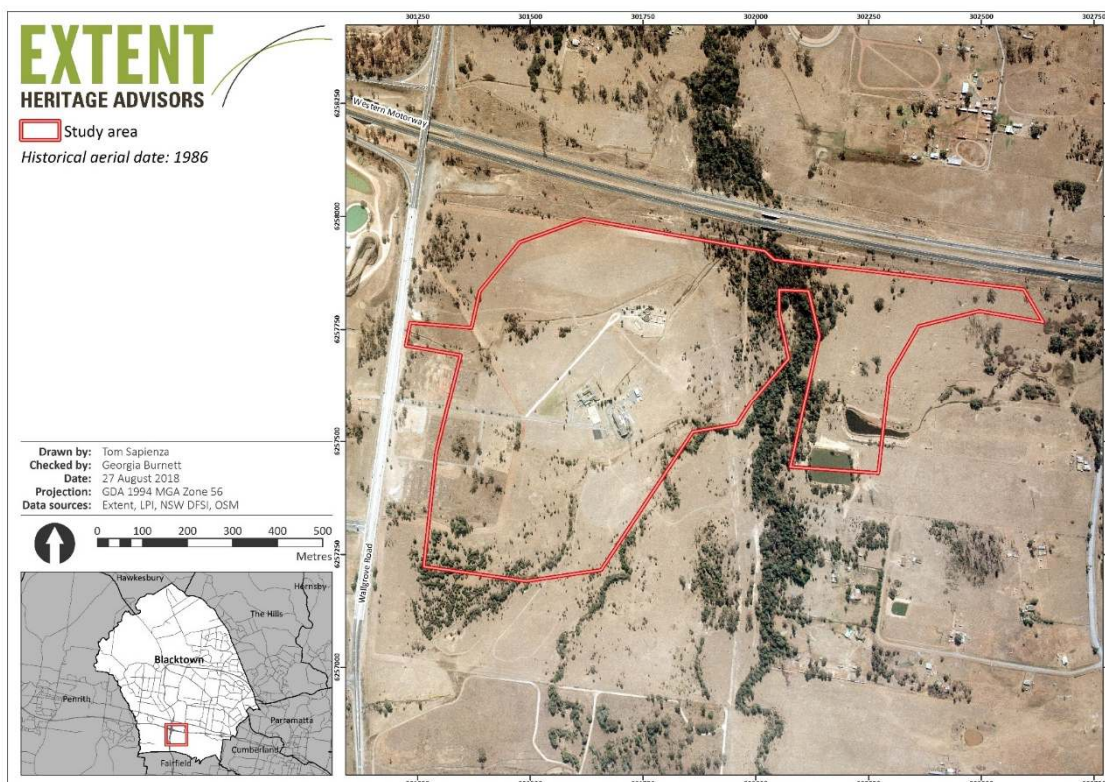


Figure 11. The study area in 1986.

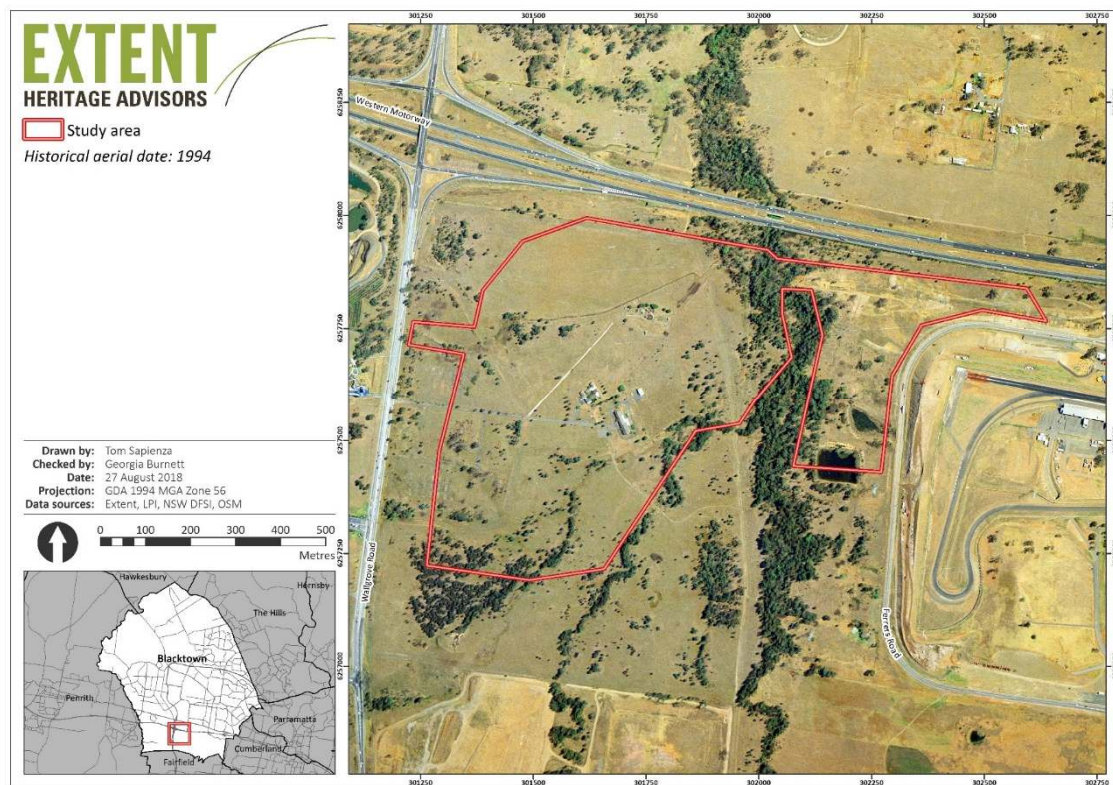


Figure 12. The study area in 1994.

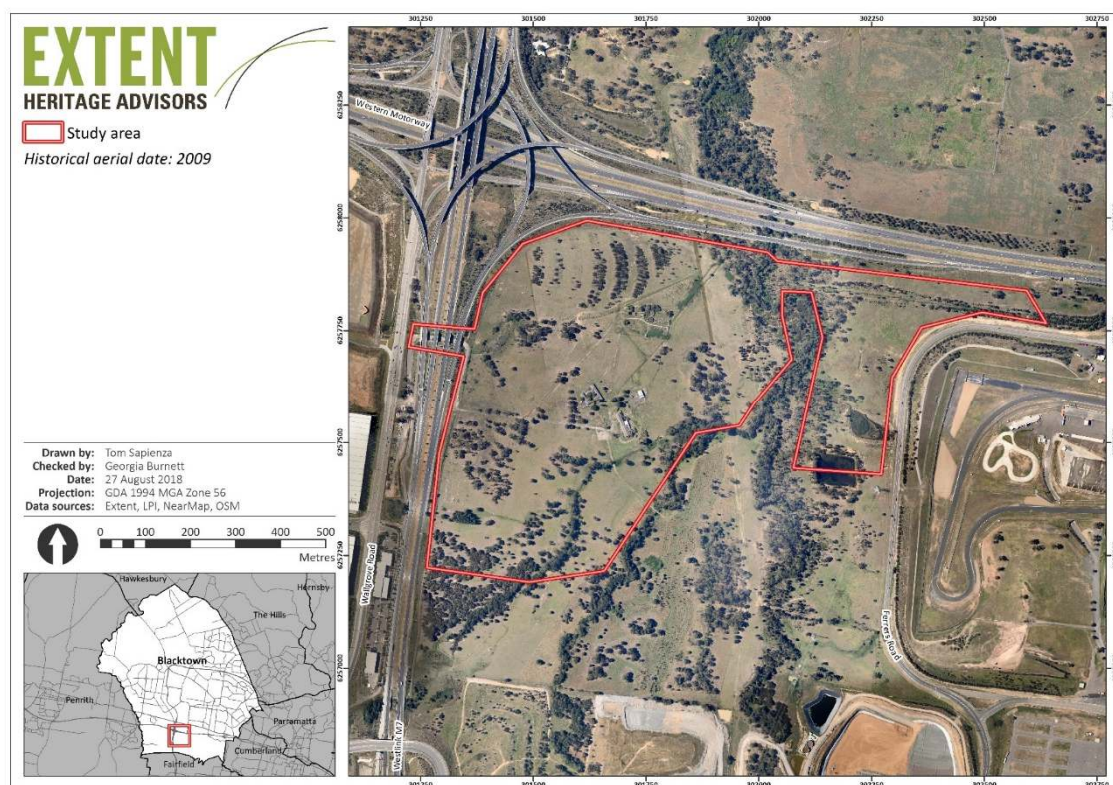


Figure 13. The study area in 2009.

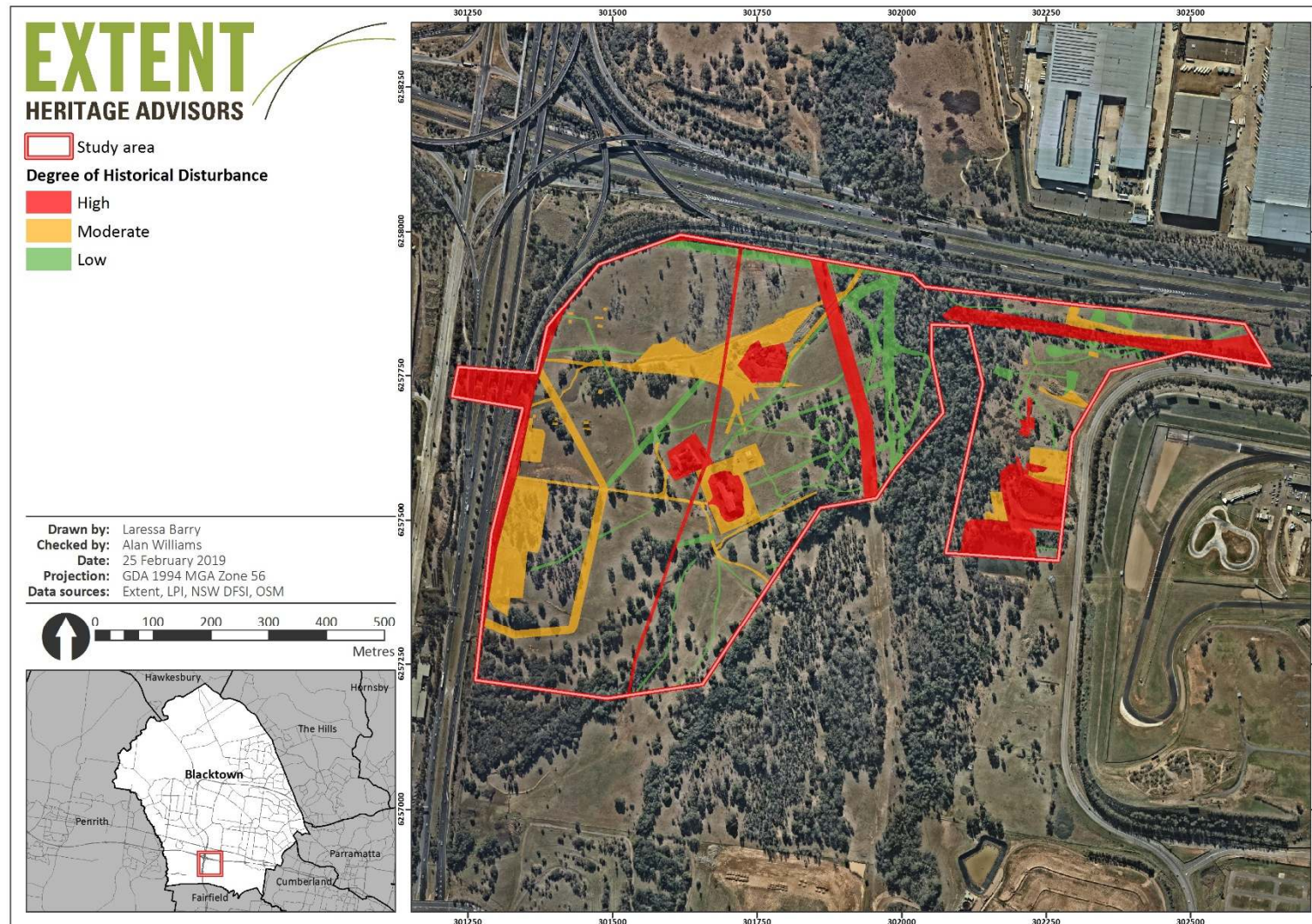


Figure 14. Areas of historical disturbance within the study area.

4. Ethnographic Record

4.1 Key Findings

- ♦ For the period from European colonisation until the mid-19th century there are detailed ethnographic and historic accounts that provide significant information about the lives of the Aboriginal people and groups who lived in and around the study area.
- ♦ Because the study area is near the point where several different groups' lands met, the exact linguistic background of the inhabitants of the study area is uncertain, but it was almost certainly Dharug, Gandangara and/or Tharawal.

4.2 Regional Information

Over thirty separate Aboriginal groups populated the Sydney region in 1788, each of which had their own country, practices, diets, dress, and dialects. These groups are now known of as 'clans', each of which is also identified with broader cultural-linguistic groups sometimes referred to as 'tribes'. Sydney tribes included Dharug, Darkinjung, Gundungarra, Tharawal, Guringai (Coastal Darug), Eora (Coastal Darug) and Awabakal (Attenbrow 2010: 23, 32).

Each clan was made up of thirty to fifty people who had own defined territory. Clans occasionally converged with other clans to trade, hunt, fight, feast, arrange marriages, conduct ceremonies, resolve disputes, and share information. There was often tension between neighbouring groups and the boundaries between territories were not lightly traversed (White 1790). On an expedition northwest of Parramatta, Watkin Tench records that his guides Colebee (Gadigal) and Ballederry (Burramattagal) quickly found themselves in "country unknown", and they described those who lived there as "bad". When the party finally reached the Hawkesbury River, he wrote that "[our] natives had evidently never seen this river before" (Tench 1961: 225-226).

The landscape of the Cumberland Plain was crossed with Aboriginal paths, many of which later became European roads, and the speed and sophistication of inter-clan communication was remarked upon by many European observers. On 23 October 1835, missionary James Backhouse encountered Aboriginal people in Richmond who knew of his brief visit to Wellington, over 300km away. He wrote: "Our persons, costume, and many other particulars, including our manner of communicating religious instruction, had been minutely described" (Backhouse 1843: 339).

Unfortunately, in 1789 the same paths that wove Aboriginal communities together rapidly spread smallpox throughout the region. The devastating outbreak forced major reorganisations among clan groups. When William Bradley sailed into Sydney in May 1789, he recorded the "dreadful havock" that smallpox had wrought amongst Aboriginal communities. "[We] did not see a Canoe or a Native the whole way coming up the Harbour & were told that scarce any had been seen lately except laying dead in & about their miserable habitations"

(Bradley 1969). As entire communities were destroyed by the disease, traditional burial practices broke down and clans merged together for survival (Hunter 1793). Bradley reported that bodies were found in caves, along streams, around the harbour and along the entire path between Port Jackson and Broken Bay.

Although Aboriginal people practiced extensive ceremonies, primary sources offer only glimpses of the ceremonial life of Sydney Aboriginal communities. Some Aboriginal customs were recorded by Europeans relatively regularly, such as the avulsed teeth and scarifications of certain initiated men, and the kangaroo teeth necklaces and the missing little finger joints of mountaineer and coastal women. But, due to the secrecy surrounding some types of ceremonial events, there are serious limitations to even the most richly described accounts like the “Yoo-long Erah-ba-diang” initiation ceremonies Collins recorded at the head of Farm Cove and in the “middle harbour” (Collins 1804: 365-374); the contests and dances conducted on “a clear spot between the town and the brick-field” (Collins 1804: 236); and the operation performed by Yellomundee, a “caradyee”, on Colebee’s wound on the banks of the Hawkesbury (Tench 1961: 232).

The Cumberland Plain woodland, particularly when it had a fire-managed understorey dominated by grasses, was a fundamental part of the Aboriginal subsistence economy. This was due primarily to its abundant game resources, and particularly grazing and browsing mammals such as kangaroos and possums. Contributing to the importance of particular portions of the Cumberland Plain were those areas near freshwater creeks, wetlands and rivers, which also made significant contributions to the Aboriginal subsistence economy.

More information was recorded about the lifeways of Aboriginal groups in the area. The inland clans fished for mullet and eels in rich lagoons, and much of their food came from yams dug out from the river banks and worms known as “cah-bro” extracted from river driftwood. Colebee and Ballederry called these people the “climbers of trees,” after their practice of skilfully ascending gums in pursuit of animals by cutting footholds in the trunks with a stone axe. More hunting traps were plotted in the area from Parramatta to Richmond than any other part of Sydney. These included “bird decoys” full of feathers, hollowed-out trees, and a tapering chute at the foot of Richmond Hill “between forty and fifty feet in length”, constructed of earth, weeds, rushes, and brambles (Collins 1798).

The foraging strategies used by the inland people of the Cumberland Plain were described in some detail by David Collins in the early years of European settlement (Collins 1798: Vol 1, Appendix IV):

The natives who live in the woods and on the margins of rivers are compelled to seek a different subsistence [to those on the coast], and are driven to a harder exercise of their abilities to procure it. This is evinced in the hazard and toll with which they ascend the tallest trees after the opossum and flying squirrel [gliders]. At the foot of Richmond Hill, I once found several places constructed expressly for the purpose of ensnaring animals or birds.

...By the sides of lagoons I have met with holes which, on examining, were found excavated for some space, and their mouths so covered over with grass, that a bird or beast stepping on it would inevitably fall in, and from its depth be unable to escape.

*In an excursion to the Hawkesbury, we fell in with a native and his child on the banks of one of the creeks of that noble river. We had Cole-be with us [a Cadigal clansman from the coastal sandstone country of Sydney's east], who endeavoured, but in vain, to bring him to a conference; he launched his canoe, and got away as expeditiously as he could, leaving behind him a specimen of his food and the delicacy of his stomach; a piece of water-soaked wood (part of the branch of a tree) full of holes, the lodgement of a large worm, named by them cah-bro [cobra or *Teredo* spp.; a type of burrowing mollusc known as shipworm]*

...They resort at a certain season of the year (the month of April) to the lagoons, where they subsist on eels which they procure by laying hollow pieces of timber into the water, into which the eels creep, and are easily taken.

These wood natives also make a paste formed of the fern-root and the large and small ant bruised together; in the season they also add the eggs of this insect.

Fire was a constant presence in early Sydney, and Aboriginal people quickly became known as the “fire-makers” (Cox 1815). Fire was an Aboriginal multitool, used to open paths and to clean country; to drive animals into the paths of hunters and to cook the kill; to keep warm at night and to carry as a torch the next day; to treat wood, melt resin and crack stone for tools; to gather around and dance and share stories.

Mapping ethnographic records gives us an insight into local burning regimes. Examples of fires around Sydney included “moving lights” seen on the harbour at night (Banks 1998: 243) to lone trees burning on the Cumberland Plain, “the smoke issuing out of the top part as through a chimney” (White 1790: 153). “In all the country thro’ which I have passed,” wrote Arthur Phillip in May 1788, “I have seldom gone a quarter of a mile without seeing trees which appear to have been destroyed by fire” (Phillip 1914: 31).

On a hot dry day in September 1790, for example, David Collins observed Aboriginal people “burning the grass on the north shore opposite to Sydney, in order to catch rats and other animals” (Hunter 1793). Almost exactly twelve months later, on 31 August 1791, they were again “firing the country” in the same place on a hot day ahead of heavy rains. While Collins regarded this to be another “remarkable coincidence”, it suggests a connection to the land and an understanding of the seasons which the settlers could not fathom. This dismissive approach proved devastating during 1799 flood of the Hawkesbury. Settlers who ignored the flood warnings given by Aboriginal people were engulfed by a destructive torrent as the river “swell’d to the height of fifty feet above its common level” (Collins 1804: 488).

After contact, early Sydney remained, in the words of historian Grace Karskens, “an Eora town” (Karskens 2009: 351). Crowds of Aboriginal people would flow through the settlement at Sydney Cove, eating in the yard of Government House, sharing a table with the Governor himself, or gathering at Bennelong’s hut. Large parties of convicts paid regular visits to an Aboriginal family in Woolloomooloo, “where they danced and sung with apparent good humour” (Collins 1798: 37). A short-lived fish trade sprang up in Parramatta, where Aboriginal people sold fresh bream and mullet for bread and salted meat (Collins 1798: 165). Fierce warfare broke out on the Hawkesbury. Clans came “not less than one Hundred Miles” to attend Governor Macquarie’s “Annual Meeting of the Natives” at Parramatta (Macquarie 1917:

95). Each of these events makes up a single piece of ethnographic evidence, but together they knit together a rich tapestry of Aboriginal activity around early Sydney.

4.3 The Study area

The study area is situated quite near the location where the territories of multiple language groups met, and so no definitive statements can be made about the traditional language spoken within the study area. However, the results of decades of academic research strongly suggest that the local language was Dharug.

Tindale's mapping of Aboriginal languages places the study area in country associated with the Eora people, but within 2km of a boundary with territory associated with the Daruk people (Tindale 1974). In Goodrum's efforts to specifically position Aboriginal groups or clans, the study area is near locations recorded as being associated with Toogagal, Gomerrigal, Cannemegal and Bool-Bain-Ora people (Goodrum 1987). Kohen's 1993 work identifying Aboriginal clans indicates that the study area is in proximity to locations associated with the Warrawarry and Weymali clans (Kohen 1993). Kohen mapped the study area in country associated with the Dharug language (Kohen 1993), and close to the interface between Dharug, Tharawal and Eora country (Horton 2000).

Early colonial records include a single ethnographic observation made in the vicinity of the study area (Figure 15). On 26 April 1788, during inland travels by Governor Phillip and several others, hunting traps and marked trees were seen in the general area of what is now Prospect Reservoir:

In our way back, which we easily discovered by the marks made in the trees, we saw a hollow tree on fire, the smoke issuing out of the top part as through a chimney. On coming near, and minutely examining it, we found that it had been set on fire by the natives; for there was some dry grass lighted and put into the hole wherein we had supposed they used to snare or take the animal before alluded to (White 1790).

The burning tree would have been an Aboriginal hunting trap. The marks made in the trees were most likely climbing notches made by a stone axe.

One historic European expedition route also bisects the study area. An exploratory expedition undertaken over two days, 26-27 June 1789, by Watkin Tench; Mr. Arndell, assistant surgeon of the settlement; Mr. Lowes, surgeon's mate of the Sirius; two marines; and a convict. The following observation was made:

This Country between Prospect Hill & the [Nepean] River appears better than on the other side Prospect Hill [sic] & in many places very Good [sic].

The map appears to be intended for an English audience, perhaps with a goal of attracting emigrants, and notes the type and quality of country explored, and water sources.

4.4 Information provided by RAPs

No additional ethnographic information was supplied by the RAPs for this report.

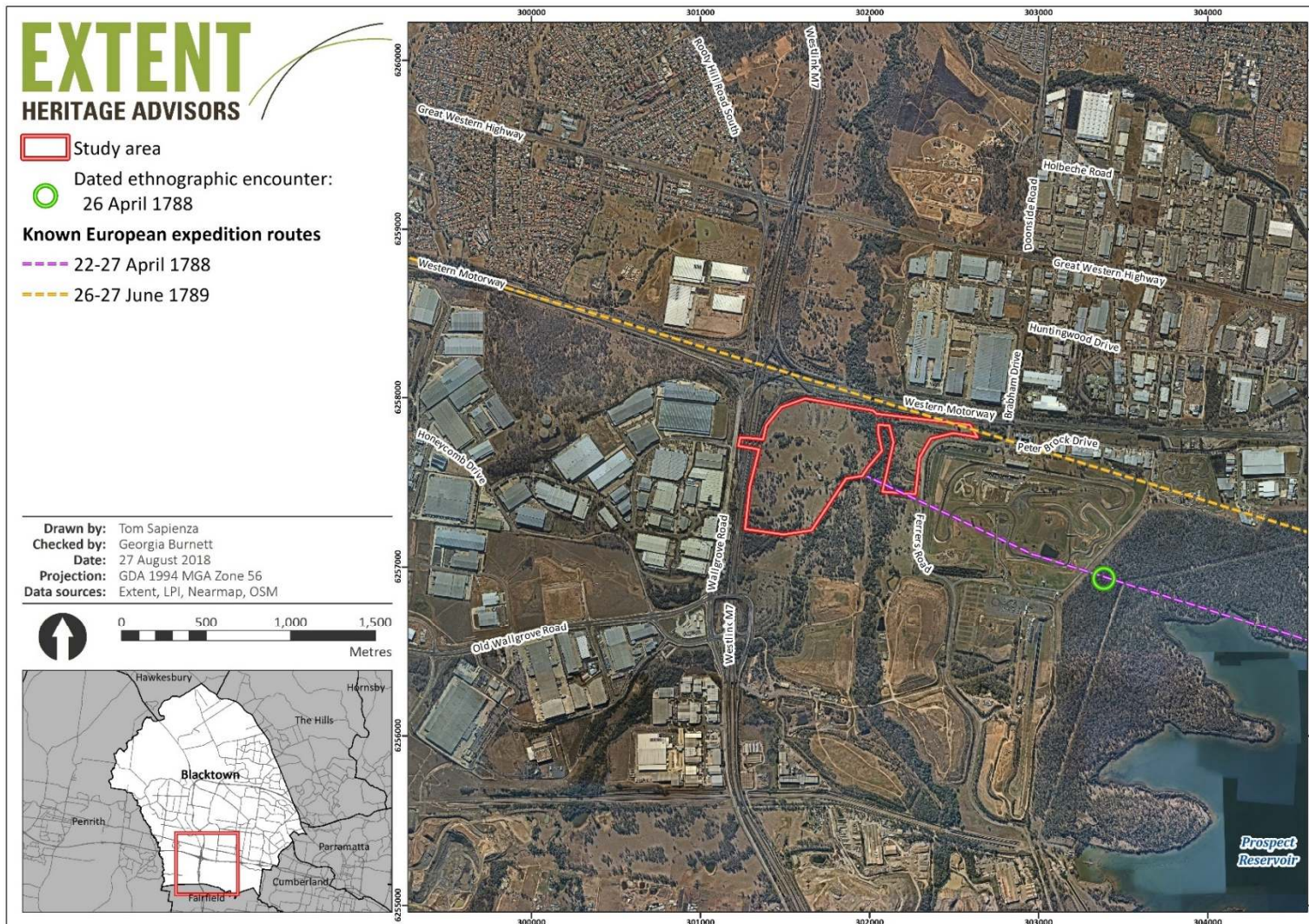


Figure 15. Ethnographic encounters and known European expedition routes referred to in text.

5. Archaeological Record

5.1 Key Findings

- ♦ Although the broader Cumberland Plain has been the subject of hundreds of archaeological studies, the part of the plain in which the study area is located is one for which significantly fewer details are known about the nature, distribution and survival of archaeological materials.
- ♦ Recent studies in the vicinity of the study area indicate that Aboriginal archaeological materials will be present in those parts of the study area that have not been subject to high disturbance. Further, it is likely that the archaeological materials present in the study area will be very similar to those found along other major waterbodies in the Cumberland Plain and mostly comprise of varying densities of surface and/or subsurface stone artefacts.
- ♦ Since 2010, no Aboriginal Heritage Impact Permits (AHIPs) have previously been issued within the study area. A consent to destroy permit was issued for an artefact scatter site immediately outside of the study area as part of the development of the Eastern Creek Grand Prix Circuit (#45-5-0751, Consent to Destroy Permit 450037, dated 1 December 1989).

5.2 Regional Background

5.2.1 A History of Research in the Sydney Basin

One of the first investigations in the region was at Lapstone Creek, southwest of Emu Plains, in the foothills of the Blue Mountains (McCarthy 1948). Initially undated, this site was one of several used by McCarthy and others to differentiate the Bondaian and Eloueran artefact assemblages (e.g. Lampert 1966, 1971; McBryde 1966, 1974; Megaw 1965, 1968; Moore 1970, 1981). Radiocarbon ages suggesting a basal age of c.4 ka for the site were published in the late 1960s from archived samples of charcoal (McCarthy 1978; Polach et al. 1967). McCarthy (1978) also identified several 'surface workshops' along the banks of the river between Castlereagh and Emu Plains. These were large surface artefact scatters that were dominated by early reduction of pebbles derived from the Hawkesbury River. The sites were dominated by uniface pebble blanks, edge-ground implements, and percussions stones, with minor representations of microliths, and were considered to be of late Holocene age.

In the 1970s Stockton and Holland (1974) undertook excavations at several rockshelters in the Blue Mountains (including Kings Tableland, Walls Cave, Lyrebird Dell and Springwood Creek), which demonstrated occupation of the region through the Last Glacial Maximum and terminal Pleistocene (25-10ka). Excavations revealed initial occupation of the Blue Mountain/Hawkesbury region by c.22 ka, with a Capertian assemblage dominating between c.12 to 6 ka and a Bondaian assemblage from c.3 ka and European arrival (and peaking after 600 years). The terms Capertian and Bondaian are explored further in the later sections of this

report. However, in brief the 'Capertian' and 'Bondaian' were terms, coined in the 1940s, to characterise two different types of artefact assemblage. The Capertian is composed of amorphous pebble-tools dominated by silicified tuff and constrained to the Terminal Pleistocene, and the Bondaian generally composed of microliths and dominated by silcrete, and constrained to the late Holocene. A sterile phase was identified between the two assemblages at many of the Blue Mountain sites. As part of this work a disturbed rockshelter at Shaws Creek, K1, was excavated with preliminary findings indicating a potential for deep-time deposits in close proximity to the Hawkesbury River (Stockton 1973).

Subsequently, as part of his doctoral research, Kohen (1986; Kohen et al. 1984) undertook excavations of KII rockshelter, a more undisturbed site immediately east of K1. This excavation identified two main assemblages: a lower assemblage (within units 1-4/phases VI-IV) composed of amorphous core/flake tools and thick flakes, and an upper assemblage (within units 5-6/phases I-III) that included backed blades, geometric microliths, edge-ground hatchets and bipolar/scalar pieces (Kohen et al. 1984). The lower assemblage was dominated by chert (also referred to as silicified tuff), while the upper assemblage was dominated by igneous and metamorphic materials, as well as an increasing abundance of silcrete. Radiocarbon ages for the two assemblages indicated that the lower had a minimum age of 13 ka, while the upper was present in various guises from 4-1.2 ka. In contrast to Stockton (1973), Kohen saw no evidence of a hiatus between the two assemblages. With the exception of Cranebrook Terrace, the KII site currently provides the earliest evidence of occupation along the Hawkesbury River.

In the same study, Kohen (et al..1984) also referred to an open stratified site at Jamisons Creek, Emu Plains, where two ages suggested an initial occupation from c.7 ka, with a proliferation of backed blades associated with a hearth date to c.3 ka. Thermo-luminescence (TL) dating of an open site at Regentville (RS 1), similarly found a focus of occupation between 5.2 ± 0.5 ka (W 1892) and a basal age 7.6 ± 0.8 ka (W 1893) (McDonald 1995).

The earliest date for alleged Aboriginal occupation in the region comes from Cranebrook Terrace, where five reportedly flaked pebbles identified as stone tools by Stockton were found within a gravel pit (Stockton and Holland 1974). Subsequent work by Nanson et al. (1987) demonstrated these gravels to be c.40 ka. If correct, these finds would be the oldest site on the Australian eastern coast. However, the artefactual status of the pebbles, their provenance (several were in an eroded context rather than in situ) and the association between the dates (which ranged from 10 to 42 ka) and the artefacts have been sources of controversy ever since. Mulvaney and Kamminga (1999) rejected these findings and despite extensive monitoring of the Penrith gravel pits over the past 30 years no other comparable artefacts or evidence of early human occupation has come to light at those levels (see Mitchell 2010a for further discussion).

Excavations by Austral Archaeology Pty Ltd at the Windsor Museum site recovered an extensive artefact assemblage within a sand dune deposit dated to between 149 ka and 8.5 ka (Mitchell pers. comm.). Correlating these TL ages with the archaeology has proven to be difficult as the sediments are known to be bioturbated but it is very likely that the oldest artefacts are of late Pleistocene age.

As part of a salvage excavation for the Rouse Hill Infrastructure project, a basal layer of silicified tuff artefacts was recovered at RH/CC2, a stratified open site, and while undated, based on artefact typology, it was considered to be of a terminal Pleistocene age (JMCHM 2005a, 2005b). Consulting work on the western Cumberland Plain by Smith (1986) at Quakers Hill and McDonald et al. (1994) at Seconds Ponds Creek have recovered hearths and other features in association with extensive artefact scatters dated to the late Holocene. Further afield in tributaries of the Hawkesbury River, studies at Upper Mangrove Creek (Attenbrow 2004), Darling Mills SF 2 rockshelter (Attenbrow 1993) and MR/1 (Moore 1981) have all demonstrated terminal Pleistocene and early Holocene occupation.

Between 2008 and 2013, Archaeological and Heritage Management Solutions Pty Ltd undertook archaeological investigations of a large sand body, PT 12 (#45-5-3198), in Pitt Town, northwest Sydney, in advance of development. PT 12 sand body is situated on the edge of a ridge line that follows the Hawkesbury River and associated tributaries. The most significant works consisted of a large salvage excavation totalling 100m² in two locations on the sand body. These works recovered ~10,000 artefacts along with a large number of OSL ages. The findings of the study indicate that the sand body had formed >100ka, with occupation by Aboriginal people at ~36ka, and continuing through until 8ka (Williams et al., 2012, 2014). Currently, this represents the earliest evidence of permanent occupation of the Sydney region.

More recent work by Extent Heritage on a large archaeological mitigation in advance of ~40km of pipeline along several creeklines in northwest Sydney. This project involved 500m² of open area excavation and recovered ~10,000 artefacts, along with an intense dating program. The findings all indicated that much of the Sydney Basin had only been colonised in the last few thousand years. It was hypothesised that earlier in the past, populations focussed on the main river systems and coast, only in-filling the intermediate region when demographic pressure reached a threshold in the last few thousand years. This is further supported by Attenbrow (2010) who considered that the vast majority of dated sites in the Sydney region are less than 5,000 years old (35 out of a total of 48 dated sites).

5.2.2 Spatial Patterns of Archaeology

A total of ~7,000 sites have been recorded on the OEH AHIMS database for the Cumberland Plain sub-region. The majority of these sites are artefacts (open camp sites or isolated finds) (n=3,756 or 54%) followed by Potential Archaeological Deposits (PADs) (n=1,212 or 17%), grinding grooves (n=936 or 13%) and other undefined site types (n=1,056 or 15%). These findings are similar to the frequency of site types recorded for the overall Sydney region. The absence of rockshelters with art or deposit for the western Sydney area may be accounted for by the geology of the area which lacks sandstone escarpments and shelters. Other site types in western Sydney include stone quarries, non-human bone or organic material, shell, and water holes.

A study of the regional archaeology of the Cumberland Plain by Kohen (1986) made a number of findings about site location patterns in the Sydney area. The study demonstrated that proximity to water was an important factor in site patterning. Kohen (1986) found that 65% of open artefact scatter sites were located within 100 metres of permanent fresh water. Only 8

per cent of sites were found more than 500 metres away from permanent fresh water (Kohen 1986). In short, Kohen (1986) argued that open artefact scatters are larger, more complex and more densely clustered along permanent creek and river lines. Kohen's (1986) study also found that silcrete (51%) and chert (34%) are the most common raw materials used to manufacture stone artefacts. Other raw materials include quartz, basalt and quartzite.

Although the patterns described above have been generally supported by subsequent investigations, Kohen's study was limited by a reliance on surface evidence. Extensive excavation across the Cumberland Plain has since shown that areas with no surface evidence often contain sub-surface deposits buried beneath current ground surfaces. This is a critical consideration in aggrading soil landscapes, such as those commonly found across the Cumberland Plain. In a 1997 study of the Cumberland Plain, McDonald (JMCHM, 1997) found that:

- ◆ 17 out of 61 excavated sites had no surface artefacts before excavation.
- ◆ The ratio of recorded surface to excavated material was 1:25.

The character and composition of the excavated sites in McDonald's study could not be properly predicted on the basis of the surface evidence. In short, surface evidence (or the absence of surface evidence) does not necessarily indicate the potential, nature or density of sub-surface material.

The results of McDonald's study clearly highlight the limitations of surface survey in identifying archaeological deposits in this landscape. The study also shows the importance of test excavation in establishing the nature and density of archaeological material on the Cumberland Plain.

McDonald has undertaken over 20 years of consulting archaeology in the Cumberland Plain, and, like Kohen, has developed a predictive model for the distribution of Aboriginal objects. In a recent publication, White and McDonald (2010) p. 29 summarised this model as follows:

Topographic and stream order variables correlate with artefact density and distribution. High artefact density concentrations may have resulted from large number of artefact discard activities and/or from intensive stone flaking. Highest artefact densities occur on terraces and lower slopes associated with 4th and 2nd order streams, especially 50–100 metres from 4th order streams. Upper slopes have sparse discontinuous artefact distributions but artefacts are still found in these landscape settings.

It must be noted, however, the on-site investigation in the southwest of the subregion has been significantly less than in the northwest. The limited studies that have been undertaken suggest that the models outlined above are generally robust, but there are differences. This is primarily for two main reasons: 1) there appear to be few raw material sources in the southwest. The sites containing tens of thousands of stone tools a few hundred metres from the Plumpton Ridge (a large silcrete outcrop) in the northwest for example, have no counterpart to the south, and based on existing evidence are unlikely to be present; and 2) the southwest is higher in the creek catchment, making the geomorphology slightly more rugged and the creeks often stronger and more erosive, than the northwest. This results in

archaeological sites being commonly lost in close association with the creekline, and more often found on mid, upper slopes and hill crests between 120-180m from the creek's edge.

More recently, a large-scale excavation of a series of pipelines along major creeklines by Extent Heritage (2015) further contributed to McDonald's work. The key findings included:

- ♦ The archaeology of the Cumberland Plain is characterised by a cultural landscape consisting of foci of activity against background low density spread of Aboriginal objects found in all undisturbed locations, generally in the order of $<6/m^2$; and therefore, it has been suggested that a 'site', or a place of specific Aboriginal cultural activity, is identified only when this threshold is exceeded. Areas of extensive occupation or repeated use contained densities $>45/m^2$ and frequently higher, with densities of $>150/m^2$ being not uncommon for the largest sites.
- ♦ While the works were constrained to the linear corridor of the pipeline, the testing program (frequently with resolution of 5 or 10m spacing of test pits) generally showed the length of high artefact densities (*a priori* sites). All of these results suggest that the linear length of high-density sites is in the order of 10-20m, and assuming a similar width, can be extrapolated to a 100-400m² occupation area.

5.3 Local Information

This section provides a summary of previous studies undertaken in the proximity of the study area (Figure 17).

Sites in the vicinity of the study area are dominated by low-density artefact scatters and/or isolated finds. Site appears to have lower artefact densities than elsewhere in the Cumberland Plain. These assemblages tend to be dominated by silcrete, and are strongly indicative of a late Holocene (5-0ka) visitation and/or occupation of the region, but chert, quartz and mudstone are also present. Artefact densities are generally lower closer to the local watercourses (likely due to scouring effects based on regional archaeological models that suggest greater artefact densities should be present), but become increasingly dense and more significant with elevation.

Archaeological Study of Aboriginal Sites in the Western Cumberland Plain (Kohen 1986)

This work was an investigation of Aboriginal sites in the Blacktown area, done both as part of Kohen's PhD research (1986a) and also as a consulting report on behalf of Blacktown City Council (1986b)). The study area of these works includes the current study area. The work was undertaken in the areas around Prospect Reservoir, Erskine Park, Marsden Park and Ropes Creek, and involved sample surveys and the reassessment of previously recorded Aboriginal sites. The study identified 25 archaeological sites with more than 50 recorded artefacts, most of which were located along watercourses and on ridgelines. Two artefact scatters were identified within the current study area (AHIMS #45-5-0453 and #45-5-0469) and three artefact scatters were identified within 200m of the study area (AHIMS #45-5-0454, #45-5-455 and #45-5-0465). The stone artefact assemblage comprised silcrete, chert, quartz,

silicified wood, basalt and quartzite flakes and cores. The sites were mostly located along watercourses and on ridgelines.

Sydney International Grand Prix Circuit, Eastern Creek (Crew 1989)

This work was an investigation of Aboriginal cultural heritage material within the development application area of the Sydney International Grand Prix Circuit at Eastern Creek. The study area for this assessment is within and immediately to the west of the current study area, from the west bank of Eastern Creek to encompass what is presently Sydney Motorsport Park (Lot 3 DP1079897). The study area identified nine open sites and ten isolated artefacts. Of these sites, one is located within the current study area (AHIMS #45-5-0756), and seven are within 200m of the current study area (AHIMS #45-5-0751, #45-5-0752, #45-5-0753, #45-5-0754, #45-5-0757, #45-5-0760 and #45-5-0761). These sites recorded 106 artefacts, and the materials observed included silcrete, chert, mudstone, and quartz. Tool types identified include flakes, cores, a small number of backed blades, and a pebble manuport.

Sites AHIMS #45-5-0752, #45-5-0760 and #45-5-0761 are described as being located along tributaries of Eastern Creek. These creeks do not appear on current maps, though the unnamed tributary extending west from Eastern Creek appears to extend close to the location (~175m northeast) up to the late 1980s (Figure 11). The area to the east of Eastern Creek was noted as having very poor visibility during the survey, and therefore the results may not accurately reflect archaeological surface or subsurface Aboriginal archaeological potential.

All of these sites, with the exception of AHIMS #45-5-0751, are indicated as still present in the landscape. As the assessment indicated that construction of the raceway would result in the destruction of these sites, salvage was recommended for some of the sites identified.

Horsley Road Deviation, Eastern Creek (Rich 1989)

Previously recorded sites EC1 (AHIMS #45-5-0761) and EC9 (#45-5-0751) were identified as partially destroyed, and a further three sites were identified during this survey (AHIMS #45-5-0750, #45-5-0751, and #45-5-0752). Two of these sites are within 200m of the current survey area (AHIMS #45-5-0751 and #45-5-0752). AHIMS #45-5-0751 and #45-5-0750 were identified as destroyed as part of the Grand Prix Circuit complex development, which is not reflected in the AHIMS database.

All newly identified sites are located on the present day Ferrers Road, within <150m from the unnamed tributary to the east of Eastern Creek. The assemblages comprise of 24 artefacts of silcrete, chert, mudstone and quartzite; no formal tool types were identified, aside from one core. Two artefacts showed signs of usewear. Present day aerials suggest these sites have been destroyed or otherwise adversely impacted by the development of the Eastern Creek Motorsports Park.

M4 Motorway Upgrade between Parramatta and Mays Hill and Prospect and Emu Plains (Helen Brayshaw Heritage Consultants 1996)

Part of the study area for this assessment include the north edge of the current study area, that which forms the road corridor of the M4. The work noted severe prior disturbance

associated with road construction activities along the entire M4 road corridor, though no precise extent was given for the disturbance.

The study identified one site within 50m of the current study area. AHIMS #45-5-1066 comprises 11 artefacts of silcrete, chert and mudstone, 80-160m east of Eastern Creek. This site was assessed as having very limited subsurface potential due to its proximity to a raised bridge associated with the M4, and the construction activities associated with the bridge, though the broader area around Eastern Creek was assessed as having moderate archaeological potential.

Eastern Creek Waste Management Facility (Navin Officer Heritage Consultants 2000 and 2001)

These reports document the Aboriginal archaeological assessment, and subsequent testing program, of the expansion works associated with the Eastern Creek Waste Management Centre. The survey works encompassed portions of Lot 12 & 13 DP 1049029, Lot 1 DP 1073820, Lot 2 DP 1041745, Lot 1 DP 1073820, Lot 20 & 21 DP 1205425, and Lot 1 DP 1077822. The subsurface testing works were comprised of 16 test pits within an approximately 450m x 30m study area, located on the east and west banks of Eastern Creek (Lot 20 DP 1205425, Lot 1 DP 1073820).

The initial investigation identified two Aboriginal sites (artefact scatters) and six isolated artefacts; the secondary subsurface testing phase recovered an additional 66 artefacts. Surface density of the study area was not calculated, presumably due to the low rate of surface finds, and subsurface density was calculated as 6.3/m². However, distribution patterning was noted as varied between the east and west banks of the creek. To the west, densities were highest in areas of higher elevation approximately 110m from the creek line. To the east, densities were highest 15m from the creek line, on the terrace plain. Material types included silcrete, chert and quartz and comprised predominately of flakes and flake pieces.

Wonderland Business Park Development (Dominic Steele Consulting Archaeology 2002 and 2003)

These reports document the initial Aboriginal archaeological assessment of ~40ha of land at the corner of Wallgrove Rd and the M4 Western Motorway, and subsequent testing program, which covered an area of approximately 850m x 400m and comprised 20 test pits.

The initial investigations relocated four of six previously recorded Aboriginal sites in the area, and one possible scarred tree. Three isolated finds previously recorded within the study area could not be relocated during the survey. A surface density was calculated at 0.0001/m² for the study area. During the testing phase, a total of 38 artefacts were identified, which was averaged as a sub-surface density of 0.25/m². Of these artefacts, eight were identified as confirmed stone tools, one ground axe fragment, and 29 were identified as manuports (raw material with no evidence of being worked). Material types comprised of silcrete, quartz, tuff and volcanic rock.

Sydney Zoo Bungarribee Precinct (Artefact Heritage 2015 - 2016)

Artefact Heritage undertook archaeological survey and test excavation in advance of the proposed development of Sydney Zoo, as part of a State Significant Development (SSD). A total of five Aboriginal archaeological sites (#45-5-0455, #45-5-0465, #45-5-4433, #45-5-4772 and #45-5-4771) and one area of potential archaeological deposit (SZ PAD01) were identified during the archaeological assessment. The five archaeological sites comprise low density artefact scatters of predominantly silcrete material, located on elevated landforms overlooking Eastern Creek. One site was identified on an existing access track where ground surface visibility was high. The assessment found that these sites had low archaeological significance and limited research potential; and recommended that no further archaeological investigation or mitigation was required as part of the proposed development. Instead, it recommended that the Aboriginal archaeological and cultural resource of the site be managed through the development of a Construction Environment Management Plan (CEMP) and unexpected finds procedure during construction works.

Bungarribee Tourism Hub (AHMS 2015, Extent Heritage 2018)

Extent Heritage undertook archaeological survey (then, as AHMS 2015) and archaeological testing in advance of the proposed development of the Bungarribee Tourism Hub. The assessment identified six Aboriginal sites within the study area (#45-5-0453, #45-50469, #45-5-4308, BBH-AS1, OTC/9, PAD WSP/01) One additional unregistered artefact scatter (OCT/10) was located only 11m outside the study area but likely extended into the curtilage. A program of archaeological excavation was implemented to characterise the nature, distribution and significance of the Aboriginal archaeological and cultural resource of the site.

The excavations recovered 39 Aboriginal objects from 24 of the excavated test pits, at an average artefact density of ~1.9/m². Fifty-nine of the test pits also contained naturally fractured silcrete pieces. The findings of the test excavation indicate that this area was not likely a focal point for Aboriginal people in the past, and was rather more likely used ephemerally or transiently. The study area was considered to have low research potential and low archaeological significance.

The report recommended that an Aboriginal Cultural Heritage Management Plan (ACHMP) be developed for the study area to provide protocols, procedures and tasks to manage the cultural resource prior to, during and post development works.

5.4 AHIMS Data

The Aboriginal Heritage Information Management System (AHIMS) database is managed by OEH, and includes all spatial and compositional information of Aboriginal objects and sites previously recorded and registered, through academic and cultural resource management (see Appendix 3-1 for further explanation of site types).

An extensive search of the OEH AHIMS database was carried out on 17 July 2018 (AHIMS Search ID # 358029) (Appendix 3-2). There are 72 registered Aboriginal sites within a 1km radius of the study area; six of these are duplicate records, bringing the total site number

down to 66. In addition, one site (AHIMS #45-5-3779) was recommended to be listed as “not a site” due to confirmed high levels of subsurface disturbance. Another site (AHIMS #45-5-3434) is registered within 500m of Paramatta River; as the study area is over 12km away from Paramatta River, this site is also excluded from this discussion. All further discussion will be based on the amended total of 64 sites, though these sites are included in Figure 18. Site types include artefact scatters, potential archaeological deposits (PADs), modified (carved or scarred) trees, and art (pigment or engraved) sites.

Regarding site distribution, identified sites in the area appear to be closely aligned with regional development. As described above, Aboriginal site patterning in the Cumberland Plain is normally described as being strongly influenced by proximity to water and areas elevated above the local landscape. Proximity to water is suggested to reflect past Aboriginal preference for locations with reliable fresh water and also good surface visibility along watercourses. The PADs registered in this area seem to follow this trend, as all four are situated within 200m of Erskine Creek, with three sites located within 100m. Kohen (1986a) also suggested that proximity to elevated areas was a particularly important factor for intensively occupied locations.

In the case of the sites identified in this search area, neither pattern holds strongly. Only 13 (20%) sites are within 100m of a watercourse, while 21 (32%) of the sites are more than 500m from a watercourse. In Kohen’s study, 65% of sites were within 100m of a watercourse and 8% were more than 500m from a watercourse. Nor are the majority of sites in close proximity to ridgelines or hilltops. Only 4 (6%) of the sites are within 200m of a ridgeline, spur, crest or hilltop, and over half the sites (54, or 83%) are farther than 500m from these topographical features. However, when assessed against the criteria outlined in White and McDonald’s (2010) study, the sites within the search area sit more comfortably. White and McDonald show that sites are more likely to be situated on terraces or lower slopes, of which the search area primarily comprises (White and McDonald 2010: 36).

Notably, the site cards for AHIMS #45-5-2564 and AHIMS #45-5-2565 note a Potential Archaeological Deposit (PAD) zone that encompasses Eastern Creek, Reedy Creek, and Erskine Creek within the study area (Figure 16). No associated report was lodged with these site cards. However, this PAD was presumably noted due to the confluence of creeks in the area.

Table 4. Aboriginal sites in the vicinity of the study area summarised by site feature.

Site Feature	# of Instances	% of Total
Artefact	56	87.50
Potential Archaeological Deposit (PAD)	4	6.25
Modified Tree (Carved or Scared)	2	3.13
Art (Pigment or Engraved)	1	1.56
Potential Archaeological Deposit (PAD), Artefact	1	1.56
Total	64	100.00

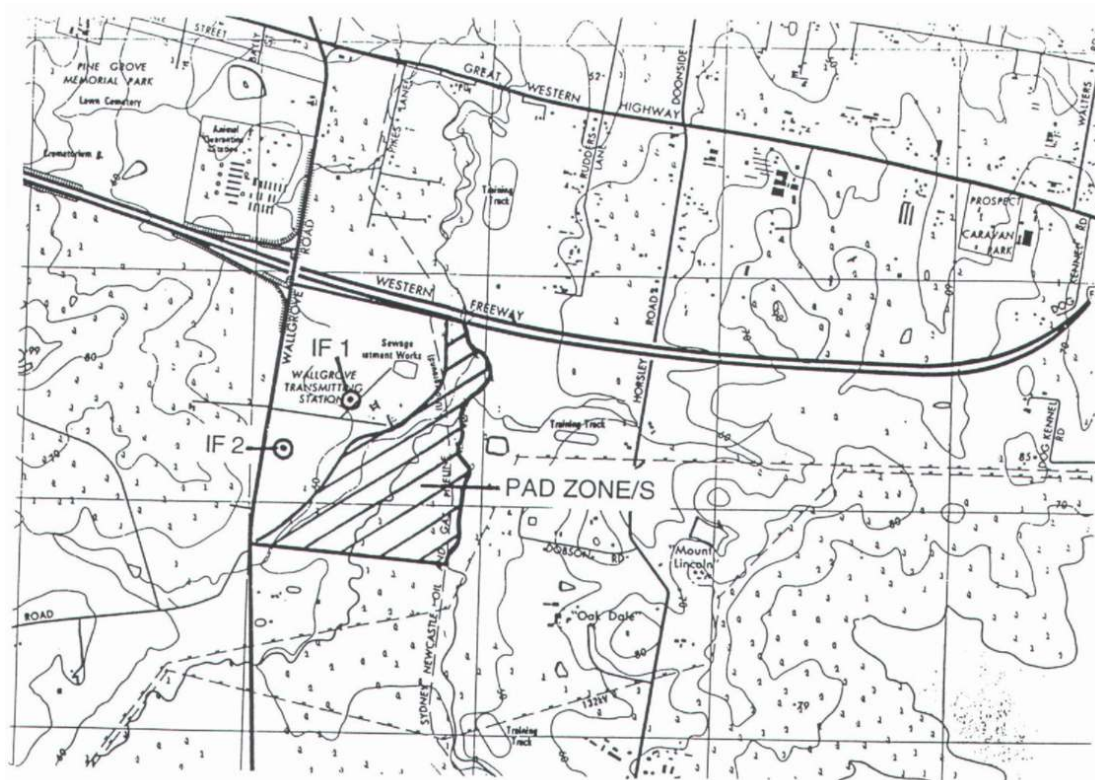


Figure 16. Area of Potential Archaeological Deposit (PAD), identified by Navin Officer (1999) and submitted with the site card for #45-5-2564 (IF1) and #45-5-2565 (IF2) (hatched).

5.5 Predictive Model

Archaeological predictive models identify, locate and map where archaeological resources are likely to survive. They can apply to small single sites or large areas, and can be simple exercises or enhanced by the use of specially designed GIS based spatial models. The model for the study area is shown in Figure 20, and is based on series of environmental and archaeological variables:

- ♦ **Areas of very high potential:** the model identifies a corridor of very high archaeological potential within relatively undisturbed and/or partially cleared areas within 200m of Eastern Creek. As a major fourth-order creekline, this watercourse would have been considered the primary water-gathering resource in the area; and deposits along its banks have been shown elsewhere to contain significant Aboriginal archaeological deposits of high complexity, and are of a high density. Stands of vegetation within this corridor appear not to have been cleared throughout the historic period and may retain evidence for Aboriginal cultural modification and/or scarring.
- ♦ **Areas of high potential:** the model identifies a corridor of high archaeological potential within relatively undisturbed but mostly cleared areas within 200m of Reedy Creek. As a third-order creekline, this watercourse would have formed a secondary water-gathering resource in the area, and one artefact scatter has previously been registered within this area on the AHIMS database (#45-5-0756).

- ♦ **Areas of moderate potential:** areas of moderate potential are associated with partially cleared land within 200m of Eskdale Creek and another unnamed first-order tributary off Eastern Creek.
- ♦ **Areas of low potential:** areas of low potential are associated with land that is not within 200m of any major or minor watercourse, or has been subjected to previous disturbance. These areas are located on slightly elevated landforms.

The results of previous investigations and predictive modelling in the region suggest that there is likely to be some site patterning across the study area. Certain landforms and locations are likely to have been favoured for occupation and are therefore likely to retain higher densities of artefacts; in particular lower slope and terrace landforms, and areas near confluences of watercourses where good access to water was provided. Within these areas, discrete high density deposits may be present, possibly associated with micro-landforms. In contrast, near low order streams and drainage lines there are usually fewer sites and those sites that are present tend to have lower artefact densities.

The cultural assemblages recovered from sites in proximity to higher order streams and drainage lines tend to show evidence of both a variety of tool types and repeated occupation over time. Some of these high-density sites show evidence of knapping activities, which occur during the manufacture of stone tools. In contrast, the cultural assemblages from sites near low order drainage lines are less varied (as well as fewer in number) and appear to indicate more transient and casual occupation. However, low-density artefact scatters have been found on the surface of all landforms, including creek banks, creek terraces, flats, elevated spurs, crests ridge tops and lower and upper slopes. These results are indicative of a 'background scatter' of occupation occurring across the region with sporadic areas of intensive or repeat usage.

Analysis indicates that local availability of stone raw materials is also a key factor in Aboriginal occupation and site distribution. Plumpton Ridge, one of the most important silcrete quarries in the region, is approximately 8km north of the study area and would have been easily accessed for raw materials.

In summary, the Aboriginal archaeological resource that is considered likely to be present within the study area consists of stone artefacts, present on the ground surface and also within subsurface archaeological deposits. There is some possibility for the presence of mature trees with cultural scarring along drainage channels where pre-contact/remnant vegetation has not been entirely removed.

Table 5. Previously recorded sites within and in close proximity to the study area.

Site ID	Site Name	Datum	Easting	Northing	Site Type	Description	Reference	Comments
45-5-2565	IF2	AGD 1966	301200	6257240	Isolated find	An isolated white chert flake on the eroded edge of a minor drainage line in the area to the west of the ex-RAAF transmitting station.	Navin Officer (1999)	Note: report not available through AHIMS database
45-5-2564	IF1	AGD 1966	301450	6257430	Isolated find	An isolated red-brown silcrete flake exposed in a dirt track just west of the ex-RAAF transmitting station.	Navin Officer (1999)	Note: report not available through AHIMS database
Not registered	PAD (associated with 45-5-2564 and 45-5-2656)	-	-	-	Potential Archaeological Deposit	An area of potential archaeological deposit that encompasses the alluvial flats and creek corridor(s) of Eastern Creek, Reedy Creek, and Erskine Creek. Previous archaeological work on Cumberland Plain provides evidence of very high potential for such landforms to exhibit localised concentrations of subsurface archaeological material.	Navin Officer (1999)	Note: report not available through AHIMS database
45-5-0756	EC6 (Eastern Creek)	AGD 1966	302070	6257300	Artefact scatter	35 artefacts located on two dam walls in the south east of the study area. Majority of the artefacts recorded were silcrete with some chert.	Crew (1989)	Strong likelihood of additional artefacts with further investigation.
45-5-3264	WSP17	GDA 1994	302412	6257853	Artefact scatter	8 artefacts located along a dirt track (20 x 20m) in the north east of the study area immediately adjacent to M4. 200m west of Eastern Creek on a hill slope. Surrounding area quite disturbed with clay, ploughing, animal grazing and dams.	JMCHM (2006)	
45-5-1066	Eastern Creek 1	GDA 1994	302060	6257750	Artefact scatter	11 artefacts were recorded, 9 silcrete, 1 chert and 1 indurated mudstone. The artefacts were found in exposures either side of the drainage line <100m from creek. Very disturbed	Brayshaw and Haglund (1996)	Site destroyed in accordance with AHIP C0002113 (KNC 2017)
45-5-0751	EC 11	AGD 1966	302290	6257550	Artefact scatter	Ten artefacts (nine silcrete and one indurated mudstone) found in a 3 x 3m area, on a haul road immediately adjacent to study area and on a flat rise adjacent to Eastern Creek tributary.	Rich (1989)	Site recorded as being destroyed

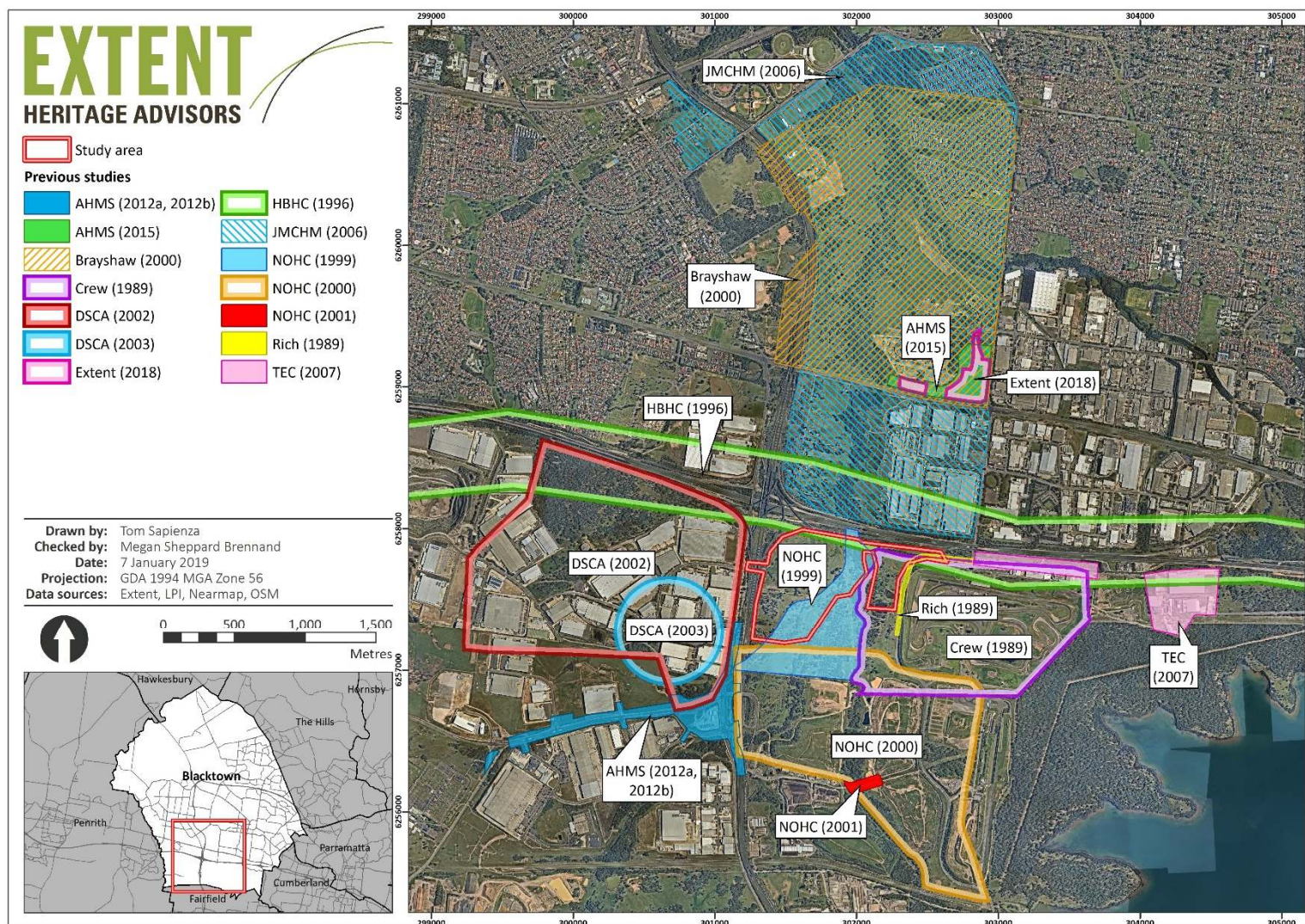


Figure 17. Previous studies undertaken in the vicinity of the study area.

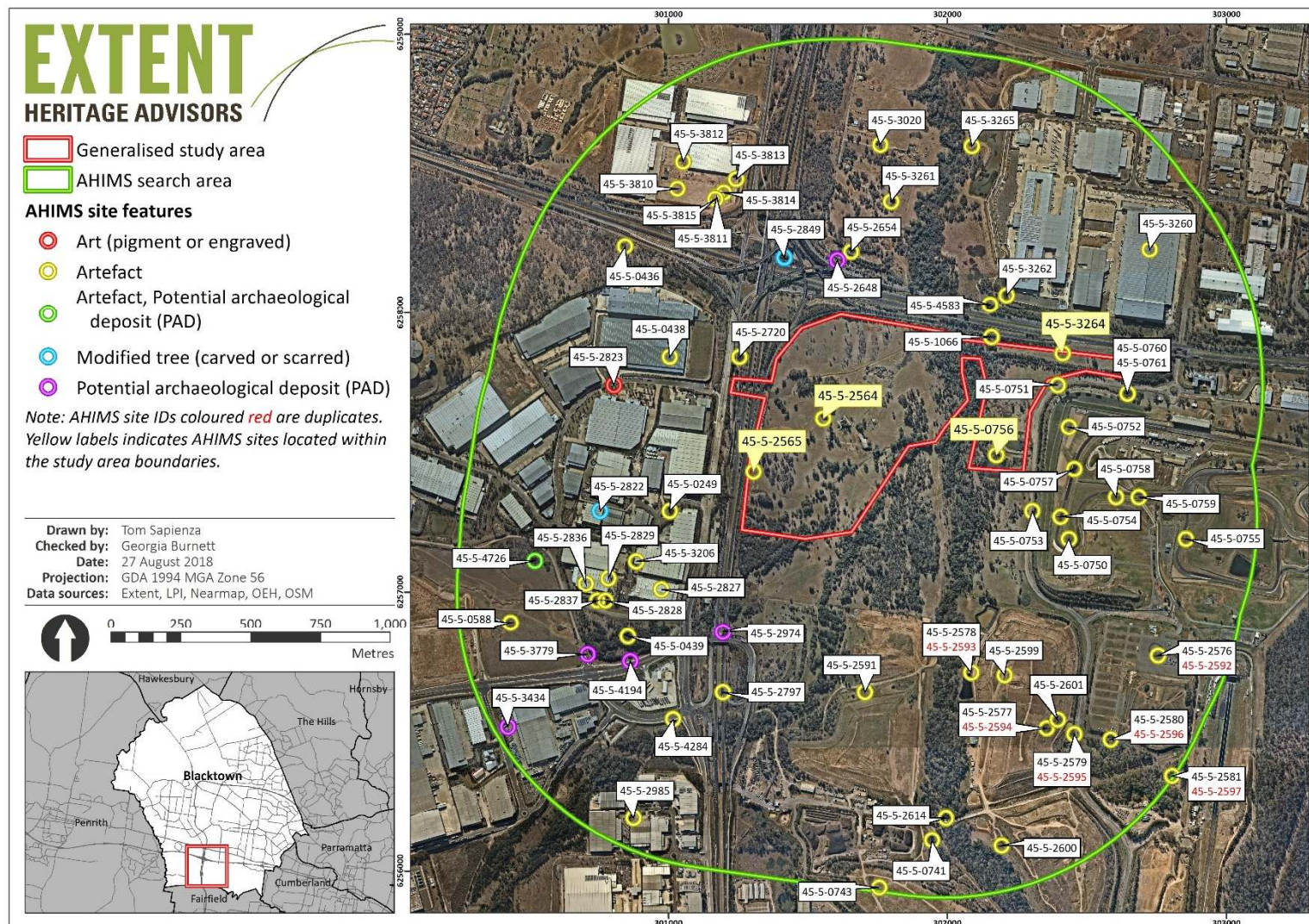


Figure 18. The study area showing registered AHIMS sites within 1km² radius, and displaying the range of site types in the nearby area.

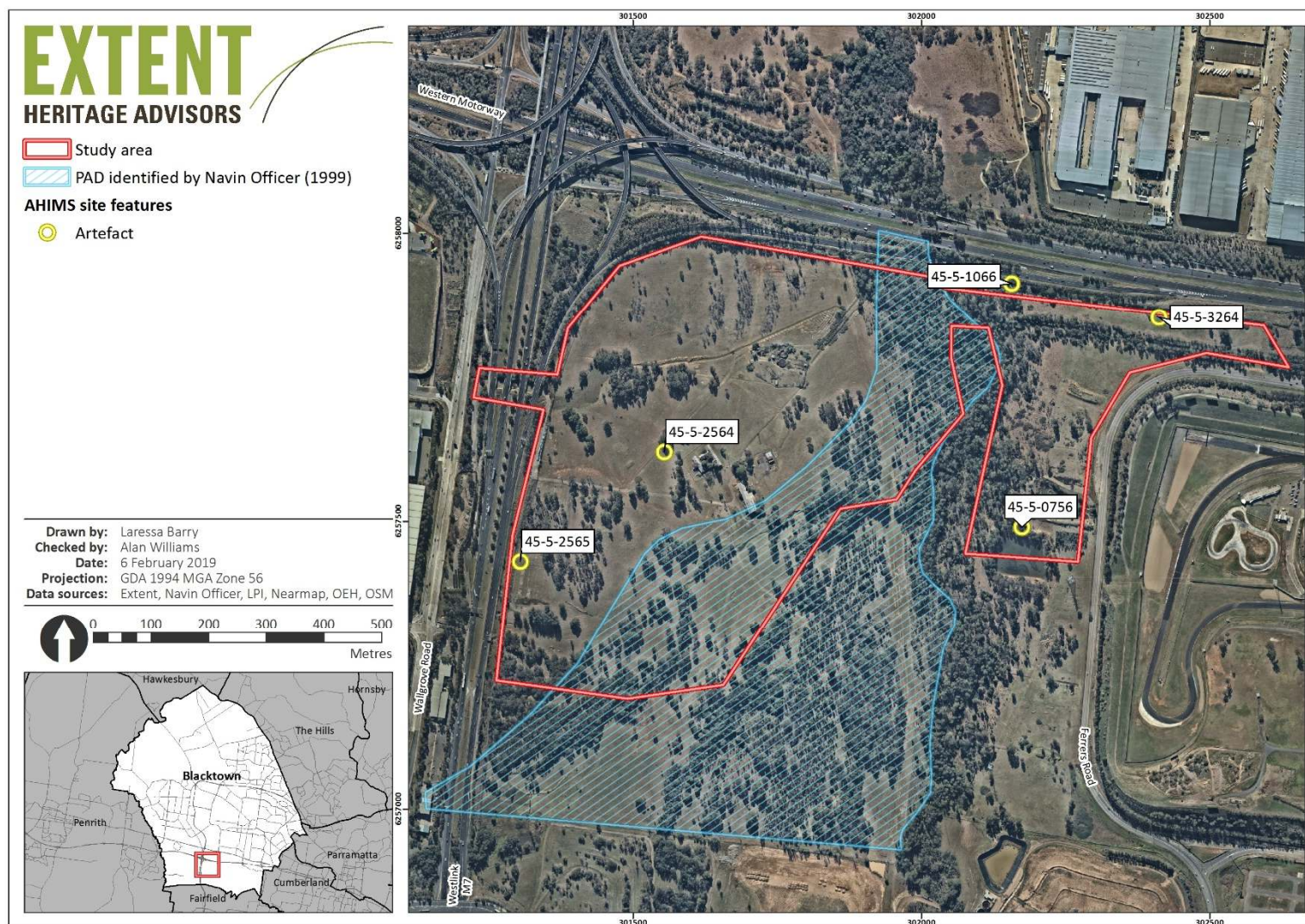


Figure 19. The study area showing AHIMS sites within and near the study area, and the PAD identified by Navin Officer (1999).

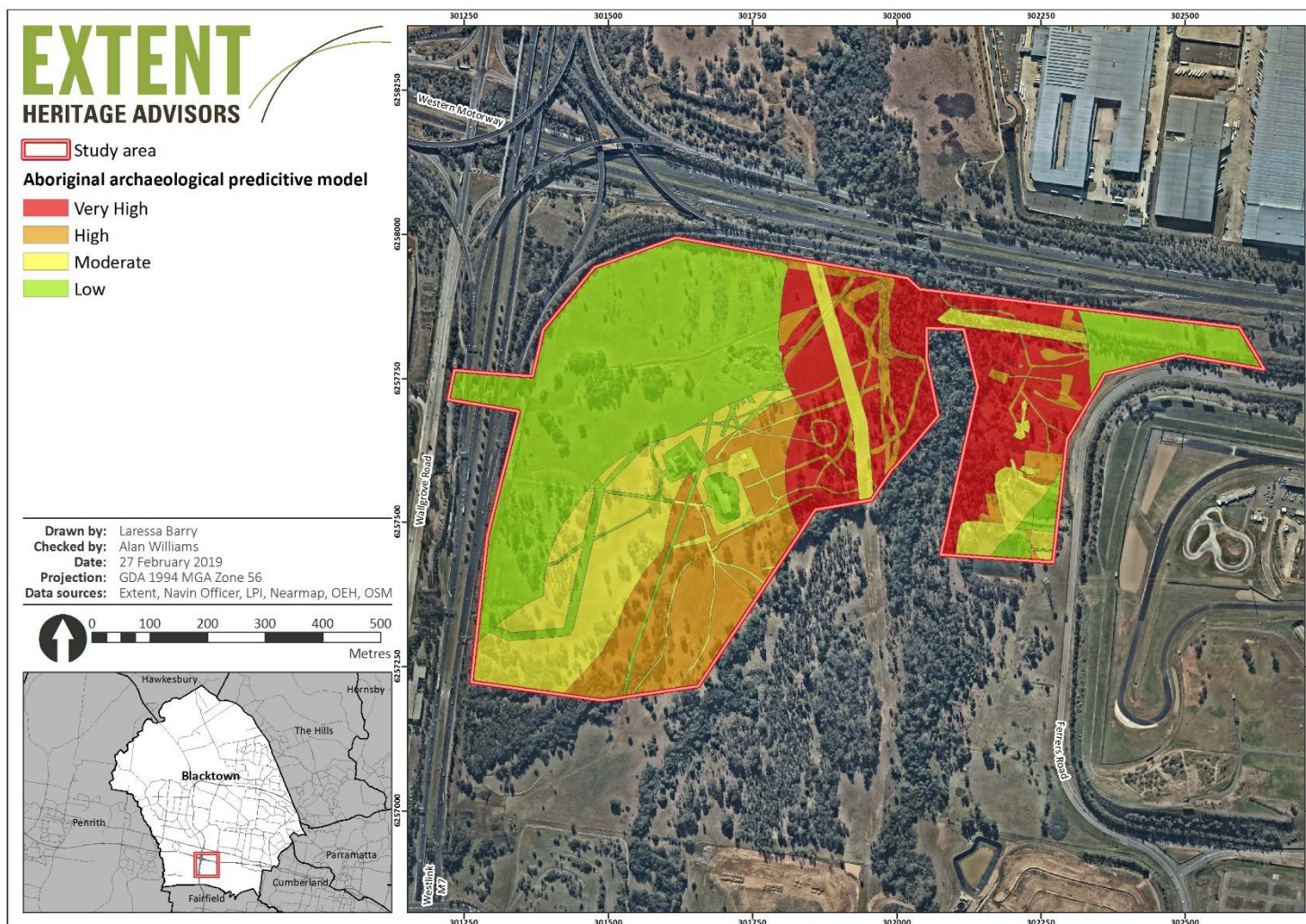


Figure 20. Predictive model of Aboriginal archaeological potential for the study area, based on historical disturbance, regional site distribution models and registered sites in the region.

6. Field Investigation

6.1 Key Findings

- ♦ Survey resulted in identification of six Aboriginal archaeological sites within the study area. This includes three artefact scatters with associated Potential Archaeological Deposit (PAD) ('LIBH AS2', 45-5-3264 and 45-5-0756), one surface artefact scatter ('LIBH AS1'), and two isolated finds (45-5-2564 and 45-5-2565).
- ♦ Two additional artefact scatters with PAD ('LIBH AS3' and 45-5-1066) were identified outside of the study area boundary. However, both sites are located on creek flat/terrace landform contexts that extend within the study area boundary, and which have the potential to contain deposits with cultural material.
- ♦ The north western and eastern portions of the study area have been subjected to disturbance from historical development and cattle grazing, whereby erosion of Blacktown soil landscape topsoils onto basal clays has occurred. This has not completely removed the potential for cultural material to have been left behind on the clay surface, and the presence of isolated finds and scatters within the western portion of the site confirms this.
- ♦ Very little mature native vegetation remains within the study area, and most of the vegetation present is recent regrowth. This excludes small stands of mature eucalypts amongst dense, impenetrable vegetation along the banks of Eastern Creek and Eskdale Creek, and which have the potential for culturally modified trees.
- ♦ Ground surface visibility across the study area is generally low, being almost entirely limited to unsurfaced vehicle and cattle tracks, dam walls and creek bed sections, and it is therefore unlikely that all archaeological sites within the study area have been identified.

6.2 Approach and Methods

The results of the background and desktop research, as outlined above and presented in the predictive model, indicated that much of the study area was of moderate to very high archaeological potential. Some areas were identified as having low potential, either because historical ground disturbance was likely to have resulted in substantial damage to previous archaeological deposits, or because a greater distance from water indicated that these locations would have been less favoured for occupation. Only small and discontinuous parts of the study area have been subjected to archaeological investigation.

An archaeological survey was therefore undertaken with the following aims:

- ♦ Verify the desktop assessment outlined in preceding sections.
- ♦ Identify any extant Aboriginal objects or sites present within the study area through visual observation.

- ♦ Identify any potential deposits or landforms of archaeological interest that may be present within the study area.
- ♦ Identify evidence of previous and existing disturbance that may have had a detrimental impact to any Aboriginal objects that may have been present.
- ♦ Discuss and identify firsthand any cultural values of the study area with the Aboriginal stakeholders.

The survey was undertaken in accordance with Requirement 5 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010). It was undertaken on 17th January 2019 by the following archaeological and RAP representatives:

Table 6. Representatives who participated in the survey.

Organisation	Representative
Deerubbin Local Aboriginal Land Council	Steven Randall
Widescope Indigenous Group	Steven Hickey
Kamilaroi-Yankuntjatjara Working Group	Stefanie Khan
Butucarbin Aboriginal Corporation	Lowanna Gibson Jack Gibson
Extent Heritage	Fenella Atkinson Rebekah Hawkins Megan Sheppard Brennand Lorna Cooper

The survey methodology involved the field team traversing the entire study area, which was characterised by lower slopes, creek flats and creek bed landforms. Priority was given to areas predicted to have very high, high and moderate archaeological sensitivity (elevated terraces and creek flats above creek lines), registered AHIMS sites within and on the margins of the study area, and areas containing exposed soils. Any areas of good ground surface exposure were examined for archaeological evidence such as stone artefact scatters or isolated finds, and areas containing old growth vegetation were examined for evidence of Aboriginal cultural modification. Where identified, cuttings and soils in sections were also examined to document landscape configuration, soil profiles, soil disturbance, erosion and potential for subsurface archaeological deposits. During the survey, detailed field notes, GPS coordinates and photographs were taken to document landform units, soil profiles, ground surface visibility and vegetation types. Aboriginal sites, when located, were recorded in a notebook with coordinates and photographs taken. Where stone artefacts were present, measurements of length, width and thickness were taken, along with observations of the artefact morphology.

6.3 Survey Results

The study area was divided into three survey units based on landform context for the purposes of reporting. Detailed descriptions of the survey units are included in Table 7 and Figure 21.

The first survey unit (Unit 1) comprises low slopes along the western and eastern margins of the study area adjacent to the M7 Motorway, the Light Horse Interchange, and Ferrers Road. These areas are typically undeveloped, partially cleared grazing land with scattered residential structures closer to the M7 Motorway. Elevations here are above ~47m Australian Height Datum (AHD).

The second unit (Unit 2) comprises creek flats and terraces associated with Eastern Creek, Reedy Creek, Eskdale Creek and their tributaries. These areas are also partially cleared, though stands of vegetation exist along the riparian corridors of these watercourses; the densest of which are preserved along Eastern Creek.

The third unit (Unit 3) comprises the creek beds of Eastern Creek, Reedy Creek, Eskdale Creek and their tributaries. A small portion of Unit 3 within 30m either side of Eastern Creek could not be surveyed due to impenetrably thick vegetation, and it was not possible to cross the creek at those parts of the Creekline that passed through the study area.

Table 7. Archaeological survey unit descriptions for the study area.

Survey Unit	Landform Description	Survey Unit Area (m ²)	Visibility (%)	Exposure (%)	Effective Coverage Area (m ²)	Effective Coverage (%)
1	Lower slopes generally comprising grassy areas and open paddocks; at elevations of above ~47m AHD.	243,398	20	10	4,868	2
2	Creek flats and elevated terraces above Eastern, Reedy and Eskdale Creeks	306,227	15	10	4,594	1.5
3	Creek beds of Eastern, Reedy and Eskdale Creeks	11,835	10	15	178	1.5
Average		187,153	15	12	3,213	1.67
Total		561,460			9,640	5

The study area encompasses a total area of 561,460m² within the suburb of Eastern Creek. Topographically, the study area can be defined by gently sloping land in the west, towards relatively flatter and more heavily vegetated creeklines which bisect the study area. The most elevated part of the study area, located along the north-western boundary, affords only limited landscape views over the lower-lying watercourses.

Survey unit 1 is characterised by a series of open paddocks with low grasses (Plate 1 and Plate 2). The western portion of the survey unit is dotted with fenceposts, disused buildings associated with the former Wallgrove Army Camp, concrete roads and dirt tracks, and stormwater/sewerage and electrical infrastructure (Plate 3 to Plate 7). The eastern portion has

been almost entirely cleared apart from a linear corridor along a manufactured drainage line (Plate 8); though historical photographs of the study area confirm these are recent plantings. Ground surface exposures within unit 1, primarily along dirt tracks and within stockpiled sediment, revealed a compacted and heavily eroded soil profile onto clay, with occasional ironstone and manganese gravels within the north western and eastern portions of the study area (Plate 9 and Plate 10). This eroded profile is characteristic of soils of the Blacktown soil landscape, which comprise thin topsoils that are easily susceptible to erosion as a result of livestock grazing, and which leave an exposed clay subsoil. This has not completely removed the potential for cultural material to have been left behind on the clay surface, however, and the presence of isolated finds and scatters within the western portion of the site confirms this.

Survey unit 2 is characterised by relatively flat open paddocks, with isolated stands of mature trees along drainage lines and within swampy waterlogged areas, as well as two large dams with earthen embankments in the eastern portion of the study area (Plate 11 to Plate 13). Several structures exist across this unit in various stages of dilapidation, including structures associated with the former sewerage treatment works and the transmitting station (Plate 14). A 30m-wide gas pipeline corridor bisects survey unit 2, running approximately north-south. Ground surface exposures within unit 2, along dirt tracks and amongst stands of trees, revealed a fine, powdery silty topsoil remaining within ~30m of Eskdale and Reedy Creeks, and is characteristic of soils of the South Creek soil landscape (Plate 15).

Survey unit 3 is characterised by the incised channels of Eastern Creek, Eskdale Creek and Reedy Creek, and their unnamed tributaries and ephemeral drainage line. These watercourses have been subjected to varying levels of disturbance over the historical period. Eastern, Reedy and Eskdale Creeks have been subject to minimal disturbance, with almost impenetrable dense vegetation present within ~50m on either side of Eastern Creek, and a dark brown silty topsoil remaining within ~30m of Eskdale and Reedy Creeks (Plate 16). Comparatively, a former tributary of Eastern Creek in the eastern portion of the study area has been converted into two vast dams; while in the western portion of the study area a tributary of Eastern Creek has been channelised near the sewerage treatment works (Plate 17).

Very little mature native vegetation remains within the study area, and most of the vegetation present is recent regrowth. This excludes small stands of mature eucalypts amongst dense, impenetrable vegetation along the banks of Eastern Creek and Eskdale Creek.

Ground surface visibility was low, being almost entirely limited to unsurfaced vehicle and cattle tracks, dam walls and creek bed sections. All of the identified Aboriginal archaeological sites were found in these areas of exposure. This is consistent with the results of previous archaeological surveys that have extended into the study area and the broader Eastern Creek area.

6.3.1 Aboriginal sites identified

In conjunction with the results of the desktop research, the survey resulted in the identification of six Aboriginal archaeological sites within the study area. These six sites are made up of three artefact scatters with associated Potential Archaeological Deposit (PAD) ('LIBH AS2' 45-5-5185, 45-5-3264 and 45-5-0756), one surface artefact scatter ('LIBH AS1' 45-5-5183), and

two isolated finds (45-5-2564 and 45-5-2565). Two additional artefact scatters with PAD ('LIBH AS3' 45-5-5184 and 45-5-1066) were identified outside of the study area boundary. However, both sites are located on creek flat/terrace landform contexts that extend to within the study area boundary, and which have the potential to contain deposits with cultural material. This leaves a total of eight Aboriginal sites, all of which comprise flaked stone artefacts located on the ground surface, with five having the potential to retain subsurface, albeit shallow, archaeological deposit (Table 8 and Figure 22).

The survey resulted in the identification of three previously unrecorded Aboriginal archaeological sites, of which one, an artefact scatter and PAD ('LIBH AS3' 45-5-5184), is located outside of the study area. Of the remaining five previously recorded sites, three could not be relocated during the survey (45-5-2564, 45-5-3264 and 45-5-1066 - the latter being the other remaining artefact scatter and PAD site outside of the study area). However, no evidence was found to indicate that these three sites had been destroyed or removed, with the exception of that part of registered AHIMS site #45-5-1066 within the M4 Motorway construction footprint, for which an AHIP for destruction has been granted.

Of the eight identified Aboriginal sites, four are located on lower slope landform contexts (Unit 1), while the remaining four are located with creek flat/terrace landform contexts (Unit 2). Most were small scatters (n=5) or isolated finds (n=2). There was only one large artefact scatter; AHIMS site #45-5-0756 (EC6 (Eastern Creek)), in Survey unit 2, which contained at least 35 artefacts in a heavily disturbed context.

Survey Unit 1

Four sites were identified in Survey unit 1, comprising three previously identified sites and one newly identified site:

- ◆ 45-5-2565 (IF2). This site comprises an isolated chert flake, located along western fence line and within long grass, on the eroded edge of a minor drainage line (Plate 18 and Plate 19). The condition of the site appeared to be similar to the condition recorded in the site card.
- ◆ 45-5-5183 (LIBH AS1). This site comprised a surface artefact scatter of three silcrete artefacts, located in an exposure some 10m south of the asphalt road leading to the transmission station. It was identified on the ground surface in an area of significant ground surface exposure beneath existing trees which appeared to have been subject to previous disturbance, due to erosion (Plate 20). The artefacts were observed within an eroded silty soil profile, that was characterised by frequent manganese and ironstone gravels onto basal clays, and is unlikely to contain subsurface deposits (Plate 21).
- ◆ 45-5-2564 (IF1). This site comprises an isolated red-brown silcrete flake, exposed in a dirt track just west of the transmitting station. The area comprises a relatively flat area covered with low grasses, and the soil profile is a pale brown sandy soil with frequent sandstone rubble (Plate 22). The site was not relocated during the survey.

- ♦ 45-5-3264 (WSP17). This site comprises eight artefacts, located within the study area on the ground surface along a dirt track at the end of Rudders Lane and adjacent to the M4 Motorway. This track is now overgrown with vegetation and ground surface visibility was very low; and therefore, the site was not relocated during the survey (Plate 23).

Survey Unit 2

Four sites were identified in Survey unit 2, consisting of two previously identified sites and two newly identified sites:

- ♦ 45-5-5185 (LIBH AS2). The site comprised two indurated mudstone/tuff/chert (IMTC) artefacts on the eastern bank of a former tributary of Eastern Creek. The artefacts were visible on the ground surface within a silty clay soil profile, in an area of exposure amongst a stand of trees and some 40m west of the gas pipeline trench (Plate 24 to Plate 26).
- ♦ 45-5-5184 (LIBH AS3). This site is a small artefact scatter within a silty clay soil profile, consisting of five silcrete and IMTC artefacts. It is located on the ground surface along the eastern bank of Reedy Creek, and visible in an area of exposure along existing vehicle tracks (Plate 27 and Plate 28). The site is located on a creek flat terrace landform, and whilst the site itself is located outside of the study area, this landform feature may extend within the study area boundary.
- ♦ 45-5-1066 (Eastern Creek 1). The site comprises an artefact scatter of 11 artefacts (9 silcrete, 1 chert and 1 IMTC), located on an artificial drainage line but formerly on the eastern bank of Eastern Creek (80m east). The site was identified on the ground surface in an area of ground surface exposure, and the site card notes the presence of natural topsoils in the area that have the potential for subsurface artefacts. The location recorded in the AHIMS database is outside the study area, and the site card notes that the scatter has been authorised for destruction due to M4 construction upgrades (AHIP C0002113). The recorded location was not inspected and the site was not relocated during the survey, though a similar landform along the eastern bank of Eastern Creek, is present within the study area, and has been subjected to minimal disturbance.
- ♦ 45-5-0756 (EC6 (Eastern Creek)). This site is a heavily disturbed artefact scatter on two adjacent dam walls, which formerly would have comprised creek flats for a tributary of Eastern Creek. A total of 35 silcrete and IMTC were recorded across two ~15m exposures, from the northern wall of the southernmost dam, and the southern wall of the northernmost dam. The site card notes that a "Consent to Destroy" permit has been issued to enable the site's destruction, however the site is unlikely to have been completely destroyed. During the current survey three silcrete artefacts were identified on the southern wall of the northernmost dam (Plate 29 and Plate 30). Artefacts that were originally recorded on the northern wall of the southernmost dam could not be relocated during the survey.

Survey Unit 3

No previously recorded or additional sites were identified within Survey Unit 3.

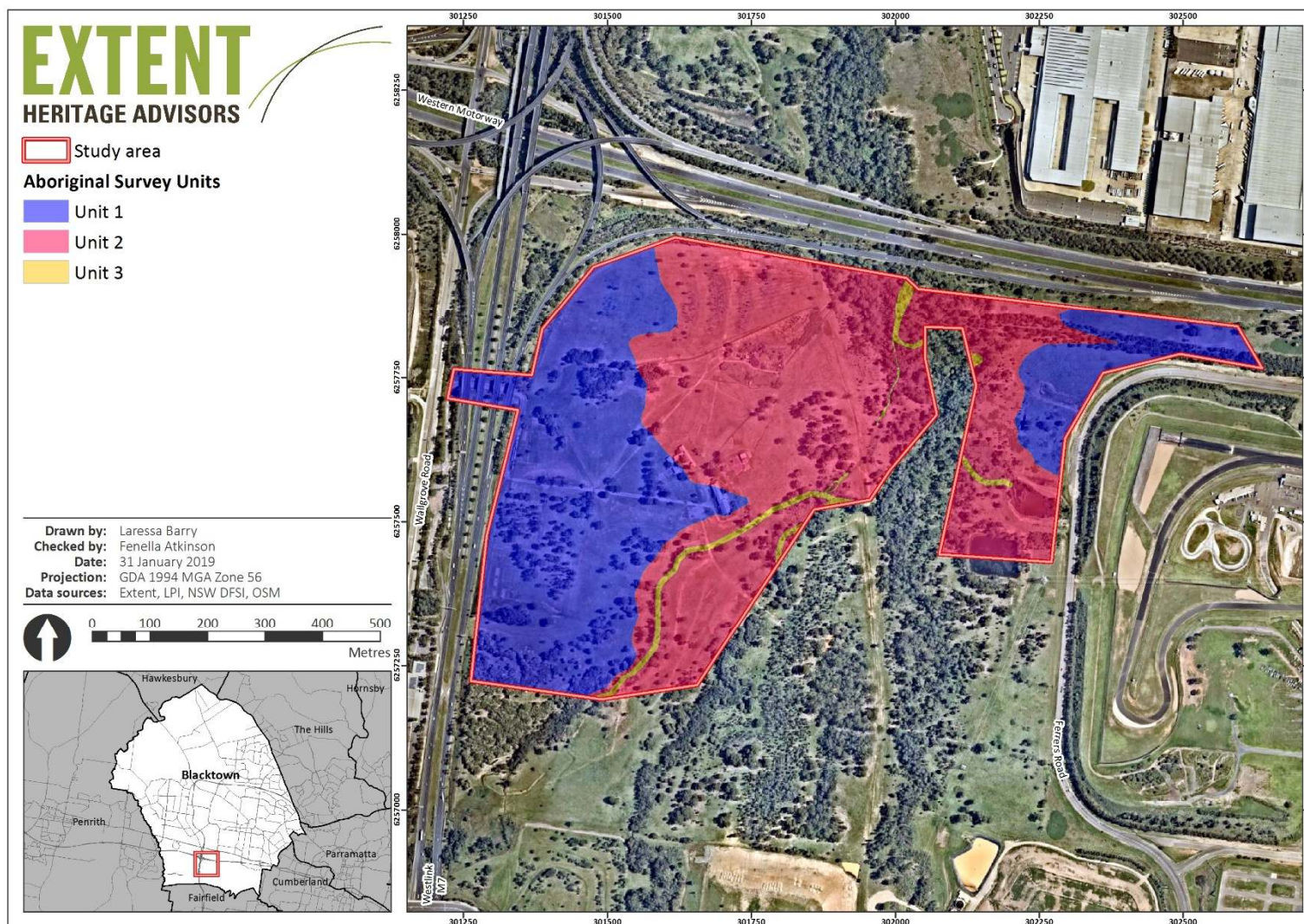


Figure 21. Survey units surveyed during the current assessment.



Plate 1. Flat, cleared land within Wallgrove Army Camp, Survey unit 1, view north.



Plate 2. Fenced paddock within Survey unit 1, view northeast.



Plate 3. Exposures along paddock fencelines, Survey unit 1, view southeast.



Plate 4. Concrete structures associated with Wallgrove Army Camp, unit 1, view east.



Plate 5. Building associated with Transmission station, Survey unit 1, view northeast.



Plate 6. Sewerage vent stack along northern site boundary, Survey unit 2, view southeast.



Plate 7. Sewerage manhole cover and disturbed clay subsoils, survey unit 2, view south.



Plate 8. Regrowth vegetation along altered drainage line along north-eastern site boundary, Survey unit 1, view south.



Plate 9. Ground surface exposures in Survey unit 1, view southeast.



Plate 10. Ground surface exposures along vehicle tracks in Survey unit 1, view north.



Plate 11. Isolated vegetation along drainage lines, Survey unit 2, view southwest.



Plate 12. Vegetation along drainage lines, Survey unit 2, view east.



Plate 13. Dam in southeastern corner of the study area, survey unit 2, view north.



Plate 14. Sewerage treatment works structures, survey unit 2, view south.



Plate 15. Ground surface exposures in survey unit 2 showing fine silty topsoil, view west.



Plate 16. Soils along Reedy Creek partially obscured by leaf litter, survey unit 3, view north.



Plate 17. Modified drainage line near sewerage treatment works, view northeast



Plate 18. Artefact (isolated find) 45-5-2565 along western boundary, survey unit 1, view south.

Table 8. Aboriginal archaeological sites identified within the study area. Note all coordinates are now given in GDA 1994/MGA Zone 56. Site locations are shown in Figure 23.

Unit	AHIMS #	Site Name	Landform Context	Co-ordinates (GDA 1994)	Site Type/ Features	Description
1	45-5-2565	IF2	Lower slope	301305 E 6257430 N	Isolated Find	Isolated chert flake measuring 17 x 12 x 4mm. Located along western fence line and within long grass, on eroded edge of a minor drainage line. The condition of the site is similar to the condition record on the site card from 1999.
1	45-5-5183	LIBH AS1	Lower slope	301494 E 6257538 N	Artefact Scatter	Artefact scatter comprising three silcrete artefacts, measuring 10x5x3mm, 20x20x10mm and 30x20x10mm. Site is located some 10m south of the former asphalt road that leads to the transmission station. The scatter is visible in an area of significant ground surface exposure beneath existing trees, within an eroded soil profile characterised by manganese and ironstone gravels onto silt and basal clays.
1	45-5-2564	IF1	Lower slope	301555 E 6257620 N	Isolated Find	Described as an isolated red-brown silcrete flake, exposed in a dirt track just west of the ex-RAAF transmitting station. The area comprises a relatively flat area covered with low grasses, and the soil profile is a pale brown sandy soil with frequent sandstone rubble The site could not be relocated but is not likely to have been destroyed.
1	45-5-3264	WSP17	Lower slope	302412 E 6257853 N	Artefact Scatter	Recorded as an artefact scatter comprising 8 artefacts, in a c.20x20m area. Located along a dirt track through horse-grazing property, at the end of Rudders Lane and adjacent to M4 Motorway. The area comprises a flat area covered with low grasses and visibility was poor; though generally the condition of the surrounding area is similar to the condition record on the site card from 2006. The site could not be relocated but is not likely to have been destroyed.
2	45-5-5185	LIBH AS2 ^{##}	Creek flat/terrace	301876 E 6257644 N	Artefact Scatter, PAD	Artefact scatter comprising two indurated mudstone/tuff/chert (IMTC) artefacts, measuring 20x20x20mm (flake) and 30x25x15mm (core). Site is located along the eastern bank of a former tributary within a stand of trees, some 40m west of the gas pipeline trench. Scatter is visible in a small area of ground surface exposure amongst trees, within a silty clay soil profile. PAD partially corresponds with the unregistered PAD identified by Navin Officer (1999).
2	45-5-5184	LIBH AS3*	Creek flat/terrace	301834 E 6257369 N	Artefact Scatter, PAD	Artefact scatter comprising five silcrete and IMTC artefacts, measuring 20x10x10mm, 10x10x5mm, 5x8x5mm, 20x10x5mm, and 15x10x5mm. The scatter is visible within exposures from existing dirt tracks that skirt the eastern bank of

Unit	AHIMS #	Site Name	Landform Context	Co-ordinates (GDA 1994)	Site Type/ Features	Description
						Reedy Creek. The is located on with the creek terrace landform, within a silty clay soil profile.
2	45-5-1066	Eastern Creek 1*	Creek flat/terrace	302157 E 6257912 N	Artefact Scatter, PAD	<p>Recorded as an artefact scatter comprising 11 artefacts (9 silcrete, 1 chert and 1 IMTC), located within very shallow topsoils (<2cm) approximately 80m east of Eastern Creek.</p> <p>The site is recorded to have been destroyed in 2016 by upgrade works for the M4 Motorway (authorised under AHIP C0002113). However, no consideration was given as to whether the site extended beyond the construction footprint, and into the study area.</p>
2	45-5-0756	EC6 (Eastern Creek)	Creek flat/terrace	302175 E 6257489 N	Artefact scatter, PAD	<p>Recorded as a heavily disturbed artefact scatter on two adjacent dam walls, which formerly would have comprised creek flats for a tributary of Eastern Creek. A total of 35 silcrete and IMTC were recorded across two ~15m exposures – the northern wall of the southernmost dam, and the southern wall of the northernmost dam.</p> <p>The site is noted as having a “Consent to Destroy” permit to enable its destruction; however the site is unlikely to have been destroyed. During survey, three silcrete artefacts measuring 20x10x5mm, 20x10x5mm and 20x20x15mm were observed in a ~25m² exposure on the southern wall of the northernmost dam.</p>

* These sites, whilst not located within the study area, are located on landforms that extend into the study area and are thus included here for consideration.

The PAD partially corresponds with the unregistered PAD associated with 45-5-2564 and 45-5-2656, and identified by Navin Officer (1999).

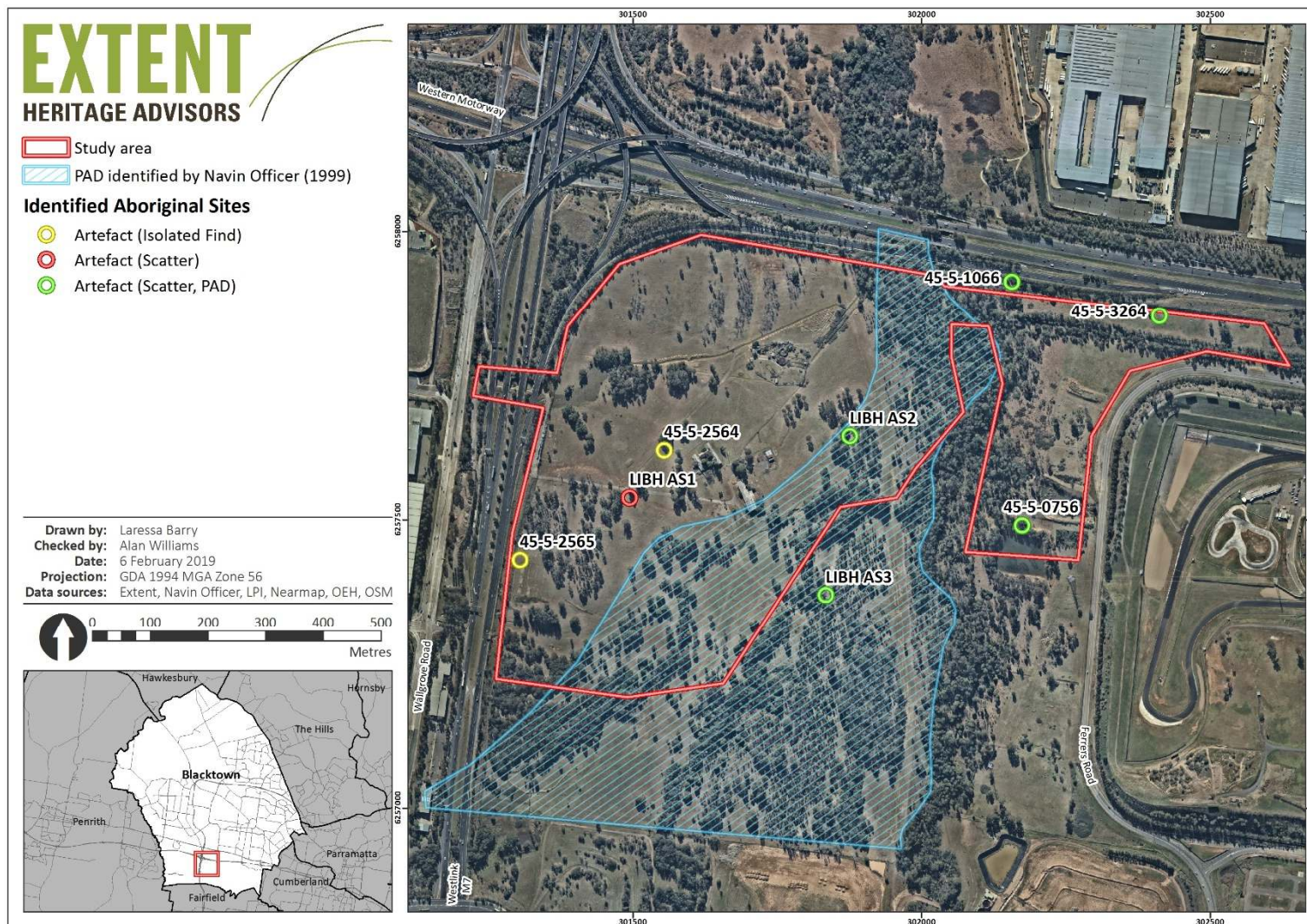


Figure 22. Previously registered and newly identified sites within the study area.



Plate 19. Detail of IMTC flake 45-5-2656.



Plate 20. Artefact scatter site 'LIBH AS1' 45-5-5183, survey unit 1, view north.



Plate 21. Detail silcrete artefact from 'LIBH AS1' 45-5-5183.



Plate 22. General location of artefact (isolated find) site 45-5-2564, survey unit 1, view southeast.



Plate 23. General location of artefact scatter site 45-5-3264, survey unit 1, view east.



Plate 24. Artefact scatter site 'LIBH AS2' 45-5-5185, survey unit 2, view north.



Plate 25. Detail artefact from 'LIBH AS2' 45-5-5185.



Plate 26. Detail IMTC core from 'LIBH AS2' 45-5-5185.



Plate 27. Artefact scatter site 'LIBH AS3' located outside of the study area, view west.



Plate 28. Detail artefacts from 'LIBH AS3' 45-5-5184.



Plate 29. Artefact scatter site 45-5-0756 along southern wall of northernmost dam, survey unit 2, view east



Plate 30. Detail silcrete artefact eroding from dam wall of 45-5-0756, survey unit 2.

7. The Archaeological Resource

7.1 Identified Archaeological Sites

The documentary research and archaeological survey resulted in the identification of six Aboriginal archaeological sites within the study area. These six sites are made up of three artefact scatters with associated Potential Archaeological Deposit (PAD) ('LIBH AS2' 45-5-5185, 45-5-3264 and 45-5-0756), one surface artefact scatter ('LIBH AS1' 45-5-5183), and two isolated finds (45-5-2564 and 45-5-2565). Two additional artefact scatters with PAD ('LIBH AS3' 45-5-5184 and 45-5-1066) are recorded close to the boundary of the study area, and the landforms upon which these sites also appear to extend within the study area. Of these eight sites, two (45-5-1066 and 45-5-0756) are documented as having been destroyed, but there remains the potential for material associated with these two sites to be present within the confines of the existing study area.

All of the identified sites comprise flaked stone artefact sites on the ground surface, with five having the potential to retain subsurface archaeological deposit. Two sites were isolated finds; and five were relatively small artefact scatters of between two and eleven objects. There was only one large artefact scatter, AHIMS site 45-5-0756 (EC6 (Eastern Creek)), recorded in a disturbed context within two dam walls in the southwestern portion of the study area, in Survey unit 2. This artefact distribution (45-5-0756) also has potential to include sub-surface artefacts, but these would likely be contained within the disturbed deposit forming two dam embankments.

The surface sites have, in general, been identified in locations that have been subject to substantial ground disturbance. That is, the identification of the sites is likely to be largely due to the presence of good ground visibility in these areas. It is therefore possible that the identified surface sites are not the result of focussed or repeated occupation but are simply visible surface expressions of a widespread low-density artefact distribution known to be present across most of the Cumberland Plain.

At this stage, with very limited sub-surface data, the identification of the sites can be used only to support the hypothesis that much of the study area has archaeological potential. However, there appears to be some patterning in site location, with most being located within 200m of third and fourth order watercourses, and on slightly elevated creek flat/ terrace landforms. This data, in conjunction with the results of the background research, suggest that more long-term and/or repeated occupation may have taken place within the study area, and that this may be represented by higher density artefact deposits in particular locations.

7.2 Areas of Archaeological Potential

The presence of surface Aboriginal objects confirms that archaeological remains of past Aboriginal occupation are present within the study area. The identified surface sites indicate that the presence of sub-surface archaeological deposits is also likely. However, the results of previous archaeological investigations on the Cumberland Plain demonstrate that the nature

and location of surface sites does not directly correlate with the nature and location of sub-surface sites.

Aboriginal occupation of the Cumberland Plain is thought to have been widespread for at least 5,000 years. This has resulted in an archaeological signature consisting of a low-density distribution of Aboriginal objects (stone tools) across most of the region. In this sense, it can be said that Aboriginal objects are likely to be present across the whole of the study area, with the exception of those discrete locations where the whole of the upper soil profile has been removed.

However, in general, mapping of archaeological sensitivity or potential relates to the possible presence of archaeological deposits with a high level of integrity and/or significant deposits relating to focussed or repeated occupation. In general, these are sites with a sub-surface archaeological deposit containing stone artefacts in densities greater than the general background distribution. Such sites can be expected within the study area, on slightly elevated and relatively flat landforms, adjacent to the watercourses and in particular at confluences.

The predictive model as presented in Section 5.5 is broadly supported by the results of the investigation undertaken for the ACHAR. The revised archaeological potential of the study area has been divided into four categories (Figure 23):

- ♦ **Low potential.** These areas are generally associated with land that is not within 200m of any watercourse, and which have been subject to substantial ground surface disturbance from development. These activities would have removed much or all of the upper soil profile, and no *in situ* archaeological material is likely to be present. However, these areas may contain archaeological evidence within disturbed contexts.
- ♦ **Moderate potential.** These areas are generally associated with land within 200m of first and second order watercourses, which may have been the subject of ephemeral or transient occupation. These areas are likely to contain archaeological evidence in the form of very low density deposits that are characteristic of the broader landscape in the southwest Cumberland Plain. Artefact densities of approximately $<2/m^2$ can be expected.
- ♦ **High potential.** These areas are likely to have been the focus of past Aboriginal occupation within the study area, and have a greater potential for the presence of higher density deposits, reflecting more frequent or long-term use. Artefact densities of approximately $5-10/m^2$ can be expected, with discrete areas of higher density, especially associated with watercourse confluences.
- ♦ **Very high potential.** These areas are in general within high potential corridors and are similarly likely to have been a focus of occupation. However, these areas are closer to Eastern Creek, where a deeper soil profile may be present. Any archaeological deposits are therefore more likely to be intact, and to provide a greater range of information about past Aboriginal land-use. Artefact densities of approximately $20-40+/m^2$ can be expected.

Archaeological test excavation would be required in order to adequately characterise and assess the nature of the archaeological resource in identified sites and in the areas with sub-surface potential.

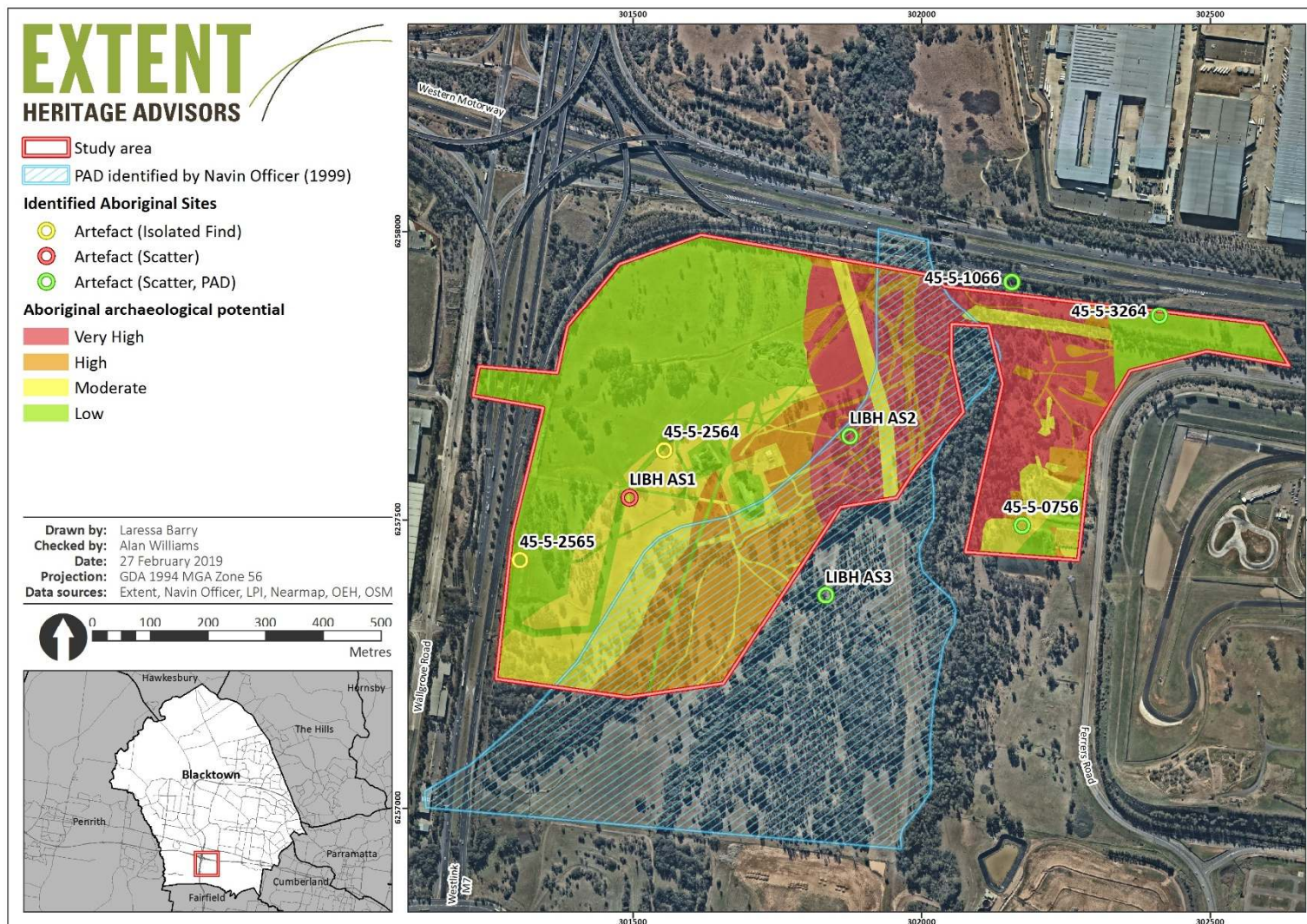


Figure 23. Aboriginal archaeological sensitivity of the study area.

8. Preliminary Significance Assessment

The management of heritage places is based on an understanding of the values of those places. The framework and criteria for significance assessment are discussed in detail in Appendix 4. OEH specifies that heritage significance should be assessed according to four criteria, as outlined in the Burra Charter; social/cultural or spiritual, historic, scientific (archaeological) and aesthetic (OEH 2011:7; Australia ICOMOS 2013). The significance of the eight sites is summarised in Table 9.

8.1 Statement of Significance

Assessment of social or cultural value is based on the views of the relevant Aboriginal community. Where previous site records have assessed social or cultural value, this has been included. In general, preliminary comments received from the RAPs over the course of the project indicate that all sites are considered to be of social/cultural significance, with particular significance being attributed to larger artefact scatters, and also to scarred trees and rock shelters (neither of the latter two of which occur within the study area). In general, comments received from the RAPs do not distinguish ranking of social/cultural significance, but 'high' has been used in Table 9 for sites that were identified as being of particular interest or importance and/or where recorded in previous site registrations. The importance of conservation within the study area, as adjacent areas are redeveloped, was also noted.

All of the eight identified sites are likely to be of low historical heritage value, as no evidence has been found to indicate that these Aboriginal archaeological sites are associated with events or people of particular historical importance in the pre-Contact, Contact, or post-Contact period.

It is not possible to accurately assess the scientific (archaeological) significance of the study area and its identified Aboriginal archaeological resource on the basis of surface investigation alone. Presently, most of the eight identified Aboriginal sites are considered to be of low scientific (archaeological) significance. The site types are relatively common in the region; they are representative examples of the local archaeological resource, but generally have low potential to provide substantial information about past Aboriginal occupation of the area; being isolated finds and/or small surface artefact scatters in somewhat disturbed contexts. Artefact scatters LIBH AS2 (45-5-5185) and LIBH AS3 (45-5-5184) are considered to have moderate scientific value, which while disturbed by access tracks have intact topsoil. Disturbed artefact scatter site 45-5-0756 (EC6 (Eastern Creek)), visible in exposures along two dam walls is also considered to have moderate scientific value. Despite being heavily disturbed, the artefacts are unlikely to have been moved far from their original location within the creek flat landform, and the assemblage has a higher level of research potential than the smaller surface sites. However, it must be highlighted that some of the densest and most scientifically significant archaeological sites in the Cumberland Plain have been documented along the Eastern Creek (notably in the vicinity of Plumpton Ridge). The locations and composition of these highly significant deposits appear similar to the environments observed in the study area. As such, there is potential for high scientifically significant cultural deposits in the vicinity of Eastern

Creek and other major creeklines. For those sites with archaeological deposit or PAD, further investigation would be required to assess their archaeological value.

In terms of aesthetic value, most of the identified sites are considered to have a moderate level of significance. Although the whole of the study area has been disturbed, it has not been built up, and it is still possible to appreciate the natural setting of the sites.

Noting the qualifications mentioned above, and that the social/cultural values are not known in most cases, the identified sites within the study area are individually of low to moderate Aboriginal heritage significance. However, as a group, the sites have a higher level of value. They comprise an assemblage of archaeological sites representing Aboriginal occupation of the southwestern Sydney Basin, preserved within a corridor along Eastern Creek that is of increasing value as archaeological evidence is lost from the surrounding areas as a result of development.

Table 9. Table of scientific significance of sites located within the study area.

Unit	AHIMS No.	Site Name	Description	Social/ Cultural	Historic	Scientific	Aesthetic	Overall Significance
1	45-5-2565	IF2	Open Artefact	High	Low	Low	Low	Low
1	45-5-5183	LIBH AS1	Open Artefact	High	Low	Low	Moderate	Moderate
1	45-5-2564	IF1	Open Artefact	High	Low	Low	Low	Low
1	45-5-3264	WSP17	Open Artefact	High	Low	Low	Moderate	Moderate
2	45-5-5185	LIBH AS2	Open Artefact	High	Low	Moderate	Moderate	Moderate
2	45-5-5184%	LIBH AS3	Open Artefact	High	Low	Moderate	Moderate	Moderate
2	45-5-1066*%	Eastern Creek 1	Open Artefact	High	Low	Low	Moderate	Moderate
2	45-5-0756	EC6 (Eastern Creek)	Open Artefact	High	Low	Moderate	Moderate	Moderate

*Indicates the site has been previously destroyed.

% The site is located outside of the study area, but situated on a landform that extends within the study area.

9. Preliminary Impact Assessment

9.1 Proposed Development

Western Sydney Parklands Trust intends to redevelop the study area to accommodate industrial and light industrial land use activities. This is in accordance with the *State Environmental Planning Policy (Western Sydney Parklands) 2009*, the Western Sydney Parklands Trust Plan of Management 2030 and the Western Sydney Parklands Trust Plan of Management 2020 supplement.

An indicative concept masterplan and subdivision plan have been prepared for the study area and illustrates indicative building development areas and site works. Key features of the concept proposal are:

- **Land use and built form:** indicative building envelopes are provided for the future construction of largescale industrial-style buildings including:
 - Approximately 157,000m² floorspace to accommodate a range of industrial and light industrial land use activities, which could include advanced manufacturing, freight and logistics and warehouse and distribution facilities.
 - Approximately 8,000m² floorspace comprising ancillary offices to support the primary industrial and light industrial use.
- **Landscaping:** the front setbacks of the future industrial lots will be landscaped to complement the architectural design of the future industrial buildings and present an attractive appearance within the streetscape. Additional landscaping will be provided within the rear and side setbacks where required to provide visual screening of the proposed buildings from the surrounding road network.
- **Transport, access and car parking:** primary vehicle access to the development site is proposed from Ferrers Road. Any new roads and road improvement works required to service the proposed development will be designed to address Blacktown City Council requirements and facilitate their dedication as part of the industrial subdivision. A secondary access point for lighter vehicles (i.e. excluding B-double trucks) may be provided via the existing Wallgrove Road entry/exit driveway, pending further assessment of the potential traffic impacts and compliance with relevant standards.
- **Stormwater management and flooding:** a comprehensive stormwater management system will be provided to manage the quality and quantity of water flows across the site, including mitigation measures to address potential flooding risk and avoid adverse impacts to the development potential of the upstream and downstream properties.
- **Biodiversity:** the site contains scattered trees and more concentrated areas of vegetation along the riparian corridors and within the south-western corner which will be assessed in further detail during the preparation of the SSDA. The final concept masterplan and EIS will address the removal of vegetation, including any biodiversity off-set requirements.

- **Bushfire protection measures:** the site is identified as Vegetation Category 2 bushfire prone land and the final concept masterplan and EIS will address the required bushfire protection measures to avoid risk and provide adequate safety for future building occupants and fire-fighting personnel.
- **Utility services:** the final siting and design of the proposed industrial subdivision will incorporate the existing easements for high-pressure gas and sewer, as well as any required augmentation of existing utility services to service the proposed development.

The detailed proposal will include the following early site works:

- **Demolition and remediation:** removal of existing buildings and structures and completion of any site remediation works required to ensure the site is suitable for its intended use as a business hub.
- **Bulk earthworks:** cut and fill details for the future building pad sites to facilitate the future development of the site as an industrial business hub.
- **Infrastructure:** provision of roads, utility services, stormwater works and flood mitigation (if required) measures required to facilitate the future development of the site as a business hub.
- **Subdivision:** creation of development lots, public roads, easements/restrictions, etc to facilitate the leasing and development of individual lots to accommodate industrial and light industrial land use activities, including freight and logistics and warehouse and distribution centres.

9.2 Potential Aboriginal Heritage Impact

The potential heritage impact of development in accordance with the concept masterplan is outlined below (Table 10 and Figure 24). A more detailed impact assessment will be developed once the recommended further investigation has been completed.

9.2.1 Identified Archaeological Sites

Redevelopment according to the current concept masterplan would result in complete destruction to 5 identified sites within the study area, and partial destruction to 1 identified site within the study area. The proposed development for these locations includes industrial and light industrial building, roads, drainage basins and flood offset areas:

- ♦ The construction and development of industrial building sites (constrained to the western half of the study area) has the potential to directly impact isolated finds 45-5-2564 and 45-5-2565, and surface artefact scatter 'LIBH AS1' 45-5-5183.
- ♦ The construction of the access road and associated infrastructure (along the northern study area boundary) has the potential to directly impact artefact scatter and PAD 45-5-3264.
- ♦ The construction and development of industrial sites and the excavation of the regional drainage basin has the potential to directly impact artefact scatter and PAD 'LIBH AS2' 45-5-5185.

- ♦ The excavation of the potential flood compensation offset area has the potential to partially impact artefact scatter 45-5-0756.

Development for uses in accordance with the plan will likely result in impacts to the ground surface resulting from demolition works, cutting, levelling and fill works, installation of services and infrastructure, as well as landscaping and revegetation works. This will likely result in the removal of much, or all, of the upper soil profile.

There is potential for two sites to be conserved as part of the proposed development; however, these sites are located on landform contexts with deposits that likely extend within the study area.

9.2.2 Areas of Archaeological Potential

Substantial parts of the study area have been identified as having moderate, high and very high archaeological potential, which incorporates a vast (but unregistered) PAD identified by Navin Officer in 1999. Development and uses that will involve impact to the ground surface and upper soil profile are likely to result in partial or complete removal of any identified or as yet unidentified archaeological sites that may be present in these areas. Proposed uses that are likely to result in impact include demolition works, cutting and levelling works, industrial building construction, installation of services and infrastructure, as well as landscaping and revegetation works.

In some locations, it may be possible to avoid archaeological impact, by minimising or entirely avoiding ground and subsurface disturbance to areas of moderate, high and very high archaeological potential. Impact may be avoided in areas designated as passive open space, environmental conservation, and/or riparian corridor.

However, at this stage, a more detailed impact assessment cannot be made for these areas of archaeological potential. Further archaeological investigation is required to establish the location, nature and significance of any identified Aboriginal sites and as yet unidentified archaeological remains that may be present within these areas. The results of this investigation would provide data for the following:

- ♦ To allow development to be designed to avoid or minimise impact where possible.
- ♦ To allow a detailed impact assessment to be made, and appropriate mitigation and management measures to be developed.
- ♦ To provide adequate documentation for any additional permits or approvals, if required.

Table 10. Potential impact to identified Aboriginal archaeological sites.

Survey Unit	AHIMS Site No(s)	Site Name	Significance (Preliminary)	Proposed Development Impact	Type of Harm	Degree of Harm	Consequence of Harm
1	45-5-2565	IF2	Low	Development area	Directly harmed	Whole	Total loss of value
1	45-5-5183	LIBH AS1	Moderate	Development area	Directly harmed	Whole	Total loss of value
1	45-5-2564	IF1	Low	Development area	Directly harmed	Whole	Total loss of value
1	45-5-3264	WSP17	Moderate	Access Road	Directly harmed	Whole	Total loss of value
2	45-5-5185	LIBH AS2	Moderate	Development area; regional site basin	Directly harmed	Whole	Total loss of value
2	45-5-5184	LIBH AS3	Moderate	Unaffected by development ^{^^}	Will not be harmed ^{^^}	None ^{^^}	No loss of value Conservation potential
2	45-5-1066	Eastern Creek 1	Moderate	Unaffected by development ^{^^}	Will not be harmed ^{^^}	None ^{^^}	No loss of value Conservation potential [@]
2	45-5-0756	EC6 (Eastern Creek)	Moderate	Flood compensation storage area	Directly harmed	Partial	Partial loss of value [@]

^{^^} The site is currently outside of the study area boundary but is situated on a landform that may extend into the study area; in which case the site may be subject to development impacts.

[@] The site has reportedly been destroyed under an authorised AHIP/Consent to Destroy Permit.

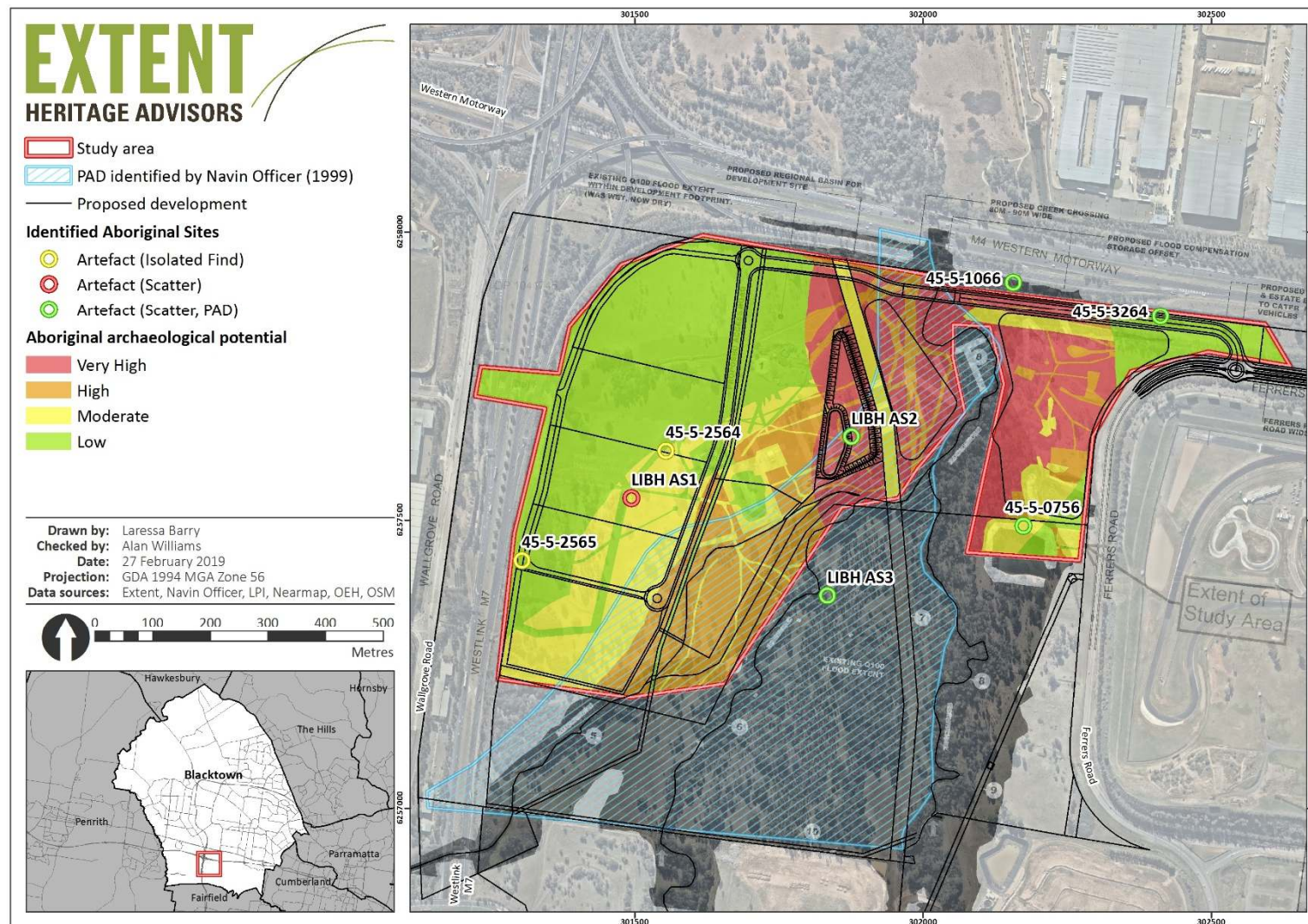


Figure 24. Identified Aboriginal sites and areas of archaeological potential overlain with the proposed concept masterplan.

10. Conclusions and Recommendations

10.1 Management Strategy

The ACHAR process, which included consultation with the Aboriginal community and surface investigations, identified eight archaeological sites within or adjacent to the study area. Of these, six would be affected by the proposed development, namely 45-5-2565 (IF2), 45-5-5183 (LIBH AS1), 45-5-2564 (IF1), 45-5-3264 (WSP17), 45-5-5185 (LIBH AS2) and 45-5-0756 (EC6 (Eastern Creek)). The development also has the potential to impact areas of moderate, high and very high archaeological potential, associated with slightly elevated creek flat and terrace landforms adjacent to major watercourses. These areas of archaeological potential are poorly defined and characterised, and are currently based entirely on desktop and modelling information. Comparable environments along other parts of Eastern Creek (e.g. Colebee Release Area, JMCHM 2006) have recovered highly significant cultural deposits, and it is considered that there is potential for such sites to occur here.

Based on current evidence, it would seem unlikely that the cultural heritage as documented across the site would require significant changes to the proposed development. The identified sites are generally common to the region and of low or moderate significance. Further in some cases, small (~10m) buffer zones and/or riparian corridors are proposed to encompass the major creeklines (with the exception of the detention basins), and there may be some possibility to conserve parts of the significant cultural deposits referenced above. Although, the exact nexus between these conservation areas and cultural deposits of value (if present) remain unclear at this stage, with further sub-surface investigation required. Given this uncertainty, recommendations below have been made to ensure that further characterisation and suitable management/mitigation strategies can be developed of these poorly defined cultural deposits.

In NSW, Aboriginal objects are provided with statutory protection by the *National Parks and Wildlife Act 1974*. In general, where a proposed activity will result in harm to an Aboriginal object, an Aboriginal Heritage Impact Permit (AHIP) is required. The AHIP, issued by OEH, contains conditions intended to manage and mitigate the identified impact. As the proposed development is an SSD project (SSD 9667), an AHIP is not required. Rather, the identified harm, as well as mitigation measures, will be managed through the Department of Planning and Environment Minister's conditions of approval for the project. The conditions of approval generally incorporate Aboriginal heritage management requirements based on advice from OEH, and the recommendations of the ACHAR process. For the purposes of this project, recommendations below include the development of an Aboriginal Heritage Management Plan (AHMP) to provide the post-approval management framework for all future Aboriginal heritage requirements for the project. They further outline the specific mitigation measures that should be implemented prior to, during and after the development. The recommendations include measures to ensure the appropriate investigation of the areas of sub-surface archaeological potential, their analysis and documentation, and development of appropriate mitigation measures; registering the cultural deposits on AHIMS; and lodging the ACHAR with appropriate public repositories.

In addition to the on-site mitigative measures, the development and implementation of a Heritage Interpretation Strategy (HIS) and subsequent Heritage Interpretation Plan (HIP) is recommended, to explore, develop and present Aboriginal heritage values of the site. These documents should focus on three main areas of Aboriginal heritage: (i) the ethnographic and historical record, which includes recent historical and contemporary associations with the site and immediate environs; (ii) consultation and input from the Aboriginal stakeholder community; and (iii) information obtained from sub-surface investigations proposed as part of the AHMP.

10.2 Recommendations

Based on the findings of the ACHAR, the following recommendations should be integrated into the Minister's conditions of approval for the project:

- Prior to ground disturbance, an Aboriginal heritage management plan (AHMP) must be developed by a heritage specialist in consultation with the RAPs and consent authority to provide the post-approval framework for managing Aboriginal and historical heritage within the study area. The AHMP should include the following information:
 - ◆ processes, timing, and methods for maintaining Aboriginal community consultation through the remainder of the project.
 - ◆ descriptions and methods of archaeological excavation that is required to define, characterise and assess all areas of very high, high and moderate archaeological potential within the impact footprint. All excavations should be undertaken in broad accordance with methodologies defined in OEH guidelines.
 - ◆ description and methods of post-excavation analysis of chronological, soil, and environmental samples that will be recovered as part of the test excavations outlined above. These would assist in the characterisation and significance of cultural deposits identified, and to inform the interpretation strategy.
 - ◆ any additional mitigative measures that may be required following the characterisation of areas of archaeological potential, which may include archaeological salvage, project re-design, and/or other measures.
 - ◆ procedures for managing the unexpected discovery of Aboriginal objects and/or human remains during the project
 - ◆ procedures for the curation of Aboriginal objects and other cultural materials recovered as part of the ACHAR process and at any subsequent stages of excavation required as part of the AHMP
 - ◆ processes for reviewing, monitoring, and updating the AHMP as the project progresses.
- A Heritage Interpretation Strategy (HIS) must be developed by a heritage specialist to identify the interpretive values of the study area, and specifically Aboriginal heritage values across the study area, and to provide direction for potential interpretive installations and devices. This strategy should be made available for consultation and feedback with relevant stakeholders and RAPs. Following consultation and feedback on the strategy, a

Heritage Interpretation Plan (HIP) will refine the strategy with content (visual and textual) and design details in order to allow the implementation stage. The outcomes of these reports must be undertaken prior to the issue of the occupation certificate (or equivalent). the interpretation strategy and interpretation plan must include consideration of three main components identified through the ACHAR process:

- ◆ input and feedback from the RAPs.
 - ◆ the historical record of the study and its immediate environs.
 - ◆ the past cultural and environmental landscape, once informed by further works recommended to be undertaken as part of the AHMP.
- Consultation should be maintained with the RAPs during the finalisation of the development proposal. This should focus on the development and implementation of the AHMP, long-term curation and management of the Aboriginal objects recovered through the archaeological excavation program, any mitigation measures that were implemented prior to, and during, the works, and the development of the interpretation strategy and plan.
 - A copy of the ACHAR should be lodged with AHIMS and provided to each of the RAPs.
 - Site Recording Forms and Site Impact Recording Forms should be developed for identified Aboriginal objects/sites/deposits within the study area and submitted to the AHIMS database.
 - If any element of the development is relocated outside the area assessed in this study, or if any alteration to the development plan is proposed that could result in additional impact to the potential cultural deposit, further assessment of the additional area(s) should be undertaken to identify and appropriately manage Aboriginal objects/sites/places that may be in the additional area(s).
 - The proponent should advise all relevant personnel and contractors involved in the design, construction, and operation of the development proposal of the relevant heritage considerations, legislative requirements, and recommendations identified in this report.

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Abbreviations

ACHAR	Aboriginal Cultural Heritage Assessment Report
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
AHMS	Archaeological and Heritage Management Solutions
BP	Before present (AD 1950)
CHL	Commonwealth Heritage List
CRM	Cultural Resource Management
DCP	Development Control Plan
DECCW	Department of Environment, Climate Change and Water (now OEH)
DP	Deposited Plan
ERS	Eastern Regional Sequence
ka	Abbreviation for thousands of years ago (e.g. 1 ka equals 1,000 years ago)
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
NHL	National Heritage List
NPW Act	National Parks and Wildlife Act 1974
OEH	Office of Environment and Heritage (formerly DECCW)
PAD	Potential Archaeological Deposit
RAP	Registered Aboriginal party
REP	Regional Environmental Plan
SEPP	State Environment Planning Policy
WHL	World Heritage List

Glossary

Aboriginal Heritage Report (ACHAR)	Cultural Assessment	A document developed to assess the archaeological and cultural values of an area, generally required as part of an Environmental Assessment (EA).
<i>Aboriginal Heritage Requirements Proponents 2010</i>	<i>Cultural Consultation for</i>	Guidelines developed by OEH to guide formal Aboriginal community consultation undertaken as part of an Aboriginal Cultural Heritage Assessment (ACHA).
Aboriginal Impact Permit (AHIP)	Heritage	The statutory instrument that the Director General of the Office of Environment and Heritage (OEH) issues under Section 90 of the <i>National Parks and Wildlife Act 1974</i> to allow the investigation (when not in accordance with certain guidelines), impact and/or destruction of Aboriginal objects. AHIPs are not required where project approval under the state-significant provisions of Part 4 (Division 4.1) of the <i>Environmental Planning and Assessment Act 1979</i> .
Aboriginal object		A statutory term defined under the <i>National Parks and Wildlife Act 1974</i> as 'any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains'.
<i>Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales</i>		Guidelines developed by OEH to inform the structure, practice and content of any archaeological investigations undertaken as part of an Aboriginal Cultural Heritage Assessment (ACHA).
Department Environment, Change and (DECCW)	of Climate and Water	Now known as the Office of Environment and Heritage (OEH), Department of Premier and Cabinet.
<i>Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales</i>		Guidelines developed by OEH, outlining the first stage of a two-stage process in determining whether Aboriginal objects and/or areas of archaeological interest are present within a study area. The findings of a due diligence assessment may lead to the development of an Aboriginal Cultural Heritage Assessment.
<i>Environmental Planning</i>		Statutory instrument that provides planning controls and

<i>and Assessment Act 1979</i>	requirements for environmental assessment in the development approval process. The Act is administered by the Department of Planning and Environment.
Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW	Guidelines developed by OEH to inform the structure and content of an Aboriginal Cultural Heritage Assessment (ACHA).
Isolated Find	An isolated find is usually considered a single artefact or stone tool, but can relate to any product of prehistoric Aboriginal societies. The term “object” is used in the ACHA, to reflect the definitions of Aboriginal stone tools or other products in the <i>National Parks and Wildlife Act 1974</i> .
<i>National Parks and Wildlife Act 1974</i>	The primary piece of legislation for the protection of Aboriginal cultural heritage in NSW. Part 6 of this Act outlines the protection afforded to and offences relating to disturbance of Aboriginal objects. The Act is administered by OEH.
Office of Environment and Heritage (OEH)	The OEH is responsible for managing the Aboriginal Heritage (and other) provisions of the <i>National Parks and Wildlife Act 1974</i> .
Potential Archaeological Deposit (PAD)	An area assessed as having the potential to contain Aboriginal objects. PADs are commonly identified on the basis of landform types, surface expressions of Aboriginal objects, surrounding archaeological material, disturbance, and a range of other factors. While not defined in the <i>National Parks and Wildlife Act 1974</i> , PADs are generally considered to retain Aboriginal objects and are therefore protected and managed in accordance with that Act.
Proponent	A corporate entity, Government agency or an individual in the private sector which proposes to undertake a development project.

Appendix 1: Legislation

A1.1. Commonwealth Legislation

Aboriginal and Torres Strait Islander Heritage Protection Act 1984

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 was enacted at a Federal level to preserve and protect areas (particularly sacred sites) and objects of particular significance to Aboriginal Australians from damage or desecration. Steps necessary for the protection of a threatened place are outlined in a gazetted Ministerial Declaration (Sections 9 and 10). This can include the preclusion of development.

As well as providing protection to areas, it can also protect objects by Declaration, in particular Aboriginal skeletal remains (Section 12). Although this is a Federal Act, it can be invoked on a State level if the State is unwilling or unable to provide protection for such sites or objects.

Environment Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 provides for the protection of natural and cultural heritage places. The Act establishes (amongst other things) a National Heritage List (NHL) and a Commonwealth Heritage List (CHL). Places on the NHL are of natural or cultural significance at a national level and can be in public or private ownership. The CHL is limited to places owned or occupied by the Commonwealth which are of heritage significance for certain specified reasons.

Places listed on the NHL are considered to be of State and local heritage value, even if State or local various heritage lists do not specifically include them.

The heritage values of places on the NHL or the CHL are protected under the terms of the EPBC Act. The Act requires that the Minister administering the EPBC Act assess any action which has, will have, or is likely to have, a significant impact on the heritage values of a listed place. The approval (or rejection) follows the referral of the matter by the relevant agency's Minister.

Native Title Act 1993

The Native Title Act 1993 provides recognition and protection for native title. The Act established the National Native Title Tribunal to administer native title claims to rights and interests over lands and waters by Aboriginal people. The Tribunal also administers the future act processes that attract the right to negotiate under the Native Title Act 1993.

The Act also provides for Indigenous Land Use Agreements (ILUA). An ILUA is an agreement between a native title group and others about the use and management of land and waters. ILUAs were introduced as a result of amendments to the Native Title Act in 1998. They allow people to negotiate flexible, pragmatic agreements to suit their particular circumstances.

An ILUA can be negotiated over areas where native title has, or has not yet, been determined. They can be part of a native title determination, or settled separately from a native title claim.

An ILUA can be negotiated and registered whether there is a native title claim over the area or not.

A1.2. NSW State Legislation

Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) requires that environmental and heritage impacts are considered by consent authorities prior to granting development approvals. The relevant sections of the EP&A Act are:

- Part 3A: A single assessment and approval system for major development and infrastructure projects [note that Part 3A has now been repealed and replaced with Part 4 (Division 4.1)].
- Part 4: Development that requires consent under consideration of environmental planning instruments.
- Part 5: An assessment process for activities undertaken by Public Authorities and for developments that do not require development consent but an approval under another mechanism.

Where Project Approval is to be determined under Part 4 (Division 4.1) of the Act, further approvals under the National Parks and Wildlife Act 1974, are not required. In those instances, management of Aboriginal heritage follows the applicable Aboriginal assessment guidelines (the Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation, July 2005) and any relevant statement of commitments included in the Development Approval.

National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 (NPW Act) provides blanket protection for Aboriginal objects (material evidence of Indigenous occupation) and Aboriginal places (areas of cultural significance to the Aboriginal community) across NSW. An Aboriginal object is defined as:

... any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

An Aboriginal place is any place declared to be an Aboriginal place by the Minister for the Environment, under Section 84 of the Act.

It is an offence to disturb Aboriginal objects or places without a permit authorised by the Director-General of the Office of Environment and Heritage. In addition, anyone who discovers an Aboriginal object is obliged to report the discovery to OEH.

The operation of the NPW Act is administered by OEH. With regard to the assessment of Aboriginal cultural heritage, OEH has endorsed the following guidelines:

- Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (2010).
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (2010).
- Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010).
- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (2011).

Aboriginal Land Rights Act 1983

The Aboriginal Land Rights Act 1983 allows for the transfer of ownership to a Local Aboriginal Land Council of vacant Crown land not required for an essential purpose or for residential land. These lands are then managed and maintained by the Local Aboriginal Land Council.

Appendix 2: Aboriginal Consultation

Appendix 2-1. Aboriginal consultation log

Pre-Notification

Agency	Contact	Date	Description	Extent contact
Pre-Notifications Sent Out				
Blacktown City Council	-	2018-10-11	Requested details of any Aboriginal organisations or individuals who may be interested in the project.	Alan Williams
Deerubbin Local Aboriginal Land Council	Steve Randall			
Greater Sydney Local Land Services	-			
NTSCorp	George Tonna			
Office of Environment and Heritage	Susan Harrison			
National Native Title Tribunal	-		Submitted register search request.	Alan Williams
Office of the Registrar, <i>Aboriginal Land Rights Act 1983</i>	-	2018-01-09	Submitted register search request.	
Pre-Notification Responses				
Greater Sydney Local Land Services	Margaret Bottrell	2018-10-12	Provided a response indicating we should liaise with OEH.	Alan Williams
OEH	Barry Gunther	2018-10-16	Provided a comprehensive list of stakeholders for the Sydney region	Alan Williams
Office of the Registrar, <i>Aboriginal Land Rights Act 1983</i>	Tyson Towney	2018-10-16	Undertook search and identified no claims within the study area.	Alan Williams
National Native Title Tribunal	-	2018-10-16	Advised that the land was freehold and could not be subject to a land claim; and that Native Title were seeking to extricate themselves from the OEH process.	Alan Williams
Blacktown City Council	Sue Galt	2018-10-26	Provided a letter advising to contact OEH	Alan Williams

Notification

Agency	Contact	Date	Description	Extent contact
Notifications Sent Out				
Butucarbin Aboriginal Corporation	Jennifer Beale	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett

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Agency	Contact	Date	Description	Extent contact
				Alan Williams
Dhinawan-Dhigaraa Culture & Heritage Pty Ltd	Ricky Fields, Athol Smith	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Didge Ngunawal Clan	Lillie Carroll, Paul Boyd	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Ginninderra Aboriginal Corporation	Steven Johnson, Krystle Carroll	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Gunjeewong Cultural Heritage Aboriginal Corporation	Cherie Carroll Turrise	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Kawul Cultural Services	Vicky Slater	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Pemulwuy CHTS	Pemulwuy Johnson	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Rane Consulting	Tony Williams	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Wurrumay Consultancy	Kerrie Slater	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Amanda Hickey Cultural Services	Amanda Hickey	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
-	Anthony Williams	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Badu	Karia Lea Bond	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Bidjawong Aboriginal Corporation	James Carroll	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Darug Aboriginal Cultural Heritage Assessments	Gordon Morton	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Darug Custodian Aboriginal Corporation	Justine Coplin	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams

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Agency	Contact	Date	Description	Extent contact
Darug Tribal Aboriginal Corporation	-	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Deerubbin Local Aboriginal Land Council	Steve Randall	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
-	Des Dyer	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Goobah Developments	Basil Smith	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
HSB Consultants	Patricia Hampton	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Merrigam Indigenous Corporation	Shaun Carroll	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Minnamunnung	Aaron Broad	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Murra Bidgee Mullangari Aboriginal Corporation	Darleen Johnson	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
-	Phil Kahn	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Tocomwall	Scott Franks	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Widescope Indigenous Group	Steven Hickey, Donna Hickey	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Wullung	Lee-Roy James Boota	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Barking Owl Aboriginal Corporation	Jody Kulakowski	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Biamanga	Seli Storer	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Bilinga Cultural Heritage Technical Services	Robert Brown	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett

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Agency	Contact	Date	Description	Extent contact
				Alan Williams
Callendulla	Corey Smith	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Corroboree Aboriginal Corportation	Steve Johnson	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Darug Boorooberongal Elders Aboriginal Corportation	Gordon Workman	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Darug Land Observations	Jamie Workman, Anna Workman	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Dharug	Andrew Bond	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
DJMD Consultancy	Darren Duncan	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Gulaga	Wendy Smith	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Gunyuu	Kylie Ann Bell	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Gunyuu Cultural Heritage Technical Services	Darlene Hoskins-McKenzie	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Jerringong	Joanne Anne Stewart	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Munyunga	Kaya Dawn Bell	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Munyunga Cultural Heritage Technical Services	Suzannah McKenzie	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Muragadi Heritage Indigenous Corporation	Jesse Johnson	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Murramarang	Roxanne Smith	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams

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Agency	Contact	Date	Description	Extent contact
Murrumbul	Mark Henry	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Murrumbul Cultural Heritage Technical Services	Levi McKenzie-Kirkbright	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Nerrigundah	Newtown Carriage	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Nudagurri	Newtown Carriage	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Thauaira	Shane Carriage	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Thoorga Nura	John Carriage	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Wailwan Aboriginal Group	Philip Boney	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Walbunja	Hika Te Kowhal	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Walgalu	Ronald Stewart	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Warragil Cultural Services	Aaron Slater	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Wingikara	Hayley Bell	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Wingikara Cultural Heritage Technical Services	Wandai Kirkbright	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Yerramurra	Robert Parson	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Yulay Cultural Services	Arika Jalmaki	2018-11-02	Notification sent enquiring of interest in project.	Georgia Burnett Alan Williams
Muragadi Heritage Indigenous Corporation	Jesse Johnson	2018-11-14	Posted letter returned to sender. LB provided recent	Georgia Burnett

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Agency	Contact	Date	Description	Extent contact
			email address; emailed.	
Murra Bidgee Mullangari Aboriginal Corporation	Darleene Johnson	2018-12-13	Another project noted problems with email provided by OEH. Emailed personal address.	Georgia Burnett
Registrations of Interest Received				
Microsoft Outlook Delivery Service	-	2018-11-02	<p>Received bounce back email to state that the addresses provided were invalid and that the emails sent could not be delivered:</p> <ol style="list-style-type: none"> 1. Nudagurri 2. Bilinga CHTS 3. Gunyuu CHTS 4. Munyunga CHTS 5. Murrumbul CHTS 6. Nerrigundah 7. Wingikara CHTS 8. Darug Boorooberongal Elders Aboriginal Corporation <p>No other contact details were provided for (1) to (7), and for (8) a notification was sent via Post.</p>	Georgia Burnett
Waliwan Aboriginal Group	Phil Boney	2018-11-02	Registered interest in the project. Provided CoC and insurance details.	Georgia Burnett Alan Williams
Didge Ngunawal Clan	Lilly Carr	2018-11-02	Registered interest in the project.	Georgia Burnett Alan Williams
Barraby Cultural Service	Lee Field	2018-11-05	Registered interest in the project. Provided CoC and insurance details.	Georgia Burnett Alan Williams
Darug Custodian Aboriginal Corporation	Justine Coplin	2018-11-05	Registered interest in the project. Provided CoC and insurance details.	Georgia Burnett Alan Williams
Yarrandaali Cultural Services	Bo Field	2018-11-05	Registered interest in the project. Provided CoC and insurance details.	Georgia Burnett Alan Williams
Yulay Cultural Services	Arika Jalomaki	2018-11-05	Registered interest in the project. Provided CoC and insurance details.	Georgia Burnett Alan Williams
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	2018-11-05	Registered interest in the project.	Georgia Burnett

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Agency	Contact	Date	Description	Extent contact
				Alan Williams
Aboriginal Archaeology Service	Andrew Williams	2018-11-06	Registered interest in the project. Provided CoC and insurance details.	Georgia Burnett Alan Williams
Darug Boorooberongal Elders Aboriginal Corporation	Gordon Workman	2018-11-06	Registered interest in the project.	Georgia Burnett Alan Williams
Kamilaroi-Yankuntjatjara Working Group	Phil Khan	2018-11-06	Phoned AW to discuss registration.	Georgia Burnett Alan Williams
Widescope	Steven Hickey	2018-11-07	Registered interest in the project.	Georgia Burnett Alan Williams
Darug Land Observations	Anna Workman	2018-11-07	Registered interest in the project.	Georgia Burnett Alan Williams
Darug Tribal Aboriginal Corporation	Dirk Schmitt	2018-11-07	Registered interest in the project.	Georgia Burnett Alan Williams
Kamilaroi Yankuntjatjara Working Group	Phil Kahn	2018-11-07	Registered interest in the project. Provided CoC and insurance details.	Georgia Burnett Alan Williams
Darug Aboriginal Land Care	Des Dyer	2018-11-10	Registered interest in the project.	Georgia Burnett Alan Williams
Barking Owl Aboriginal Corporation	Jody Kulakowski	2018-11-14	Registered interest in the project.	Georgia Burnett Alan Williams
A1 Indigenous Services	Carolyn Hickey	2018-11-18	Registered interest in the project	Georgia Burnett Alan Williams
Butucarbin Aboriginal Corporation	Jennifer Beale	2018-11-19	Registered interest in the project. Provided CoC and insurance details.	Georgia Burnett Alan Williams
Muragadi Heritage Indigenous Corporation	Jesse Johnson	2018-11-20	Registered interest in the project. Provided CoC and insurance details. Noted transcribing error for original PO Box bounce.	Georgia Burnett Alan Williams
Kawaul Cultural Services	Vicky Slater	2018-11-20	Registered interest in the project	Georgia Burnett Alan Williams
Kawaul Cultural Services	Vicky Slater	2018-11-27	Phone call to discuss project schedule. Expressed recommendation that only local stakeholders be	Georgia Burnett

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Agency	Contact	Date	Description	Extent contact
			involved in the project.	
Murra Bidgee Mullangari Aboriginal Corporation	Darleene Johnson	2018-12-13	Registered interest in project.	Georgia Burnett
Post-Notification Information Submission to LALC and OEH				
Deerubbin LALC	Steve Randall	2019-01-08	Sent letter notifying the LALC of the Registered Aboriginal Parties for the project, in accordance with Section 4.1.6 of the consultation requirements. Also provided with a copy of the project notification letter and advertisement.	Laressa Barry
OEH; GS ACH Division	Susan Harrison	2019-01-08	Sent letter notifying OEH of the Registered Aboriginal Parties for the project, in accordance with Section 4.1.6 of the consultation requirements. Also provided with a copy of the project notification letter and advertisement.	Laressa Barry
ACHAR Methodology Notification				
Wailwan Aboriginal Group	Phil Boney	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Didge Ngunawal Clan	Lilly Carroll	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Barraby Cultural Services	Lee Field	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Darug Custodian Aboriginal Corporation	Justine Coplin	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Yarrandaali Cultural Services	Bo Field	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Yulay Cultural Services	Arika Jalomaki	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry

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Agency	Contact	Date	Description	Extent contact
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Aboriginal Archaeology Service Inc.	Andrew Williams	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Darug Boorooberongal Elders Aboriginal Corporation	Gordon Workman	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Kamilaroi-Yankuntjatjara Working Group	Phil Khan	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Widescope Indigenous Group	Steven Hickey	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Darug Land Observations	Anna Workman	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Darug Tribal Aboriginal Corporation	Dirk Schmitt	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Darug Aboriginal Land Care	Des Dyer	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Wurrumay Consultancy	Kerrie Slater	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
Barking Owl Aboriginal Corporation	Jody Kulakowski	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry
A1 Indigenous Services	Carolyn Hickey	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laressa Barry

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Agency	Contact	Date	Description	Extent contact
Butucarbin Aboriginal Corporation	Jennifer Beale	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laessa Barry
Muragadi Heritage Indigenous Corporation	Jesse Johnson	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laessa Barry
Kawul Cultural Services	Vicky Slater	2018-12-14	Emailed proposed archaeological survey and test excavation methodology. Requested feedback by 16 January 2019.	Laessa Barry
Deerubbin LALC	Steve Randall	2019-01-07	E-mailed to seek interest in the project since no response had been received; and provided methodology still out for comment.	Alan Williams

ACHAR Methodology Responses Received

Aboriginal Archaeology Service Incorporated	Andrew Williams	2018-12-15	Provided letter response in support of the ACHAR methodology, and prefers that any recovered artefacts are either (1) displayed in a museum, local library or government building, or (2) reburied in close proximity to the area.	Laessa Barry
A1 Indigenous Services	Carolyn Hickey	2018-12-16	Provided email response to reconfirm registration of interest and indicate an interest in being involved in fieldwork, but did not provide any feedback on the ACHAR methodology.	Laessa Barry
Barking Owl Aboriginal Corporation	Jody Kulakowski	2018-12-18	Emailed to say they agreed with the proposed methodology and had no further recommendations or comments. Thank you sent 2018-12-19.	Tom Sapienza
Barraby Cultural Services	Lee Field	2018-12-19	Provided brief email response in support of the ACHAR methodology and indicated an interest to be involved in the fieldwork.	Laessa Barry
Yurrandaali Cultural Services	Bo Field	2018-12-19	Provided brief email response in support of the ACHAR methodology and indicated an interest to be involved in the fieldwork.	Laessa Barry
Yulay Cultural Services	Arika Jalomaki	2018-12-19	Provided brief email response in support of the ACHAR methodology and indicated an interest to be involved in	Laessa Barry

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Agency	Contact	Date	Description	Extent contact
			the fieldwork.	
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	2018-12-19	Provided a brief email response in support of the ACHAR methodology.	Laessa Barry
Darug Custodian Aboriginal Corporation	Justine Coplin	2018-12-23	Provided letter response in support of assessment methodology.	Laessa Barry
Darug Aboriginal Landcare Incorporated	Des Dyer	2018-12-26	Provided a brief email response in support of the ACHAR methodology.	Laessa Barry
Kamilaroi-Yankuntjatjara Working Group	Phil Khan	2018-12-31	Provided a brief email response in support of the ACHAR methodology.	Laessa Barry
Widescope Indigenous Group	Steven Hickey	2019-01-07	Provided a brief email response in support of the ACHAR methodology.	Laessa Barry
Darug Land Observations	Anna O' Hara	2019-01-16	Provided a brief email response in support of the ACHAR methodology.	Tom Sapienza

Site Investigation

All RAPs	-	8.1.19	Invitation to attend a site inspection. Widescope, Kamilaroi Yankuntjatjara Working Group, Aboriginal Archaeology Service and Deerubbin Local Aboriginal Land Council invited on a paid basis.	Alan Williams
Kawul Cultural Services	Vicky Slater	8.1.19	Indicated that her ancestry was local to the area, and disappointed at not being involved in the paid involvement of the site investigation.	Alan Williams
Darug Boorooberongal Elders Aboriginal Corporation	Gordon Workman	8.1.19	(Phone call) Indicated that he was dissatisfied at not being involved in the paid involvement of the site investigation.	Alan Williams
Didge Ngunawal Clan	Lilly Carroll	8.1.19	Sought to attend the site work on a voluntary basis.	Alan Williams
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	8.1.19	Indicated that they could not participate in the field program unless paid.	Alan Williams
Widescope	Steven Hickey	8.1.19	Will attend the site inspection	Megan Sheppard Brennand
Kamilaroi Yankuntjatjara Working Group	Philip Khan	8.1.18	Marbuck Khan will attend the site inspection	Megan Sheppard

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				Brennand
Darug Custodian Aboriginal Corporation	Justine Coplin	8.1.18	Sought clarification on why DCAC were not involved. AW responded that a smaller selection of RAPs was necessary due to numbers, but other opportunities may eventuate.	Alan Williams
Muragadi Heritage Indigenous Corporation	Rebecca	9.1.18	Declined to attend on a voluntary basis.	Alan Williams
Deerubbin Local Aboriginal Land Council	Steve Randall	11.1.19	Sent a follow up email asking if they would like to attend the Site inspection on a paid basis	Megan Sheppard Brennand
Aboriginal Archaeology Service	Andrew Williams	11.1.19	Sent a follow up email asking if they would like to attend the Site inspection on a paid basis	Megan Sheppard Brennand
Darug Aboriginal Landcare Inc	Ricky Fields	11.1.19	Advised that they were sending a representative	Alan Williams
Butucarbin Cultural Heritage Assessments	Lowanna Gibson	15.1.19	Advised she was sending a representative	Alan Williams
Kamilaroi-Yankuntjatjara Working Group, Widescope Indigenous Group, Deerubbin Local Aboriginal Land Council, Butucarbin Aboriginal Corporation	Various	17.1.19	Survey undertaken at the Lighthouse Business Hub site	Megan Sheppard Brennand

Distribution of ACHAR for Feedback and Review

All RAPs	Various	27.02.2019	Provided with draft ACHAR report and appendices for review and comments.	Laressa Barry
	Microsoft Outlook Delivery Notification Service	27.02.2019	Received error message notification from Outlook Delivery Service, stating that "a communication failure occurred during the delivery of this message", and that the mailbox was unavailable".	Laressa Barry
Wailwan Aboriginal Group	Phil Boney	27.02.2019	Distributed draft ACHAR and Appendices to Wailwan Aboriginal Group via FTP (WeTransfer).	Laressa Barry
WeTransfer FTP service		27.02.2019	Received error message notification from WeTransfer to state that the email address was unavailable.	Laressa Barry
Wailwan Aboriginal Group	Phil Boney	27.02.2019	Phoned Phil to discuss delivery of report, but no answer. Left voicemail message for Phil to call the Extent Heritage Office.	Laressa Barry
Muragadi Heritage Indigenous Corporation	Anthony Johnson	01.03.2019	Muragadi reviewed the ACHAR and appendices and endorsed the report recommendations.	Laressa Barry
Didge Ngunawal Clan	Lilly Carroll	04.03.2019	Requested that Extent update its contact details for	Laressa Barry

SYD18198 Notification Log
Lighthouse Interchange Business Hub

			Didge Ngunawal Clan, but provided no comment on the ACHAR.	
Darug Land Observations	Anna O'Hara	06.03.2019	DLO reviewed and provided support for the recommendations contained within the ACHAR. They recommended that artefacts be reburied on country, and indicated an interest in participating in any fieldwork.	Laessa Barry
Darug Tribal Aboriginal Corporation	John Reilly	12.03.2019	DTAC provided a brief response in support of the report recommendations. They requested to be advised of any further updates to the project.	Laessa Barry
Barraby Cultural Services	Lee Field	13.03.2019	Barraby provided a brief response in support of the report recommendations and wish to be kept informed of all stages of the project.	Laessa Barry
Kamilaroi Yankuntjatjara Working Group	Sterfeanie Khan	15.03.2019	KYWG provided a brief response in support of the report recommendations.	Laessa Barry
All RAPs	Various	25.03.2019	Provided a follow-up reminder of the impending finalisation of the report, and requested that any further comments or feedback be sent through prior to Wednesday 27 March 2019.	Laessa Barry
Yurrandaali Cultural Services	Bo Field	25.03.2019	Yurrandaali provided a brief response in support of the report recommendations, and requested that the client continue to consult with Yurrandaali as the project progresses.	Laessa Barry
Yulay Cultural Services	Arika Jalomaki	25.03.2019	Yulay provided a brief response in support of the report recommendations, and requested that the client continue to consult with Yulay as the project progresses.	Laessa Barry
Didge Ngunawal Clan	Paul Boyd	25.03.2019	DNC provided a brief response in support of the report recommendations.	Laessa Barry

Appendix 2-2. List of identified Aboriginal stakeholders.

The following Aboriginal stakeholder groups and individuals were identified as potentially having interest in the project:

Aboriginal Archaeology Service
Amanda Hickey Cultural Services
Badu
Barking Owl Aboriginal Corporation
Biamanga
Bidjawong Aboriginal Corporation
Bilinga Cultural Heritage Technical Services
Butucarbin Aboriginal Corporation
Callendulla
Corroboree Aboriginal Corporation
Darug Aboriginal Cultural Heritage Assessments
Darug Aboriginal Land Care
Darug Boorooberongal Elders Aboriginal Corporation
Darug Custodian Aboriginal Corporation
Darug Land Observations
Darug Tribal Aboriginal Corporation
Deerubbin Local Aboriginal Land Council
Dharug
Dhinawan-Dhigaraa Culture & Heritage Pty Ltd
Dige Ngunawal Clan
DJMD Consultancy
Ginninderra Aboriginal Corporation
Goobah Developments
Gulaga
Gunjeewong Cultural Heritage Aboriginal Corporation
Gunyuu
Gunyuu Cultural Heritage Technical Services
HSB Consultants
Jerringong
Kamilaroi-Yankuntjatjara Working Group
Kawul Cultural Services
Merrigam Indigenous Corporation
Minnamunnung
Munyunga
Munyunga Cultural Heritage Technical Services
Muragadi Heritage Indigenous Corporation
Murra Bidgee Mullangari Aboriginal Corporation
Murramarang
Murrumbul
Murrumbul Cultural Heritage Technical Services

Nerrigundah
Nudagurri
Pemulwuy CHTS
Rane Consulting
Thauaira
Thoorga Nura
Tocomwall
Wailwan Aboriginal Group
Walbunja
Walgalu
Wallung
Warragil Cultural Services
Widescope Indigenous Group
Wingikara
Wingikara Cultural Heritage Technical Services
Wurrumay Consultancy
Yerramurra
Yulay Cultural Services

Appendix 2-3. List of registered Aboriginal parties for the project

The following Aboriginal stakeholder groups registered their interest in the project:

A1 Indigenous Services
Aboriginal Archaeology Service
Barking Owl Aboriginal Corporation
Barraby Cultural Services
Butucarbin Aboriginal Corporation
Corroboree Aboriginal Corporation
Darug Aboriginal Land Care
Darug Boorooberongal Elders
Aboriginal Corporation
Darug Custodian Aboriginal Coporation
Darug Land Observations
Darug Tribal Aboriginal Corporation
Deerubbin Local Aboriginal Land
Council
Didge Ngunawal Clan
Kamilaroi-Yankuntjatjara Working Group
Kawaul Cultural Services
Muragadi Heritage Indigenous
Corporation
Wailwan Aboriginal Group
Widescope
Wurrumay Consultancy
Yarrandaali Cultural Services
Yulay Cultural Services

Appendix 2-4. Pre-Notification Documentation Sent and Received

2 August 2018

Attn: **NAME**

AGENCY / DEPARTMENT

ADDRESS LINE 1

ADDRESS LINE 2

Re: Request for Information on Aboriginal Stakeholders for an Aboriginal Cultural Heritage Assessment of Lighthorse Interchange Business Hub, Eastern Creek, NSW

Dear Sir/Madam,

Extent Heritage Pty Ltd has been engaged by the Western Sydney Parklands Trust (the proponent) to undertake an Aboriginal Cultural Heritage Assessment (ACHAR) in advance of proposed development of the Lighthorse Interchange Business Hub. The hub encompasses 165 Wallgrove Road, and 475 Ferrers Road, Eastern Creek, NSW (Lot 5 DP804051; Lot 10 DP 1061237).

The land in question is within the Blacktown Local Government Area, and the proposed development will involve subdivision and then re-development of the land. Specific design and development activities are yet to be determined, but would likely include bulk earthworks, stormwater, lead-in services, environmental works, vehicle access points and pedestrian/ cycle links with landscaping.

The proponent's contact details are:

Mr Luke Wilson, C/- Western Sydney Parklands Trust
PO Box 3064
Parramatta NSW 2124
(T) 02 9895 7500
(E) Luke.Wilson@wspt.nsw.gov.au

In accordance with the NSW Office of Environment and Heritage's (OEH) *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*, I am writing to you to seek information on relevant Aboriginal individuals and/or communities that you are aware of, who may hold cultural knowledge for the area relevant to determining the significance of Aboriginal objects and/or places. It would be appreciated if you could provide this information to at the Sydney address below or by email to awilliams@extent.com.au

Please don't hesitate to contact me on (02) 9555 4000 if you have any queries or concerns.

Yours sincerely,



Dr Alan Williams FSA MAACAI
Associate Director | Extent Heritage

Built & Urban Heritage | Aboriginal Heritage | Archaeology | Interpretation | Intangible Cultural Heritage | World Heritage

EXTENT HERITAGE PTY LTD
ABN 24 608 666 306 ACN 608 666 306
info@extent.com.au
extent.com.au

SYDNEY
3/73 Union Street
Pyrmont
P 02 9555 4000

MELBOURNE
13/240 Sydney Road
Coburg
P 03 9388 0622

BRISBANE
Level 7, 757 Ann Street
Fortitude Valley
P 07 3667 8881

PERTH
312 Onslow Road
Shenton Park
P 08 9381 5206



Office of
Environment
& Heritage

Our reference: Doc18/771559

Dr Alan Williams
Associate Director
Extent heritage Advisors
3/73 Union Street
Pyrmont NSW

Dear Alan,

Thank you for your letter dated 11th October 2018 to the Office of Environment and Heritage (OEH) regarding obtaining a list of the Aboriginal stakeholders that may have an interest in the proposed development for the Lighthouse Interchange Business Hub, 165 Wallgrove Road and part of 475 Ferrers Road, Eastern Creek, NSW.

Please find attached the list of Aboriginal stakeholders known to OEH that may have an interest in the project.

As the Department of Planning and Environment is the approval authority for this project, the consultation process should be in accordance with the relevant guidelines as stipulated by the Department of Planning and Environment.

If you wish to discuss any of the above matter further please email gs.ach@environment.nsw.gov.au.

Yours sincerely

16/10/2018

Amy Dumbrell
Acting Senior Team Leader Planning
Greater Sydney Branch
Communities and Greater Sydney Division

Our file no: 145-537-1
C18/5827

19 October 2018

Luke Wilson
c/-Western Sydney Parklands Trust

awilliams@extent.com.au

Dear Sir,

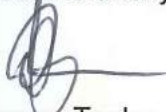
Request for Relevant Aboriginal Stakeholders Information for Aboriginal Cultural Heritage Assessment of Lighthorse Interchange Business Hub, Eastern Creek

Thank you for your letter dated 11 October 2018 regarding Aboriginal stakeholders contact details relevant to the above.

The NSW Office of Environment and Heritage (OEH) has advised us that their consultation list for this purpose is confidential and may only be obtained on a project by project basis from officers of the OEH.

Please contact Fran Scully of the Office of Environment and Heritage Regulatory Group on 9995 6830 for further assistance.

Yours faithfully,



Trevor Taylor
Manager Development Policy and Regulation

REQUEST FOR SEARCH OF LAND CLAIM REGISTER



OFFICE OF THE REGISTRAR
ABORIGINAL LAND RIGHTS ACT 1983 (NSW)

11-13 Mansfield Street
Glebe NSW 2037
PO Box 112, Glebe NSW 2037
P. 02 9562 6327 F. 02 9562 6350

Please print all details clearly using block letters

Full name of person requesting search: *(name for correspondence)*

Alan Williams

Name of company:

Extent Heritage Pty Ltd

Postal address:

3/73 Union Street, Pyrmont, NSW 2009

Telephone number:

0428 810 150

Fax number:

02 9555 7005

Land identifiers:

(lot, dp, reserve number –
not crown plan number or vol id)

Lot 5 DP804051; Lot 10 DP 1061237

Parish name:

Prospect

County name:

Cumberland

To assist the office in assigning priorities, please answer the following:

1) Purpose for which information is required:

Seeking information of Aboriginal stakeholders to consult with as part of an Aboriginal Cultural Heritage Assessment for the proposed Lots.

2) If urgent consideration is required, reason for urgency:

Signature, position and date:

Alan Williams

Please note:

1. Searches are completed within 5 working days and returned by ordinary mail.
2. The register covers only crown land.
3. All information is required including a name for correspondence before the search will be completed.
4. The person to whom correspondence is addressed must sign the form.

18 October 2018

Dr. Alan Williams
Associate Director
Extent Heritage Pty Ltd
3/73 Union Street
PYRMONT NSW 2009

Via email: awilliams@extent.com.au

Dear Alan,

Request – Search for Aboriginal Land Claims

I refer to your request dated 11 October 2018, to search the Register of Aboriginal Land Claims database (**the Register**) in relation to lands described by you as Lot 5 DP 804051 and Lot 10 DP 1061237 in the Parish of Field of Prospect, County of Cumberland.

I have searched the Register and the properties above do not appear as being affected by an Aboriginal Land Claim, pursuant to sections 36 or 37 of the *Aboriginal Land Rights Act 1983*.

Please contact our office on (02) 8633 1266 if you require further assistance.

Yours sincerely,



Tysan Towney
Administration Officer
Office of the Registrar, ALRA

Please Note:

1. Search requests should not be made over privately owned land. Crown Land is the only land in NSW that is likely to be affected by an ALC under the *Aboriginal Land Rights Act*. If an ALC has been made over privately owned land it would be refused as soon as this is known.

2. Land across NSW with older land descriptors such as "portion, REF & TSR" have been allotted new descriptors over the last 10 years & many of these now have "Lot & DP" numbers. The ORALRA database lists the land descriptor at lodgement & may not include an updated land descriptor. If this may affect the land that you've described, we advise that you contact the Aboriginal Land Claims Investigation Unit on (02) 6883 3396.

To Alan Williams,

RE: Request for Information on Aboriginal Stakeholders for an Aboriginal Cultural Heritage Assessment of Lighthorse Interchange Business Hub, Eastern.

Thank you for your letter dated 11 October 2018, requesting assistance with identifying Aboriginal stakeholder groups or persons who may have an interest in your project area.

Greater Sydney Local Land Services (GS LLS) acknowledges that Local Land Services have been listed in *Section 4.1.2 (g)* of the *Aboriginal cultural heritage consultation requirements for proponents 2010*, under *Part 6, National Parks and Wildlife Act 1974* as a source of information to obtain the “names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal *objects* and/or *places*”.

GS LLS is a partner with many Aboriginal communities in the region on many natural resource management (NRM) projects. However, GS LLS is not the primary source for contacting or managing contact lists for Aboriginal communities or persons that may inform or provide comment on planning issues. GS LLS considers cultural heritage issues that relate to land-use planning in general and only considers culture and heritage issues in the context of NRM.

We strongly recommend that you make contact with the Office of Environment and Heritage (OEH), Cultural Heritage Division, for all-inclusive contact lists of persons and organisations that may assist with your investigation.

Note: Hawkesbury Nepean Catchment Management Authority (HNCMA) no longer exists. All work previously carried out by HNCMA is now delivered by Greater Sydney Local Land Services (GS LLS).

Regards,

--

Margaret Bottrell Senior Strategic Land Services Officer
(Aboriginal Communities)

Greater Sydney Local Land Service

Level 4, 2-6 Station Street Penrith

PO Box 4515 Penrith Westfields NSW 2750

T: 02 47242111

E: margaret.bottrell@lls.nsw.gov.au

W: <http://www.lls.nsw.gov.au>

Request for Search of Tribunal Registers

*mandatory fields are marked with an asterisk

1. Your details*

NAME:

POSITION:

COMPANY/ORGANISATION:

POSTAL ADDRESS:

TELEPHONE:

EMAIL:

YOUR REFERENCE:

DATE OF REQUEST:

2. Reason for your request - please complete either Part A OR Part B*

Part A - Are you a party to a native title proceeding? Yes No

Please provide Federal Court/Tribunal file number/or application name:

OR

Part B - Do you need to identify existing native title interests to comply with the *Native Title Act 1993* (Cth) or other State/Territory legislation? Yes No

Please provide brief details of these obligations here:

3. Identify the area to be searched - please complete either Part A OR Part B*

Part A - Mining tenure

Tenement ref/s:

State/Territory:

OR

Part B - Other tenure type

Crown Land, crown reserve

Agricultural/pastoral lease

Freehold (privately owned)**

State/Territory:

Local Government Area:

4. Description (please provide as many details as possible)

Provide any additional details to describe the area, including attaching maps with landmarks clearly shown.

Lot and plan details:

Property name:

Pastoral Lease number or name:

County:

Parish:

Town:

Section:

Hundred:

Northern Territory Portion:

5. Submit your request

NNTT Office	Search jurisdiction	Email address	Fax
Perth	WA searches	waenquiries@nntt.gov.au	(08) 9425 1193
Melbourne	VIC, TAS searches SA, NT searches	vicandtasenquiries@nntt.gov.au sa_and_ntenquiries@nntt.gov.au	(03) 9606 0680 (03) 9606 0680
Sydney	NSW, ACT searches	nswenquiries@nntt.gov.au	(02) 9227 4030
Brisbane	QLD searches	qldenquiries@nntt.gov.au	(07) 3307 5050

Or post to: National Native Title Tribunal, GPO Box 9973 (Perth 6848, Melbourne 3001, Sydney 2001, Brisbane 4001)

- There is no charge for conducting searches of the Tribunal's databases.
- Timeframe for providing results is generally 3-5 business days.
- Register and schedule extracts, plus map attachments will be provided with your results. Technical coordinates may be omitted.

Did you know?

Native Title Vision (NTV) is the National Native Title Tribunal's free online visualisation, mapping and query tool. All that is needed to use NTV is a computer connected to the internet, a current web browser and an NTV user account. NTV puts you in the driver's seat in exploring native title and brings together:

- a geospatial view of the Tribunal's registers and databases
- overlays of administrative regions, non-freehold land parcels and resources tenure.

To obtain a NTV user account visit the [Geospatial section](#) on our website.

****Native title & freehold tenure**

Under the *Native Title Act 1993* (Cth), the valid grant of a freehold estate (other than certain types of Aboriginal and Torres Strait Islander land) on or before 23 December 1996 is known as a 'previous exclusive possession act'. This means that native title has been extinguished over the area.

The Tribunal is not the custodian of the data for freehold estates. To determine whether a particular parcel of land is freehold land, you may wish to seek such information from the relevant state/territory government custodian.

UNCLASSIFIED

Native title search – NSW Freehold Parcels – Lot 5 on DP804051 and Lot 10 on DP 1061237

Your ref: SYD18198- Our ref: SR4991

Change of e-mail address for Geospatial Searches

Please ensure that from 14th August 2018 your search requests are forwarded to GeospatialSearch@NNTT.gov.au with a **completed search request form**. The form is available from the Tribunal's website at this address: <http://www.nntt.gov.au/News-and-Publications/Pages/Forms.aspx>

Dear Alan Williams,

Thank you for your search request received on 11 October 2018 in relation to the above areas.

Please note: Records held by the National Native Title Tribunal as at 16 October 2018 indicate that the identified parcels appear to be freehold, and freehold tenure extinguishes native title.

The National Native Title Tribunal does not hold data sets for freehold tenure; consequently, we **cannot** conduct searches over freehold. For confirmation of freehold data, please contact the NSW Land and Property Information office or seek independent legal advice.

For further information, please visit our [website](#).

Cultural Heritage Searches in NSW

The National Native Title Tribunal (the Tribunal) has undertaken steps to remove itself from the formal list of sources for information about indigenous groups in development areas. The existence or otherwise of native title is quite separate to any matters relating to Aboriginal cultural heritage. Information on native title claims, native title determinations and Indigenous Land Use Agreements is available on the Tribunal's website.

Interested parties are invited to use Native Title Vision (NTV) the Tribunal's online mapping system to discover native title matters in their area of interest. Access to NTV is available at

<http://www.nntt.gov.au/assistance/Geospatial/Pages/NTV.aspx>

Training and self-help documents are available on the NTV web page under "Training and help documents". For additional assistance or general advice on NTV please contact

GeospatialSearch@NNTT.gov.au

Additional information can be extracted from the Registers available at

<http://www.nntt.gov.au/searchRegApps/Pages/default.aspx>

If you have any further queries, please do not hesitate to contact us on the free call number 1800 640 501.

Regards,

Geospatial Searches

National Native Title Tribunal | Perth

Email: GeospatialSearch@nntt.gov.au | www.nntt.gov.au

Shared country, shared future

Appendix 2-5. Notification Documentation Sent and Registrations Received

2 August 2018

Attn: NAME
ORGANISATION
Address1
Address2
email@email.com

Re: Aboriginal Cultural Heritage Assessment for Lighthorse Interchange Business Hub, Eastern Creek, NSW – Notification of Project Proposal.

Dear FIRSTNAME,

In accordance with the NSW Office of Environment and Heritage's (OEH) (formerly NSW Department of Environment, Climate Change and Water (DECCW)) *Aboriginal Cultural Heritage Consultation Requirements for Proponents, 2010*, I am writing to notify you that we have been engaged by Western Sydney Parklands Trust (the proponent) to undertake an Aboriginal Cultural Heritage Assessment (ACHAR) as part of a State Significant Development of the Lighthorse Interchange Business Hub. The hub encompasses part of 165 Wallgrove Road, and part of 475 Ferrers Road, Eastern Creek, NSW (Lot 5 DP804051; Lot 10 DP 1061237) (**Figure 1**).

The land in question is within the Blacktown Local Government Area, and the proposed development will involve subdivision and then re-development of the land. Specific design and development activities are yet to be determined, but would likely include bulk earthworks, estate stormwater, lead-in services, environmental works, access, estate landscaping and conceptual built form.

The proponent's contact details are:

Mr Luke Wilson, C/- Western Sydney Parklands Trust
PO Box 3064
Parramatta NSW 2124
(T) 02 9895 7500
(E) Luke.Wilson@wspt.nsw.gov.au

Extent will be undertaking the assessment in accordance with the relevant OEH *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* guidelines. An important part of the assessment will be Aboriginal community consultation that aims to identify the Aboriginal cultural heritage within the study area, including the cultural values and places of importance to the Aboriginal community. The purpose of the consultation is to assist the proponent in preparing the ACHA for the study area, and if necessary to assist OEH in considering the assessment and any Aboriginal Heritage Impact Permit (AHIP) application.

We are inviting registrations from Aboriginal individuals and/or organisations who may hold relevant cultural knowledge for determining the Aboriginal cultural heritage of the area, and who wish to be involved in the community consultation process. If you or your organisation is interested in being part of the consultation process, please provide a registration of interest to Alan Williams at the Sydney address below or by email to awilliams@extent.com.au

Registrations are requested by **19 November 2018**.

Built & Urban Heritage Aboriginal Heritage Archaeology Interpretation Intangible Cultural Heritage World Heritage				
EXTENT HERITAGE PTY LTD ABN 24 608 666 306 ACN 608 666 306 info@extent.com.au extent.com.au	SYDNEY 3/73 Union Street Pyrmont P 02 9555 4000	MELBOURNE 13/240 Sydney Road Coburg P 03 9388 0622	BRISBANE Level 7, 757 Ann Street Fortitude Valley P 07 3667 8881	PERTH 312 Onslow Road Shenton Park P 08 9381 5206

Please don't hesitate to contact me on (02) 9555 4000 if you have any queries or concerns.

Yours sincerely,



Dr Alan Williams FSA MAACAI
Associate Director | Extent Heritage

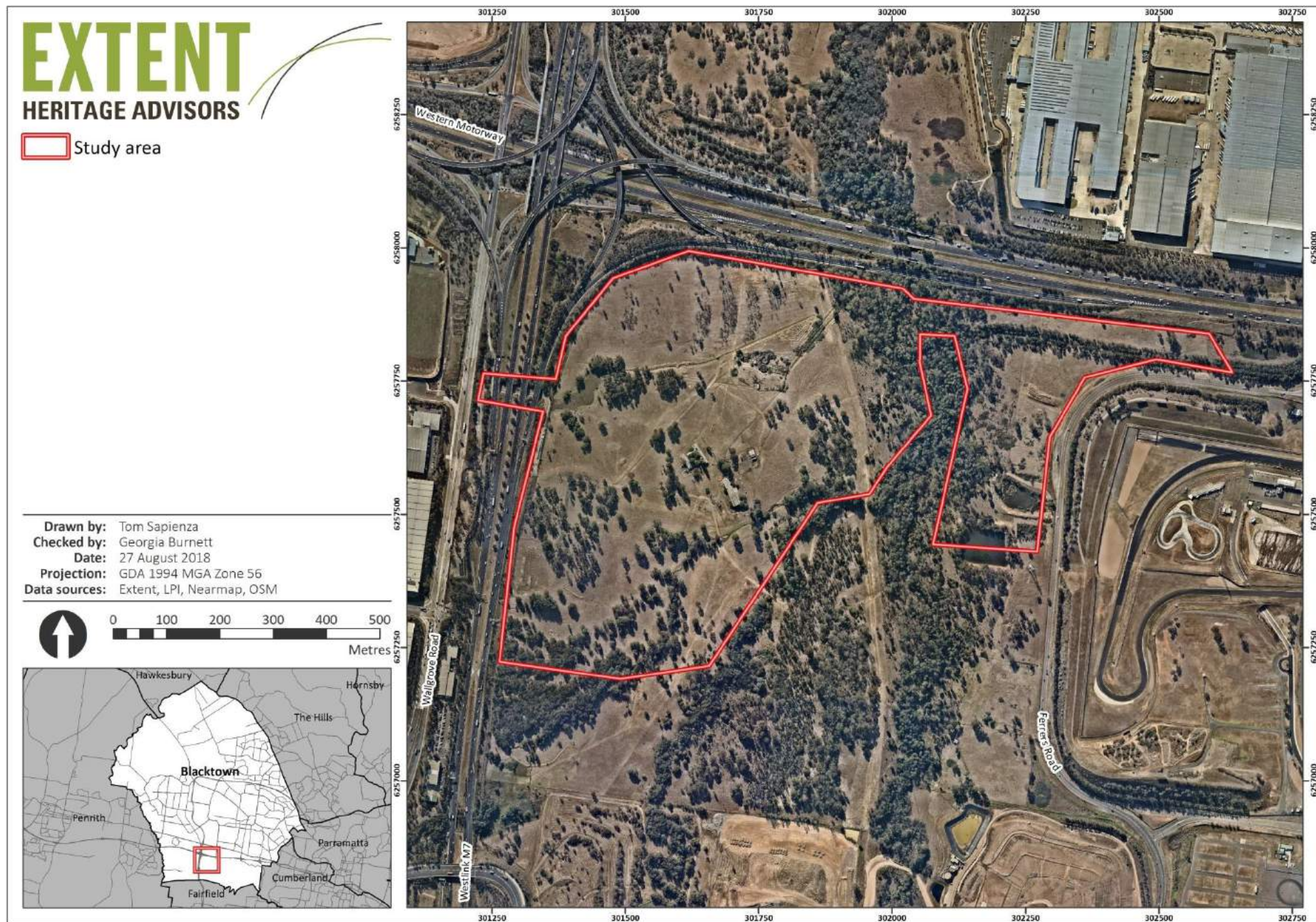


Figure 1. The study area.

Megan Sheppard Brennand

From: Caza X <cazadirect@live.com>
Sent: Sunday, 18 November 2018 5:12 PM
To: Dr Alan Williams
Subject: lighthouse interchange business hub

A1

Indigenous Services

Contact: Carolyn
M: 0411650057
E: Cazadirect@live.com
A: 10 Marie Pitt Place, Glenmore Park, NSW 2745
ABN: 20 616 970 327

Hi Alan,
A1 would like to register for consultation and an field work for this project.
I hold cultural knowledge and connection to this area.
Thank you
Carolyn Hickey



Aboriginal Archaeology Service
INC: 1400988
2/24 Goodwin Street Narrabeen NSW
Mobile: 0456 399 687
Email: aas.info@bigpond.com

6th November 2018

Extent Heritage Pty Ltd

Attention: Alan Williams / Georgia Burnett

Registration for consultation for ACHA for Lighthorse Interchange Business Hub, Eastern Creek NSW.

Aboriginal Archaeology Service is seeking *involvement* in all consultation meetings and fieldwork for the above-mentioned project, as we are registered traditional owners of the area. AAS immediate family has lived in the area from 1897 and retains local and oral history on behalf of its first nation people. We have no objection to our information being provided to the Office of Environment and Heritage and the Local Aboriginal Land Council.

AAS can assist with input that can be incorporated into a written assessment of cultural values of the area. We are also able to provide fit staff to assist with work that may involve physical labour. We can provide our schedule of rates and copies of relevant certificates of currency for business insurances on request.

All correspondence should be emailed to AAS.info@bigpond.com . The nominated contact person is myself and I would like to be involved in any fieldwork.

The area is an important part of our culture and valued by our family.

Yours truly

Andrew Williams



BUTUCARBIN ABORIGINAL CORPORATION

PO Box E18, Emerton NSW 2770

28 Pringle Road, Hebersham NSW 2770

Ph: 9832 7167 Fax: 9832 7263

koori@ozemail.com.au

ABN: 83 535 742 276

19th November, 2018

To whom it may concern,

Butucarbin Aboriginal Corporation wishes to register its interest to participate in the Aboriginal community consultation (at all stages) for the proposed development of the Lighthouse Interchange Business Hub. We would prefer that our details are not released to the Deerubbin LALC.

Background information

Butucarbin Aboriginal Corporation is a successful not for profit community organisation that was established in 1993 to provide Community Development, Education and Training to organisations and individuals in the Blacktown and Penrith LGA's of Western Sydney. The organisation has won many awards for outstanding service delivery over the past 23 years. The latest being our Executive Officer Jennifer Beale being a finalist in the 2014 NSW Australian of the Year awards.

Due to the changes in funding, for Aboriginal organisations and for Butucarbin to continue the service that they have been providing, the organisation has developed an Aboriginal Cultural Heritage Assessment business. All profits go back into the organisation to provide services to the community. Ultimately, as community workers we believe it is our duty to involve the Aboriginal community of Western Sydney in this work, as it enables the community to learn about cultural heritage and also enables archaeologists to gain different perspectives of Aboriginal Culture.

Consultation and Field Work

We recently participated in the Western Sydney Airport (WSA) EIS Aboriginal cultural heritage field program and Mt Gilead cultural test excavation and sieving program. Our workers were on time, professional and participated in all tasks set for them. Our cultural team advisor is Uncle Dave Whitton who is a highly respected and well-known elder throughout NSW. We believe it is of the utmost importance that the cultural heritage skills and knowledge are passed on to our younger Aboriginal generations. Mt Druitt has the largest urban Aboriginal population in Australia and one of the worst unemployment rates.

Our Team

Our team is highly skilled and has over ten years' experience in cultural heritage assessment field work. Currently, our team consists of several skilled field officers and two archaeology majors from the University of Sydney, one of which has a completed degree and also worked as a graduate archaeologist. We ensure there is diversity amongst our workers in that we do not discriminate against gender and age. In fact, we strongly encourage the employment of individuals of all ages as it is essential to gain insight into cultural heritage from varying age groups.

In conclusion, we have had a rich contemporary cultural connection to the Western Sydney Area since the NSW Government's 1970 Resettlement Program. A number of significant, contemporary cultural sites, such as community based organisations, have been established in Western Sydney since the early 1970's. We look forward to being involved in the process and appreciate the invitation to do so.

If you require further information, we have attached our flyer and web page www.butucarbin.org.au and we are also on Facebook. We would appreciate the opportunity to tender for any Aboriginal cultural heritage assessments you may have coming up in the future. You can contact Jennifer Beale on 0409924409.

Yours Sincerely,

Jennifer Beale
Executive Officer
November 19th, 2018

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'J. Beale', with a stylized flourish at the end.

Jennifer Beale
CEO



Barraby Cultural Services
ABN: 65 112 720 796
11 Waterhouse Place
Airds NSW 2560
M: 0423 906 606

E: barrabyculturalservices@gmail.com

5/11/2018

Alan Williams
Extent Heritage Pty Ltd
3/73 Union Street
Pyrmont NSW 2009

Re: I am writing in regards to Express my Interest to register for consultation -Aboriginal Cultural Heritage Assessment for Lighthorse Interchange Business Hub, Eastern Creek, NSW

Barraby Cultural Services is an Aboriginal owned company and have actively participated in the Protection of Aboriginal Cultural Heritage throughout the Sydney Basin Regions and South Coast Regions.

I on behalf of Barraby Cultural Services wish to provide you my organisation's registration of interest.

- I have completed all the tasks as directed and meet the physical labour and all the requirements listed below:
 - *Transects* **Wet and dry seiving* **White Card*
 - *Monitoring* **Science excavation* **Artefacts analysis*
- Barraby Cultural Services wishes to be involved in all aspects of this project such as any upcoming Consultation Meetings, heritage identification, assessment and management and Fieldwork.
- Attached are our Certificates of Currency for your records.

I have great pride in my culture and I acknowledge the lands that I live and work on and I pay my respects to the elders past and present.

I am a active member within the Campbelltown, Liverpool and South Coast Aboriginal Communities.

Should you wish to provide further information, please do not hesitate to contact me via email barrabyculturalservices@gmail.com or on 0423 906 606

Kind Regards

Lee Field

YULAY CULTURAL SERVICES

ABN: 20 192 216 560

15 Rowley place, Airids NSW 2560

Phone: 0411 048 794 Email: yulayculturalservices@gmail.com

5th November 2018

Alan Williams
Extent Heritage Pty Ltd
3/73 Union Street
Pymont NSW 2009

RE: I am writing in regards to Express my Interest to register for consultation for ACHA - Lighthorse Interchange Business Hub, Eastern Creek, NSW

Yulay Cultural Services is an Aboriginal owned company and I have been working within Aboriginal Heritage Work for over 8 years.

I on behalf of Yulay Cultural Services wishes to be involved in all aspects of this project, such as any upcoming Consultation Meetings, heritage identification, assessment and management and Fieldwork.

I have completed all the tasks as directed and meet the physical labour and all the requirements listed below

- Transects
- Science excavation
- Artefacts analysis
- Wet and dry sieving
- Monitoring
- White Card – On request
- Experience in Aboriginal Cultural Heritage in Aboriginal Archaeology
- RMS on the Hunter Expressway (15-18 months)
- Various Mines in the Hunter Region
- Local Sydney Basin - Western Sydney / South Western Sydney Regions
- Mt Gillard Project
- Western Sydney Airport
- RMS – M12
- Casual Sites Officer – Tharawal Aboriginal Land Council

I have great pride in my culture and I acknowledge the lands that I live and work on and I pay my respects to the elders past and present and I am a active member within the Campbelltown and Blacktown Aboriginal Communities.

If you require any further information regarding this letter please don't hesitate in contacting me via email or phone number above, or the following references.

Name: Andrew Costello
Company: SNR Archaeologist Jacob Pty Ltd

Phone: 0458 325 345

Name: Vanessa Hardy
Company: Archaeologis

Virtus Heritage Pty Ltd

Phone: 02 6676 4354

Kind Regards

Arika Jalomaki

5 November 2018

Extent -Heritage Advisors

Dear Alan

Re: Aboriginal Registration for Community Consultation—Lighthorse Interchange Business Hub
Eastern Creek Industrial Estate

We wish to register our expression of interest on all levels. Our corporation Corroboree Aboriginal Corporation holds cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the Eastern Creek region, and surrounding areas. We have lived in and around the area, and as Aboriginal people we therefore connect thru the land, thru our history, thru our heritage our families our stories. Please register our interest in the process of community consultation regarding the proposed activity. In line with OEH's consultation guidelines (Section 3.3.1), as we are Aboriginal people who can provide information for 'decision making'. We recognise our responsibilities and obligation to protect and conserve our traditional culture and heritage and we care for our traditional lands. We continue to maintain a deep respect for our ancestral belief system, traditions and customs. We have the trust of our community, the knowledge and the understanding. We have consulted with numerous archaeologists on many a project. We have a proven knowledge of identifying the significant artefacts to enable preservation of our culture and heritage.

We hereby register for all aspects of consultation, etc. in writing , please provide in writing. This statement is clarifying that we wish to be involved in future Aboriginal community consultation and that we shall assist with the assessment of cultural significance. We can assist in all aspects i.e. Identifying artefacts, pits, digging, sifting, carting, etc. We address all the OEH's requirements for registration as stated above. We have all the necessary insurances and safety gear.

We register an interest in the project and request our details not be forwarded to OEH and the Local Aboriginal Land Council (LALC). We specify that we do not want our details released or published. We look forward to your earliest response to acknowledge receipt of our interest as stakeholders in all aspects

Yours sincerely

Marilyn Carroll Johnson

Darug Aboriginal Land Care

(Uncle Des
Dyer)

18a Perigee Close
Doonside 2767NSW
ABN 71 301 006 047

Alan Williams
Archaeologist
Extent Heritage Advisors
3/73 Union Street
Pyrmont 2009
NSW

Re: Business Hub Eastern Creek.

Dear Alan,

Darug Aboriginal Land care / Uncle Des Dyer. Have no objections to the planned development.

The Darug Aboriginal Land care would like to **register** for this project and be consulted and take part in survey and test excavations. This project falls within the Darug land.

We are Traditional Owner, our members have lived on Darug land for most of their lives and worked in the area. We have responsibility to look after the plants, creeks and rivers on Darug land. We have been doing Cultural Heritage Assessments for over 20 year and still do today.

Our members are family and have lived in the area, we consult with them by Email and phone.

We would like to take part in any field survey and test excavations. Attend any meetings.

We have over 20years experience and all our works have White cards
Our preferred method of communication is by Email.

Our Site Officer Ricky Fields

Mobile 0402942572.

Email fields.r@outlook.com

**For all Survey test excavation and salvage works please contact him
for all work matters.
please contact him**

We agree and understand you can give our contacted details to others.

The area is an important part of our culture and valued by the community as most of the people that lived there were Darug. We can provide cultural knowledge during the survey.

Our preferred option to receive the project information is by E-mail.

Thank you

Kind regards

Des Dyer. Manager.

Darug Elder

Email desmond4552@hotmail.com

Mobile 0408360814

DARUG BOOROOBEROGAL ELDERS ABORIGINAL CORPORATION



ICN: 8890 ABN: 76 170 262 247
E-MAIL: BOOROOBERONGAL@OUTLOOK.COM
ADDRESS: PO BOX 14 DOONSIDE NSW 2767
PHONE: 0415 663 763



6/11/2018

TO: Dr Alan Williams
Extent Heritage Advisors

RE: Lighthorse Interchange Business Hub Eastern Creek NSW

Notification and Registration of ALL Darug Aboriginal Interests

Please be advice that Darug Boorooberongal Elders Aboriginal Corporation (DBEAC) is seeking to be involved in any and all consultation meetings and field work.

This office specialises in Darug Aboriginal and community consultation. The membership comprises of traditional owners from the area in question who retain strong story, song lines, oral history and continued contact. We have a continued spiritual connection to Darug nation territories. We would also like to state, that we do not except or support any person or organisation that are NOT from the DARUG Nation to have input on the project area.

Please also be advised that this Aboriginal organisation does not do volunteer work or attend unpaid meetings. I hope that you advise your client of this, so that, this group will not be discriminated against and refused paid field work.

We will be delighted to discuss this project with you in the near future.

Please do not hesitate to send all correspondence should be emailed to our email boorooberongal@outlook.com.

Yours faithfully

Uncle
Gordon Workman
Darug Elder

Sites Officer



**DARUG LAND
OBSERVATIONS PTY LTD
ABN 27 602 765 453**

EMAIL: DARUGLANDOBSERVATIONS@GMAIL.COM
PO BOX 173 ULLADULLA NSW 2539
MOBILE: 0413 687 279

7th November, 2018

Alan Williams
Extent Heritage Pty Ltd
3/73 Union Street
PYRMONT NSW 2009

Notification and Registration of ALL Aboriginal Interests

RE: LIGHTHORSE INTERCHANGE BUSINESS HUB – LOT 5 DP 804051 &
LOT 10 DP 1061237; PART OF 165 WALLGROVE ROAD & PART OF
475 FERRERS ROAD, EASTERN CREEK
Aboriginal Cultural Heritage Assessment

Dear Alan,

Please be advised that Darug Land Observations Pty Ltd is seeking to be involved in any and all consultation meetings and fieldwork.

This office specialises in Aboriginal and community consultations, and has a membership that comprises of Traditional owners from the area in question. Those retain strong story, song lines, oral history and continued contact.

We would also like to state that we do not accept or support any person or organisation that are NOT from the DARUG Nation that comments regarding the said area.

Please also be advised that this Aboriginal organisation does not do volunteer work or attend unpaid meetings. I hope that you advise your client of this so that, 'This Group', will not be discriminated against and refused paid fieldwork. DLO's rate is \$440 half day (less than 4 hours) and \$880 per day (flat rate), including GST.

All correspondence should be emailed to: daruglandobservations@gmail.com and any further consultation during this project can be directed to Anna on mobile 0413 687 279.

Yours sincerely,

Anna O'Hara
Darug Land Observations Pty Ltd

Jamie Workman

DARUG CUSTODIAN

ABORIGINAL CORPORATION



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: Lighthouse Interchange Business Hub Heritage Study

Dear Georgia

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.

The Eastern Creek area is an area that our group has a vast knowledge of, we have worked and lived in for many years, this area is significant to the Darug people due to the connection of sites and the continued occupation. Our group has been involved in all previous assessments and works in this area as a traditional owner Darug group for the past 40 plus years.

Therefore we would like to register our interest for full consultation and involvement in the above project area.

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

Regards

Justine Coplin

Archaeological Project - Expression of Interest

Darug Research
& Information Centre
71 Seven Hills Rd South,
Seven Hills, NSW, 2147
Ph (02) 9622-4081



Darug Tribal Aboriginal Corporation
ICN: 2734
PO Box 441
Blacktown, NSW, 2148
Ph | 02 9622 4081
Email: darug_tribal@live.com.au

07/11/2018

Alan Williams
Extent Heritage
Unit 3/73 Union Street
Pyrmont NSW
awilliams@extent.com.au

RE – Aboriginal Cultural Heritage Assessment for Lighthorse Interchange Business Hub, Eastern Creek, NSW - Notification of Project Proposal.

Dear Alan,

On behalf of the Board of Darug Tribal Aboriginal Corporation, I would like to thank you for the invitation to participate in the above-mentioned project.

The Darug Tribal Aboriginal Corporation, on behalf the Board and its Members, do hereby request to be included in all activities regarding this project, including any future correspondence there from arising.

Correspondence arising should be addressed to the Archaeological Coordinator, Mr. John Reilly and may be provided by post to the above PO Box address, or via e-mail to the above e-mail address. John may be contacted directly via Mobile at: (04) 0233-4123 or a message may be left on the answering machine in the DTAC Office via (02) 9622-4081.

On site consulting, and other services can be provided as required. The standard rate for such services is \$100 excluding GST per hour (\$110 per hour including GST).

The Corporation is a Not for Profit entity, and as such, all net income, following payment of wages to archaeological workers, derived from our participation in any project, goes toward supporting our Members, being the Traditional Owners of Darug land, the protection and preservation of Darug places and sites, the education of the wider community about the Darug people, their history, heritage and culture, and the functioning of the Corporation and its' services.

Sincerely,

Dirk Schmitt
Accountant to Darug Tribal Aboriginal Corporation

Megan Sheppard Brennand

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Friday, 2 November 2018 3:48 PM
To: Georgia Burnett
Subject: Re: Lighthouse Interchange Business Hub Heritage Study - Invitation to Register

Hi Georgia,

DNC would like to register an interest into Lighthouse Interchange business Project,

Kind regards
Paul Boyd & Lilly Carr
Directors DNC

[Sent from Yahoo Mail for iPhone](#)

On Friday, November 2, 2018, 2:21 pm, Georgia Burnett <gburnett@extent.com.au> wrote:

Dear Lillie and Paul,

On behalf of Western Sydney Parklands Trust, Extent is beginning work on an Aboriginal cultural heritage assessment as part of a State Significant Development of the Lighthouse Interchange Business Hub. The hub encompasses part of 165 Wallgrove Road, and part of 475 Ferrers Road, Eastern Creek, NSW (Lot 5 DP804051; Lot 10 DP [1061237](#)). As part of the process, we are following the OEH community consultation requirements.

At this stage, I am enquiring to see if you would like to be involved in the project. Please see the attached letter for more detail. I would appreciate a response by COB Monday **19 November 2018**.

The following are questions and notes that would help us greatly with project management and communication, so if you are able to answer any of them or provide the information in your response, that would be very much appreciated!

COMMUNICATION INFORMATION

To assist me with communicating project information effectively could you please provide the following information:

- A clear identification of the organisation registering an interest in the project.
- Your preferred method of communication with Extent and the proponent during consultation for this project, including a nominated contact person and contact details.

- Comment on the level of consultation and/or project involvement you require. Do you wish to attend any meetings? Do you wish to be involved in any fieldwork? Do you simply want a copy of the final report?
- If you wish to be involved in any meetings or fieldwork, please ensure we have current copies of your public liability, workers compensation and professional indemnity (if available) insurances as soon as possible.

PASSING ON YOUR DETAILS TO OEH AND DEERRUBBIN LALC

As part of the consultation process we are obliged to provide the contact details of organisations and individuals who register an interest to the Office of Environment and Heritage and Deerrubbin Local Aboriginal Land Council, unless instructed otherwise. Please advise us if you do not wish this to occur.

ADDITIONAL QUESTIONS TO HELP US

Please also consider the following questions, but note that these issues can also be discussed over the course of the project:

- Guidance on the protocols, sensitivity, use and/or distribution of any cultural information that you provide to Extent and the proponent as part of this project.
- Identification of any Aboriginal objects or places of cultural significance that you are aware of within or in the vicinity of the proposed activity area.
- Please note that registration of interest will not necessarily lead to participation in fieldwork. Participants will be engaged by the client on the basis of experience, cultural knowledge, appropriate insurances and our personnel requirements.

If you have any queries or concerns, please don't hesitate to contact me on [\(02\) 9555 4000](tel:0295554000).

Kind regards,

Georgia

Georgia Burnett
Research Assistant
T [02 9555 4000](tel:0295554000)
gburnett@extent.com.au
extent.com.au
Connect with us on:



Kamilaroi Yankuntjatjara Working Group
Phillip Khan - Principal
78 Forbes Street, Emu Plains NSW 2750
Mobile 043 4545 982 Emil philipkhan.acn@live.com.au

Extent Heritage
Att: Allan Williams
Unit 3/73 Union Street
Pyrmont NSW 2009

Dear Allan,

9th November 2018

Thankyou for your ad in the Daily Telegraph to be involved in Cultural Heritage Assessment at Lighthorse Interchange at Eastern Creek NSW & that you are inviting Aboriginal organisations to register, if they wish to be involved in the community consultation process.

As a Senior Aboriginal person for the past 40yrs, i actively participate in the Protection of the Aboriginal Cultural Heritage throughout the Sydney Basin , and particularly throughout Western Sydney, on behalf of Kamilaroi Yankuntjatjara Working Group, i wish to provide to you my organisations' registration of interest.

Information in my registration of Interest:

I am a Senior Aboriginal and Principal of the Kamilaroi Yankuntjatjara Working Group, I prefer communicating by, Mail, telephone or email

My contact details are:

Phillip Khan - Principal

78 Forbes Street, Emu Plains NSW 2750

Mobile 043 4545 982 Emil philipkhan.acn@live.com.au

alternatively you can also discuss any matters with Stefeanie via email philipkhan.acn@live.com.au

I wish to be involved and participate in all levels of consultation/project involvement. I wish to attend all meetings, and, participate in available field work; and would receive a copy of the report.

A copy of Kamilaroi Yankuntjatjara Working Group's - GIO Public Liability Insurance & GIO Workers Compensation Certificate is attached.

Should you wish me to provide further information, please do not hesitate to contact me on 0434545982.

Yours Sincerely
Pollowan Phillip Khan

Megan Sheppard Brennand

From: Vicki Slater <Vicki.slater@hotmail.com>
Sent: Tuesday, 20 November 2018 4:05 PM
To: Georgia Burnett
Subject: Re: EOI -Lighthouse Interchange Business Hub Heritage Study - Invitation to Register

Dear Georgia

Kawul Cultural Services / Wurrumay Consultants would like to register an interest for the above project.

Over 20 years Experienced site officers with Connection to country Black Kitty Colebee from C1800.
Hunter Valley Mining Companies and Sydney Basins.

We live within the project area. (Don't live out of the Sydney Areas)
Current Insurances
Dedicated to the protection of our culture.

Kind Regards

Vicky Slater Manager KCS
Kerry Slater Behalf of Wurrumay Consultants

From: Georgia Burnett <gburnett@extent.com.au>
Sent: Friday, 2 November 2018 3:20 AM
To: vicki.slater@hotmail.com
Subject: Lighthouse Interchange Business Hub Heritage Study - Invitation to Register

Dear Vicky,

On behalf of Western Sydney Parklands Trust, Extent is beginning work on an Aboriginal cultural heritage assessment as part of a State Significant Development of the Lighthouse Interchange Business Hub. The hub encompasses part of 165 Wallgrove Road, and part of 475 Ferrers Road, Eastern Creek, NSW (Lot 5 DP804051; Lot 10 DP 1061237). As part of the process, we are following the OEH community consultation requirements.

At this stage, I am enquiring to see if you would like to be involved in the project. Please see the attached letter for more detail. I would appreciate a response by COB Monday **19 November 2018**.

The following are questions and notes that would help us greatly with project management and communication, so if you are able to answer any of them or provide the information in your response, that would be very much appreciated!

COMMUNICATION INFORMATION

To assist me with communicating project information effectively could you please provide the following information:

- A clear identification of the organisation registering an interest in the project.
- Your preferred method of communication with Extent and the proponent during consultation for this project, including a nominated contact person and contact details.

- Comment on the level of consultation and/or project involvement you require. Do you wish to attend any meetings? Do you wish to be involved in any fieldwork? Do you simply want a copy of the final report?
- If you wish to be involved in any meetings or fieldwork, please ensure we have current copies of your public liability, workers compensation and professional indemnity (if available) insurances as soon as possible.

PASSING ON YOUR DETAILS TO OEH AND DEERRUBBIN LALC

As part of the consultation process we are obliged to provide the contact details of organisations and individuals who register an interest to the Office of Environment and Heritage and Deerrubbin Local Aboriginal Land Council, unless instructed otherwise. Please advise us if you do not wish this to occur.

ADDITIONAL QUESTIONS TO HELP US

Please also consider the following questions, but note that these issues can also be discussed over the course of the project:

- Guidance on the protocols, sensitivity, use and/or distribution of any cultural information that you provide to Extent and the proponent as part of this project.
- Identification of any Aboriginal objects or places of cultural significance that you are aware of within or in the vicinity of the proposed activity area.
- Please note that registration of interest will not necessarily lead to participation in fieldwork. Participants will be engaged by the client on the basis of experience, cultural knowledge, appropriate insurances and our personnel requirements.

If you have any queries or concerns, please don't hesitate to contact me on (02) 9555 4000.

Kind regards,

Georgia

Georgia Burnett

Research Assistant

T 02 9555 4000

gburnett@extent.com.au

extent.com.au

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Megan Sheppard Brennand

From: kerrie slater <wurrumay@hotmail.com>
Sent: Monday, 12 November 2018 9:07 AM
To: Georgia Burnett
Subject: Re: Lighthorse Interchange Business Hub Heritage Study - Invitation to Register

Thanks Georgia will be submitting an interest.

Kerry

From: Georgia Burnett <gburnett@extent.com.au>
Sent: Friday, 2 November 2018 2:21 PM
To: wurrumay@hotmail.com
Subject: Lighthorse Interchange Business Hub Heritage Study - Invitation to Register

Dear Kerrie,

On behalf of Western Sydney Parklands Trust, Extent is beginning work on an Aboriginal cultural heritage assessment as part of a State Significant Development of the Lighthorse Interchange Business Hub. The hub encompasses part of 165 Wallgrove Road, and part of 475 Ferrers Road, Eastern Creek, NSW (Lot 5 DP804051; Lot 10 DP 1061237). As part of the process, we are following the OEH community consultation requirements.

At this stage, I am enquiring to see if you would like to be involved in the project. Please see the attached letter for more detail. I would appreciate a response by COB Monday **19 November 2018**.

The following are questions and notes that would help us greatly with project management and communication, so if you are able to answer any of them or provide the information in your response, that would be very much appreciated!

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ADDITIONAL QUESTIONS TO HELP US

Please also consider the following questions, but note that these issues can also be discussed over the course of the project:

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If you have any queries or concerns, please don't hesitate to contact me on (02) 9555 4000.

Kind regards,

Georgia

Georgia Burnett

Research Assistant

T 02 9555 4000

gburnett@extent.com.au

extent.com.au

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THE ASIA PACIFIC**



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Megan Sheppard Brennand

From: Muragadi <muragadi@yahoo.com.au>
Sent: Tuesday, 20 November 2018 11:38 AM
To: Georgia Burnett
Subject: RE: Lighthorse Interchange Business Hub Heritage Study - Invitation to Register
Attachments: muragadi workers compensation insurance 2019.pdf; muragadi public liability 2019pdf.pdf

Hi Georgia,

We would like to be involved in this project, I don't understand why our address is wrong, I have just spoken with OEH and its 5 Hession road on their list. We would like to be involved in all aspects of the project i.e meetings, fieldwork etc

Kind regards

Jesse

From: Georgia Burnett [mailto:gburnett@extent.com.au]
Sent: Wednesday, 14 November 2018 10:42 AM
To: muragadi@yahoo.com.au
Subject: Lighthorse Interchange Business Hub Heritage Study - Invitation to Register

Dear Jessie,

I tried to send you this invitation to register to the PO Box listed by on the OEH registered, and it bounced as undeliverable. Please let me know if you need a hard copy of the letter sent again to updated address. Otherwise, please find below further information on the project, as well as the attached letter:

On behalf of Western Sydney Parklands Trust, Extent is beginning work on an Aboriginal cultural heritage assessment as part of a State Significant Development of the Lighthorse Interchange Business Hub. The hub encompasses part of 165 Wallgrove Road, and part of 475 Ferrers Road, Eastern Creek, NSW (Lot 5 DP804051; Lot 10 DP 1061237). As part of the process, we are following the OEH community consultation requirements.

At this stage, I am enquiring to see if you would like to be involved in the project. Please see the attached letter for more detail. I would appreciate a response by COB Monday **19 November 2018**.

The following are questions and notes that would help us greatly with project management and communication, so if you are able to answer any of them or provide the information in your response, that would be very much appreciated!

COMMUNICATION INFORMATION

To assist me with communicating project information effectively could you please provide the following information:

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- If you wish to be involved in any meetings or fieldwork, please ensure we have current copies of your public liability, workers compensation and professional indemnity (if available) insurances as soon as possible.

PASSING ON YOUR DETAILS TO OEH AND DEERRUBBIN LALC

As part of the consultation process we are obliged to provide the contact details of organisations and individuals who register an interest to the Office of Environment and Heritage and Deerrubbin Local Aboriginal Land Council, unless instructed otherwise. Please advise us if you do not wish this to occur.

ADDITIONAL QUESTIONS TO HELP US

Please also consider the following questions, but note that these issues can also be discussed over the course of the project:

- Guidance on the protocols, sensitivity, use and/or distribution of any cultural information that you provide to Extent and the proponent as part of this project.
- Identification of any Aboriginal objects or places of cultural significance that you are aware of within or in the vicinity of the proposed activity area.
- Please note that registration of interest will not necessarily lead to participation in fieldwork. Participants will be engaged by the client on the basis of experience, cultural knowledge, appropriate insurances and our personnel requirements.

If you have any queries or concerns, please don't hesitate to contact me on (02) 9555 4000.

Kind regards,
Georgia

Georgia Burnett
Research Assistant
T 02 9555 4000
gburnett@extent.com.au
extent.com.au
Connect with us on:



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THE ASIA PACIFIC



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Megan Sheppard Brennand

From: Darleen Johnson <darleenj@y7mail.com>
Sent: Thursday, 13 December 2018 3:10 PM
To: Georgia Burnett
Subject: Re: Lighthouse Business Hub - Invitation to register

Hi Georgia
Thank u very much can u please register us for this project
Thanks
Darleen

Sent from my iPhone

On 13 Dec 2018, at 9:38 am, Georgia Burnett <gburnett@extent.com.au> wrote:

Hi Darleene,

I am emailing you regarding a project which is currently ongoing – we originally sent the documentation to your email address, but Alistair has mentioned that that email address has had problems recently, and provided me with your personal email address. In case you hadn't received this invitation to register for this project, I thought I'd send the notification along in case.

If you wish to register, please let me know.

Kind regards,
Georgia

Georgia Burnett
Research Assistant
T 02 9555 4000
gburnett@extent.com.au
extent.com.au
Connect with us on:

<[FB_423c721a-4cd0-481a-91f8-780e9f111549.png](#)> <[LinkedIn_ebc4f2a1-55e1-4efe-8f0e-103053dbb87b.png](#)>
<[christmasgreetingsemail\(005\)_cfce7c99-c4df-47ae-87d6-6d010235d6c1.jpg](#)>



<Murra Bidgee Mullangari AC_Notification - Lighthouse Interchange Business Hub.pdf>

Megan Sheppard Brennand

From: Phillip Boney <waarlan12@outlook.com>
Sent: Friday, 2 November 2018 3:02 PM
To: Georgia Burnett
Subject: Re: Lighthorse Interchange Business Hub Heritage Study - Invitation to Register
Attachments: OA26204109_CONFIRMATION_1_1.PDF

Hi Georgia,

My name is Phil Boney. My RAP group name is Wailwan Aboriginal Group, my contact details are as followed:

Email: Waarlan12@outlook.com
Mobile: 0436483210

I would like to be involved entirely on all bases of this project: fieldwork/excavation/ meetings and so forth. Also I have attended my public liability and workers compensation insurances. With respects if successful I look forward to working with you on this project. Thankfully yours, Phil Boney

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From: Georgia Burnett <gburnett@extent.com.au>
Sent: Friday, November 2, 2018 2:20:21 PM
To: waarlan12@outlook.com
Subject: Lighthorse Interchange Business Hub Heritage Study - Invitation to Register

Dear Philip,

On behalf of Western Sydney Parklands Trust, Extent is beginning work on an Aboriginal cultural heritage assessment as part of a State Significant Development of the Lighthorse Interchange Business Hub. The hub encompasses part of 165 Wallgrove Road, and part of 475 Ferrers Road, Eastern Creek, NSW (Lot 5 DP804051; Lot 10 DP 1061237). As part of the process, we are following the OEH community consultation requirements.

At this stage, I am enquiring to see if you would like to be involved in the project. Please see the attached letter for more detail. I would appreciate a response by COB Monday **19 November 2018**.

The following are questions and notes that would help us greatly with project management and communication, so if you are able to answer any of them or provide the information in your response, that would be very much appreciated!

COMMUNICATION INFORMATION

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- Comment on the level of consultation and/or project involvement you require. Do you wish to attend any meetings? Do you wish to be involved in any fieldwork? Do you simply want a copy of the final report?
- If you wish to be involved in any meetings or fieldwork, please ensure we have current copies of your public liability, workers compensation and professional indemnity (if available) insurances as soon as possible.

PASSING ON YOUR DETAILS TO OEH AND DEERRUBBIN LALC

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ADDITIONAL QUESTIONS TO HELP US

Please also consider the following questions, but note that these issues can also be discussed over the course of the project:

- Guidance on the protocols, sensitivity, use and/or distribution of any cultural information that you provide to Extent and the proponent as part of this project.
- Identification of any Aboriginal objects or places of cultural significance that you are aware of within or in the vicinity of the proposed activity area.
- Please note that registration of interest will not necessarily lead to participation in fieldwork. Participants will be engaged by the client on the basis of experience, cultural knowledge, appropriate insurances and our personnel requirements.

If you have any queries or concerns, please don't hesitate to contact me on (02) 9555 4000.

Kind regards,
Georgia

Georgia Burnett
Research Assistant
T 02 9555 4000
gburnett@extent.com.au
extent.com.au
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HERITAGE ADVISORS
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Megan Sheppard Brennand

From: WIDESCOPE . <widescope.group@live.com>
Sent: Wednesday, 7 November 2018 11:16 AM
To: Dr Alan Williams
Subject: EOI: Registration Aboriginal Cultural Heritage Assessment Lighthorse Interchange Business Hub Eastern Creek

Hi Alan,

Could you please register my interest in the Aboriginal Cultural heritage assessment for the Lighthorse Interchange Hub Eastern Creek, NSW

I am a recognised indigenous cultural knowledge holder. I hold knowledge relevant in determining the significance of Aboriginal objects and places. I hold a cultural connection to Eastern Creek and surrounding areas.

My preferred Method of contact is Via Email: widescope.group@live.com or Mob 0425230693
Admin 0425232056

My level of involvement: I would like to attend Community Consultation meetings and to be considered for field survey works.

Regards
Steven Hickey

Yurrandaali Cultural Services

ABN: 52 618 794 088

11 Waterhouse Place

Airds NSW 2560

T: 0457 546 643

E: yurrandaali_cs@hotmail.com

5/11/2018

Alan Williams
Extent Heritage Pty Ltd
3/73 Union Street
Pyrmont NSW 2009

**Re: I am writing in regards to Express my Interest to register for consultation -
Aboriginal Cultural Heritage Assessment for Lighthouse Interchange Business Hub,
Eastern Creek, NSW**

Yurrandaali Cultural Services is an Aboriginal owned company and we have been working with Aboriginal Cultural Heritage Work for over 10 years throughout the South Coast and Sydney Basin Regions.

Yurrandaali Cultural Services would like to express our registration of interest for this project.

1. Yurrandaali Cultural Services wishes to be involved in all aspects of this project such as any upcoming Consultation Meetings, heritage identification, assessment and management and Fieldwork.
2. Attached are our Certificates of Currency for your records.
3. I have completed all the tasks as directed and meet the physical labour and all the requirements listed below
 - Transects
 - Science excavation
 - Artefacts analysis
 - Wet and dry sieving
 - Monitoring
 - White Card –
 - Experience in Aboriginal Cultural Heritage in Aboriginal Archaeology

I have great pride in my culture and I acknowledge the lands that I live and work on and I pay my respects to the elders past and present.
I am a active member within the Campbelltown & South Coast Aboriginal Communities.

Kind Regards

Bo Field

8 January 2019

Office of Environment and Heritage

PO Box 644
Parramatta NSW 2124

Attention: **Susan Harrison** (Senior Team Leader Planning Greater Sydney)

Aboriginal Cultural Heritage Assessment Report for the Lighthorse Interchange Business Hub: Registered Aboriginal Parties

Dear Susan,

On behalf of Western Sydney Parklands Trust, Extent Heritage is preparing an Aboriginal Cultural Heritage Assessment Report for the Lighthorse Interchange Business Hub at 165 Wallgrove Road and 475 Ferrers Road, Eastern Creek, NSW. While the project is being assessed as a State Significant Development (SSD 9667), the project SEARs require that an Aboriginal Cultural Heritage Assessment Report (ACHAR) be prepared in accordance with the Office of Environment and Heritage guidelines. As part of the ACHAR, we are following the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010).

I am writing to provide you with a list of the Registered Aboriginal Parties (RAPs) for the project, in accordance with Section 4.1.6 of the requirements:

1. Deerubbin Local Aboriginal Land Council
2. A1 Indigenous Services
3. Aboriginal Archaeology Service
4. Barking Owl Aboriginal Corporation
5. Barraby Cultural Services
6. Butucarbin Aboriginal Corporation
7. Corroboree Aboriginal Corporation
8. Darug Aboriginal Land Care
9. Darug Boorooberongal Elders Aboriginal Corporation
10. Darug Custodian Aboriginal Corporation
11. Darug Land Observations
12. Darug Tribal Aboriginal Corporation

13. Didge Ngunawal Clan
14. Kamilaroi-Yankuntjatjara Working Group
15. Kawaul Cultural Services
16. Muragadi Heritage Indigenous Corporation
17. Wailwan Aboriginal Group
18. Widescope Indigenous Group
19. Wurrumay Consultancy
20. Yarrandaali Cultural Services
21. Yulay Cultural Services

Enclosed also are a copy of the notification that was distributed to potential stakeholders, and a copy of the advertisement that was published in *The Blacktown Advocate*.

Please don't hesitate to contact me on (02) 9555 4000 if you have any queries or concerns.

Yours sincerely,



Laressa Barry
Heritage Advisor | Extent Heritage

2 November 2018

Attn: Amanda Hickey
Amanda Hickey Cultural Services
41 Dempsey Street
Emu Heights NSW 2750

Re: Aboriginal Cultural Heritage Assessment for Lighthorse Interchange Business Hub, Eastern Creek, NSW – Notification of Project Proposal.

Dear Amanda,

In accordance with the NSW Office of Environment and Heritage's (OEH) (formerly NSW Department of Environment, Climate Change and Water (DECCW)) *Aboriginal Cultural Heritage Consultation Requirements for Proponents, 2010*, I am writing to notify you that we have been engaged by Western Sydney Parklands Trust (the proponent) to undertake an Aboriginal Cultural Heritage Assessment (ACHAR) as part of a State Significant Development of the Lighthorse Interchange Business Hub. The hub encompasses part of 165 Wallgrove Road, and part of 475 Ferrers Road, Eastern Creek, NSW (Lot 5 DP804051; Lot 10 DP 1061237) (**Figure 1**).

The land in question is within the Blacktown Local Government Area, and the proposed development will involve subdivision and then re-development of the land. Specific design and development activities are yet to be determined, but would likely include bulk earthworks, estate stormwater, lead-in services, environmental works, access, estate landscaping and conceptual built form.

The proponent's contact details are:

Mr Luke Wilson, C/- Western Sydney Parklands Trust
PO Box 3064
Parramatta NSW 2124
(T) 02 9895 7500
(E) Luke.Wilson@wspt.nsw.gov.au

Extent will be undertaking the assessment in accordance with the relevant OEH *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* guidelines. An important part of the assessment will be Aboriginal community consultation that aims to identify the Aboriginal cultural heritage within the study area, including the cultural values and places of importance to the Aboriginal community. The purpose of the consultation is to assist the proponent in preparing the ACHA for the study area, and if necessary to assist OEH in considering the assessment and any Aboriginal Heritage Impact Permit (AHIP) application.

We are inviting registrations from Aboriginal individuals and/or organisations who may hold relevant cultural knowledge for determining the Aboriginal cultural heritage of the area, and who wish to be involved in the community consultation process. If you or your organisation is interested in being part of the consultation process, please provide a registration of interest to Alan Williams at the Sydney address below or by email to awilliams@extent.com.au

Registrations are requested by **19 November 2018**.

Please don't hesitate to contact me on (02) 9555 4000 if you have any queries or concerns.

Yours sincerely,



Dr Alan Williams FSA MAACAI
Associate Director | Extent Heritage

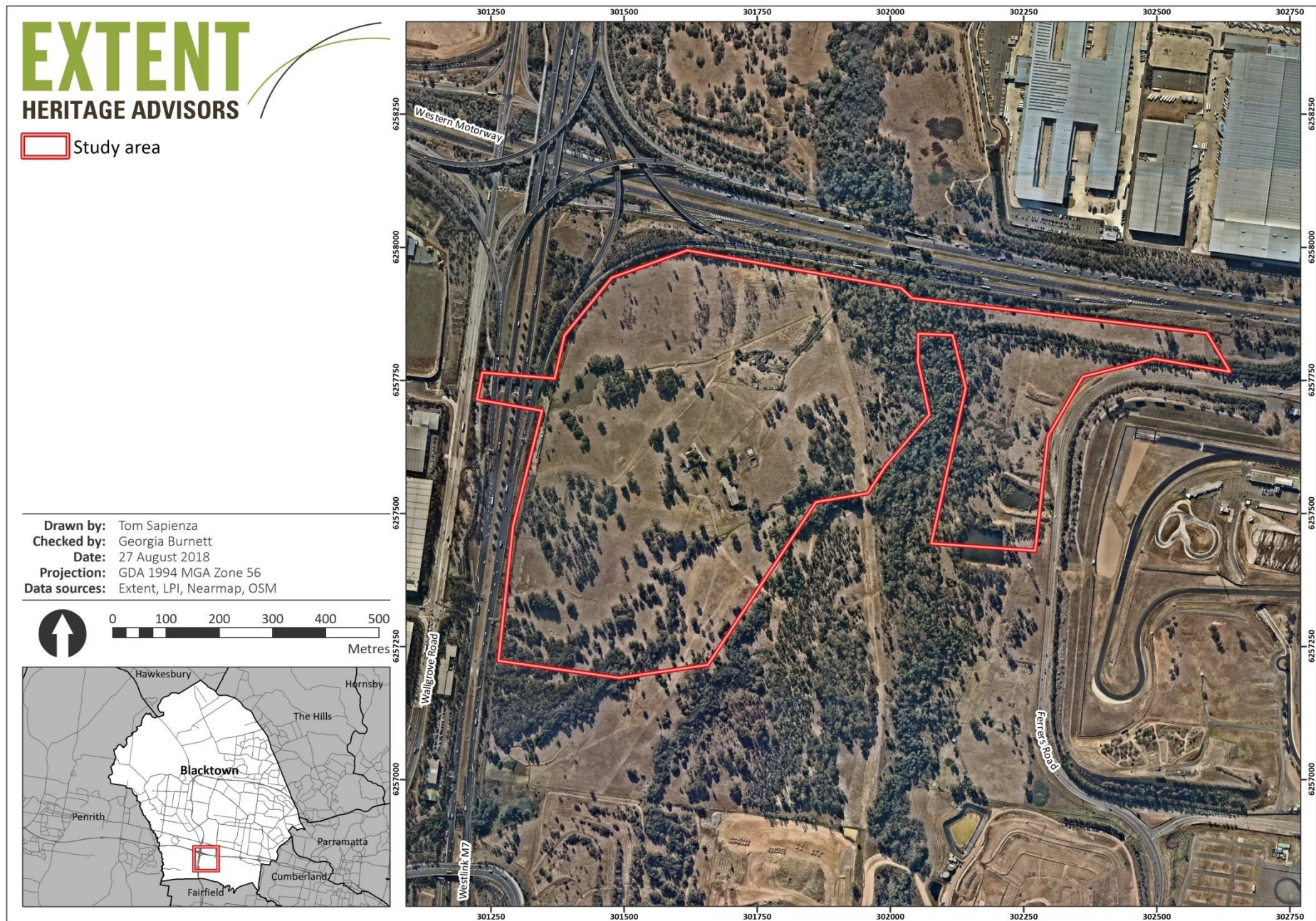


Figure 1. The study area.

8 January 2019

Deerubbin Local Aboriginal Land Council

Level 1, Suite 3, 291-295 High Street
Penrith NSW 2750

Attention: **Steven Randall**

Aboriginal Cultural Heritage Assessment Report for the Lighthorse Interchange Business Hub: Registered Aboriginal Parties

Dear Steven,

On behalf of Western Sydney Parklands Trust, Extent Heritage is preparing an Aboriginal Cultural Heritage Assessment Report for the Lighthorse Interchange Business Hub at 165 Wallgrove Road and 475 Ferrers Road, Eastern Creek, NSW. While the project is being assessed as a State Significant Development (SSD 9667), the project SEARs require that an Aboriginal Cultural Heritage Assessment Report (ACHAR) be prepared in accordance with the Office of Environment and Heritage guidelines. As part of the ACHAR, we are following the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010).

I am writing to provide you with a list of the Registered Aboriginal Parties (RAPs) for the project, in accordance with Section 4.1.6 of the requirements:

1. Deerubbin Local Aboriginal Land Council
2. A1 Indigenous Services
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4. Barking Owl Aboriginal Corporation
5. Barraby Cultural Services
6. Butucarbin Aboriginal Corporation
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8. Darug Aboriginal Land Care
9. Darug Boorooberongal Elders Aboriginal Corporation
10. Darug Custodian Aboriginal Corporation
11. Darug Land Observations
12. Darug Tribal Aboriginal Corporation

13. Didge Ngunawal Clan
14. Kamilaroi-Yankuntjatjara Working Group
15. Kawaul Cultural Services
16. Muragadi Heritage Indigenous Corporation
17. Wailwan Aboriginal Group
18. Widescope Indigenous Group
19. Wurrumay Consultancy
20. Yarrandaali Cultural Services
21. Yulay Cultural Services

Enclosed also are a copy of the notification that was distributed to potential stakeholders, and a copy of the advertisement that was published in *The Blacktown Advocate*.

Please don't hesitate to contact me on (02) 9555 4000 if you have any queries or concerns.

Yours sincerely,



Laressa Barry
Heritage Advisor | Extent Heritage

Appendix 2-6. Notification Documentation – Newspaper Advert

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NOTICE BOARD

General Notices

Notice of Aboriginal Cultural Heritage Assessment and Invitation for Registrations of Interest - Lighthorse Interchange Business Hub, Eastern Creek, NSW.

Western Sydney Parklands Trust is proposing to undertake an Aboriginal Cultural Heritage Assessment as part of a State Significant Development Application for the proposed Lighthorse Interchange Business Hub (Part Lot 5 DP804051; Part Lot 10 DP 1061237), Eastern Creek, NSW. Contact details for the proponent are: Mr Luke Wilson, C/- Western Sydney Parklands Trust, PO Box 3064, Parramatta NSW 2124.

Registrations are invited from Aboriginal individuals and organisations who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area, and who wish to be involved in the consultation process.

The consultation may be used to prepare an Aboriginal Heritage Impact Permit or equivalent, if required, and to assist OEH in consideration and determination of the AHIP application.

Registrations of interest should be provided by no later than **19 November 2018** to Alan Williams at Extent Heritage Pty Ltd by:
Email: awilliams@extent.com.au
Phone: (02) 9555 4000
Fax: (02) 9555 7005
Post: 3/73 Union St, Pyrmont, NSW, 2009

The Management Committee of the Pat Zikan Reserve is holding its **Annual General Meeting** Saturday 17th November 2018 at 9:45am on the Reserve, Flushcombe Rd, Blacktown. New members and visitors Welcome

For more information please contact the secretary on: 0425 235 050

Legal Notices

WITNESSES SOUGHT
Would anyone who has any information about or who has witnessed an accident involving 5 cars on the M4 Motorway, Prospect NSW 2148 at approximately 5:30pm on 27 June 2018, please contact: Iain Miller at Shanahan Tudhope Lawyers on (02) 9262 2888 or email: iainmiller@stlaw.com.au.

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Appendix 2-7. Presentation of Information/Assessment Methodology Sent and Any Feedback Received

7 December 2018

[Company]

[Address]

[City State Postcode]

Attention: [Name]

Re: Lighthorse Interchange Business Hub, Eastern Creek, NSW (SSD 9667) - Proposed Aboriginal Cultural Heritage Assessment Report Methodology

Dear [Name]

Thank you for your registration of interest in the Aboriginal Cultural Heritage Assessment Report (ACHAR) for the proposed Lighthorse Interchange Business Hub, at part of Lot 5 DP 804051 and Lot 10 DP 1061237 in the Blacktown Local Government Area (**Figure 1**). Your interest in the project has been formally registered in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

Attached is the proposed methodology for the project, which includes an archaeological survey and test excavations. I would like to invite you to review the methodology and provide any comments you may have by **DATE**.

If you have any questions, please do not hesitate to contact me on (02) 9555 4000, or by email at tsapienza@extent.com.au.

Kind Regards



Tom Sapienza

Heritage Advisor | Extent Heritage

Built & Urban Heritage | Aboriginal Heritage | Archaeology | Interpretation | Intangible Cultural Heritage | World Heritage

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BRISBANE

Level 7, 757 Ann Street
Fortitude Valley
P 07 3667 8881

PERTH

Level 24,
108 St. Georges Terrace
P 08 9381 5206

Contact Details

This letter has been prepared by Extent Heritage Pty Ltd (Extent) on behalf of Western Sydney Parklands Trust (the proponent). The proponent's contact details are:

Mr Luke Wilson
C/- Western Sydney Parklands Trust
PO Box 3064
Parramatta NSW 2124
T: 02 9895 7500

Background

Western Sydney Parklands Trust propose to undertake development on property within parts of Lot 5 DP 804051 and Lot 10 DP 1061237, which encompasses 165 Wallgrove Road, and 475 Ferrers Road, Eastern Creek, NSW. The proposed development has been classified as State Significant Development (SSD) (SSD 9667). The development would involve subdivision of the land and construction of bulk earthworks, stormwater infrastructure, environmental controls, vehicular access, footpaths and landscaping. Notably, the development proposes to redirect part of Eskdale Creek, a 2nd order tributary of Eastern Creek. Areas of proposed development are shown in **Figure 2**.

Sites in the vicinity of the study area are dominated by low-density artefact scatters and/or isolated finds. Site appears to have lower artefact densities than elsewhere in the Cumberland Plain. These assemblages tend to be dominated by silcrete, and are strongly indicative of a late Holocene (5-0ka) visitation and/or occupation of the region, but chert, quartz, tuff and mudstone are also present. A number of materials types not local to the area have been identified in the study area by previous investigations, suggesting transportation of artefacts. Artefact densities are generally lower closer to the local waterways (likely due to scouring effects based on regional archaeological models that suggest greater artefact densities should be present), but become increasingly dense and more significant with elevation.

A complete list of the Aboriginal sites in, and immediately adjacent to, the study area can be found in **Table 1**, and a map of the sites is shown in **Figure 3**. In 1985, Kohen undertook surveys for Aboriginal sites in the Blacktown area and registered two sites in the current study area (AHIMS #45-5-0453 and #45-5-0469). In 1989, Crew surveyed the eastern bank of Eastern Creek, and located one site within the current study area (AHIMS #45-5-0756) and one immediately adjacent to the current study area (AHIMS #45-5-0751). In 1996, Brayshaw identified one site (AHIMS #45-5-1066) immediately adjacent to the current study area.

In 1999, Navin Officer identified two isolated artefacts (AHIMS #45-5-2564 and #45-5-2565) within the current study area, and one Potential Archaeological Deposit (PAD) that encompasses Eastern Creek, Reedy Creek and Erskdale Creek. The PAD was not registered

on AHIMS, and the associated report was not lodged with the Office of Environment and Heritage (OEH). The reason for this is not known.

As part of the present development, Extent has been engaged to facilitate the Aboriginal heritage process, and will be synthesising the existing assessments in the area and preparing an ACHAR in accordance with current OEH guidelines. The ACHAR will assess the potential impact of any future development, and will develop relevant management and mitigation measures to be incorporated into the development consent.

Table 1. Archaeological sites in and immediately adjacent to the development area.

AHIMS SITE ID	SITE NAME	SITE FEATURE
45-5-0751	EC11 (Eastern Creek)	Artefact scatter
45-5-0756	EC6 (Eastern Creek)	Artefact scatter
45-5-1066	Eastern Creek 1 EC 1	Artefact scatter
45-5-2564	IF1	Isolated artefact
45-5-2565	IF2	Isolated artefact
45-5-3264	WSP 17	Artefact scatter
-	PAD	Potential artefact deposit

Proposed Assessment Methodology

While an SSD project, the SEARs require that an Aboriginal Cultural Heritage Assessment Report (ACHAR) be prepared in accordance with the Office of Environment and Heritage guidelines:

- ♦ *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011);
- ♦ *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010);
- ♦ *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010)
- ♦ *Draft Guidelines for Aboriginal Cultural Impact Assessment and Community Consultation* (DPI 2005)

Development of the ACHAR will be in two stages – with the first stage involving an archaeological survey and subsequent reporting to meet SSD submission as part of the Environmental Impact Statement (EIS) in February 2019. This will be followed by archaeological test excavation and revision of the ACHAR in light of the results of the test excavation, shortly thereafter, if required.

The initial ACHAR will include the following tasks:

- ♦ Aboriginal community consultation;
- ♦ Archaeological survey;

- ◆ Preparation of the ACHAR, which incorporates Aboriginal consultation and any cultural information provided, outlines the findings of the archaeological survey, and makes recommendations for the future management of Aboriginal heritage sites and/or objects that may be present within the proposed study area; and
- ◆ If sites are identified, submissions of site recordings for registration on OEH's AHIMS database.

The subsequent ACHAR will include the following tasks:

- ◆ Archaeological test excavation, if required;
- ◆ Revision of the existing ACHAR to incorporate the findings of the test excavation program, updated Aboriginal consultation and cultural information, Aboriginal heritage impact assessment, and further recommendations for the management of Aboriginal cultural heritage and archaeological sites present in the study area; and
- ◆ Updated site card information following from the test excavation.

Further details regarding the archaeological survey and test excavation are provided below. These components of the work would be undertaken in conjunction with representatives of the Registered Aboriginal Parties (RAPs) based on selective commercial engagements determined by the client.

Archaeological Survey Methodology

We propose to undertake an archaeological survey in accordance with the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010). The survey will aim to identify any visible Aboriginal objects (material traces and evidence of Aboriginal land), as well as identify those areas where it can be inferred that, although not visible, material traces or evidence of Aboriginal land use have a likelihood of being present under the ground surface (PADs). The survey will serve as a ground truthing exercise, to inform the testing program, if required.

The survey strategy will include:

- ◆ Inspection of a sample of the landforms that will potentially be impacted;
- ◆ Placing a proportionate emphasis on those landforms deemed to have archaeological potential;
- ◆ Pedestrian survey of pre-determined transects;
- ◆ Taking representative photographs of survey units and landforms where informative;
- ◆ Recording landform and general soil information for each survey unit;
- ◆ Recording the land surface and vegetation conditions encountered during the survey (accounting as appropriate for things like vegetation, rock outcrops, coarse fragments, etc.), and how these impact on the visibility of objects;
- ◆ Recording any Aboriginal objects observed during the survey; and

- ◆ Recording of spatial information suitable for mapping according to Code requirements and the calculation of survey coverage.

The archaeological survey is designed to sample the study area in a systematic manner by targeting areas of ground surface visibility and including a representative sample of all landforms. Any areas of ground exposure will be examined for archaeological evidence such as stone artefacts, charcoal and shell. Ground surfaces and cut-and-fill features will also be examined to determine the degree of soil disturbance, erosion and potential for subsurface archaeological deposits.

Archaeological Test Excavation Methodology

Depending on the outcomes of the archaeological survey, Extent proposes to undertake an archaeological test excavation program that reflects the development design and the archaeological sensitivity of the study area. The aim of the test excavation will be to determine the subsurface nature and extent of the Aboriginal heritage resource within the area.

Archaeological test excavation would be implemented in broad accordance with Requirements 16 and 17 of DECCW's *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. Specifically, they will follow the following general methodology:

- ◆ Placement of test excavation units on a systematic grid across areas of archaeological interest.
- ◆ Manual excavation using hand tools.
- ◆ Individual test excavation units of 50cm x 50cm size. Test excavation units may be combined and excavated as necessary to understand the site characteristics.
- ◆ Excavation will occur in 10cm spits or according to stratigraphy (whichever is smallest).
- ◆ Excavation to continue to the base of the identified Aboriginal object-bearing soil(s) and below, sufficient to confirm that the underlying soil(s) is/are culturally sterile.
- ◆ Sieving of all excavated material through a 5mm sieve.
- ◆ Photographic and scale-drawn records of the excavations.

Extent proposes to excavate an initial grid of 0.25m² test pits at systematic intervals across the study area, with the grid interval to be based proportionately upon areas of very high, high, moderate and low archaeological potential, and subject to the outcomes of the archaeological survey (**Figure 4**). However, this strategy has been based on desktop research only, and may prove unsuitable following from the survey, or due to information that only becomes clear once on site. In such a situation, the Excavation Director may revise the shape and size of the grid, and/or alter the locations of the test pits, in consultation with the Aboriginal stakeholders on site.

All excavations would continue until basal clays are exposed, or culturally sterile units identified (being defined as three consecutive spits without cultural material). Should significant cultural materials be identified, and time permits, additional excavation will be undertaken. This may consist of excavation of additional test pits in gaps in the grids, and/or expanding the test pit found to contain the highest artefact density in order to further characterise the deposit.

All material would be sieved through a 5mm mesh. All excavations would be recorded in accordance with the Code, including scale drawings, photographs, written descriptions, etc.

Timeframes

Extent Heritage proposes the following indicative timeframes for the project:

- ◆ Distribution of this document to Registered Aboriginal Parties: **mid December 2018.**
- ◆ End of review period for the proposed methodology: **mid January 2019.**
- ◆ Field survey to be undertaken: **mid to late January 2019.**
- ◆ Distribution of draft ACHAR to Registered Aboriginal Parties for review: **mid February 2019.**
- ◆ Archaeological test excavation (if required): **March 2019.**
- ◆ Distribution of the draft ACHAR (post-testing) to Registered Aboriginal Parties for review (if required): **May 2019.**

Information Sought

Extent Heritage would appreciate your feedback on the methodology proposed above for the investigation and assessment of the study area.

In returning your answers, please include the following where appropriate:

- ◆ Any protocols that you would like adopted during the project;
- ◆ Identification of any Aboriginal objects of cultural significance and/or importance that you are aware of within the activity area, and how you wish them to be dealt with during the project;
- ◆ Identification of any places of cultural significance and/or importance that you are aware of within the activity area, and how you wish them to be dealt with during the project;
- ◆ Guidance on the protocols, sensitivity, use and/or distribution of any cultural information that you provide to Extent Heritage;
- ◆ Whether you require any further information prior to Extent Heritage proceeding with the project.

We also direct you to Extent's policy and procedures on Aboriginal engagement, which will be provided with this document. It is important that you understand that Extent Heritage will compile

and forward information for review by the proponent, but we do not decide who will be involved in fieldwork in any paid capacity.

If you would like to arrange for any elders or other community members to be able to visit the site during the work, please let us know.

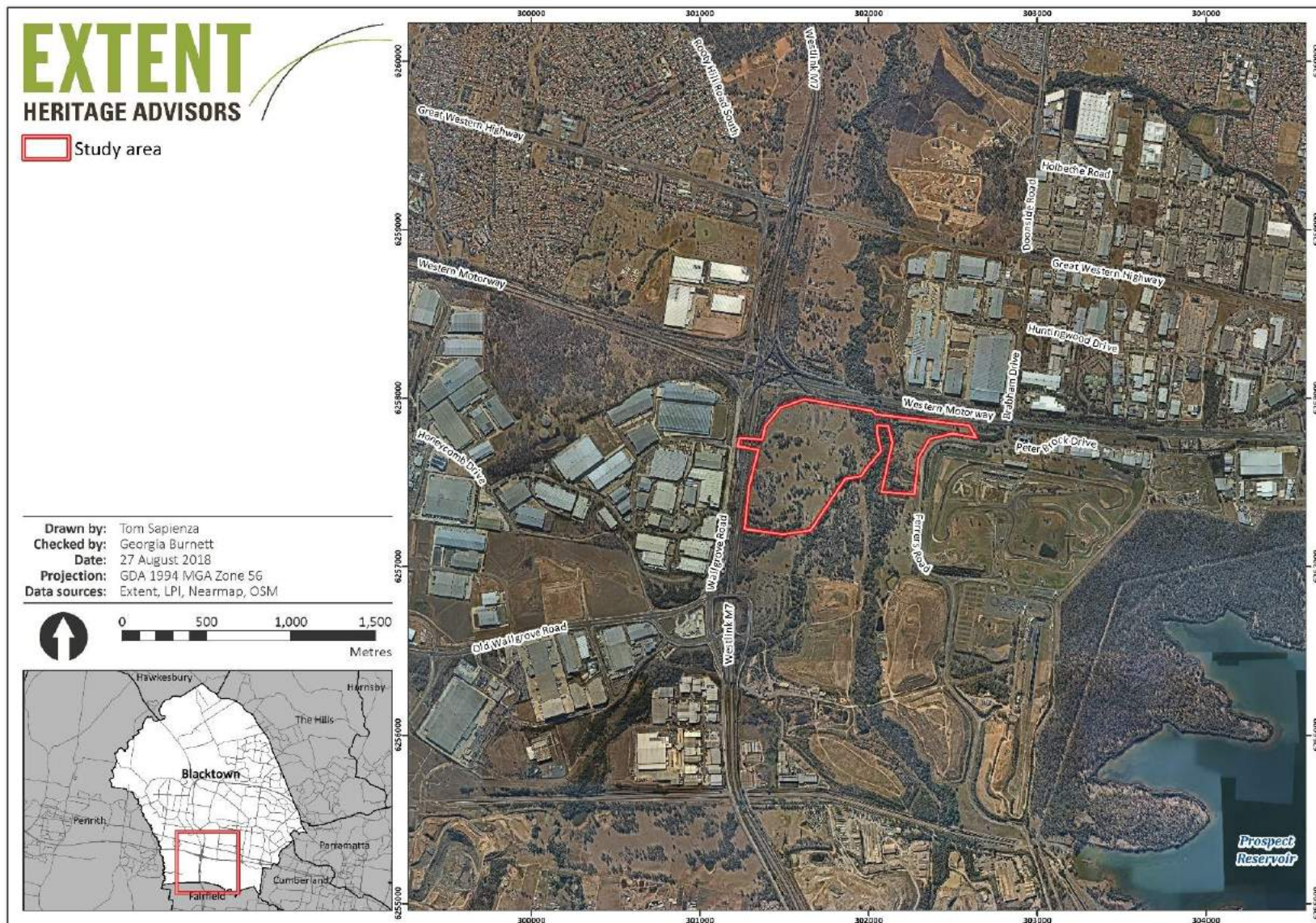


Figure 1. *Lighthorse Business Hub study area.*

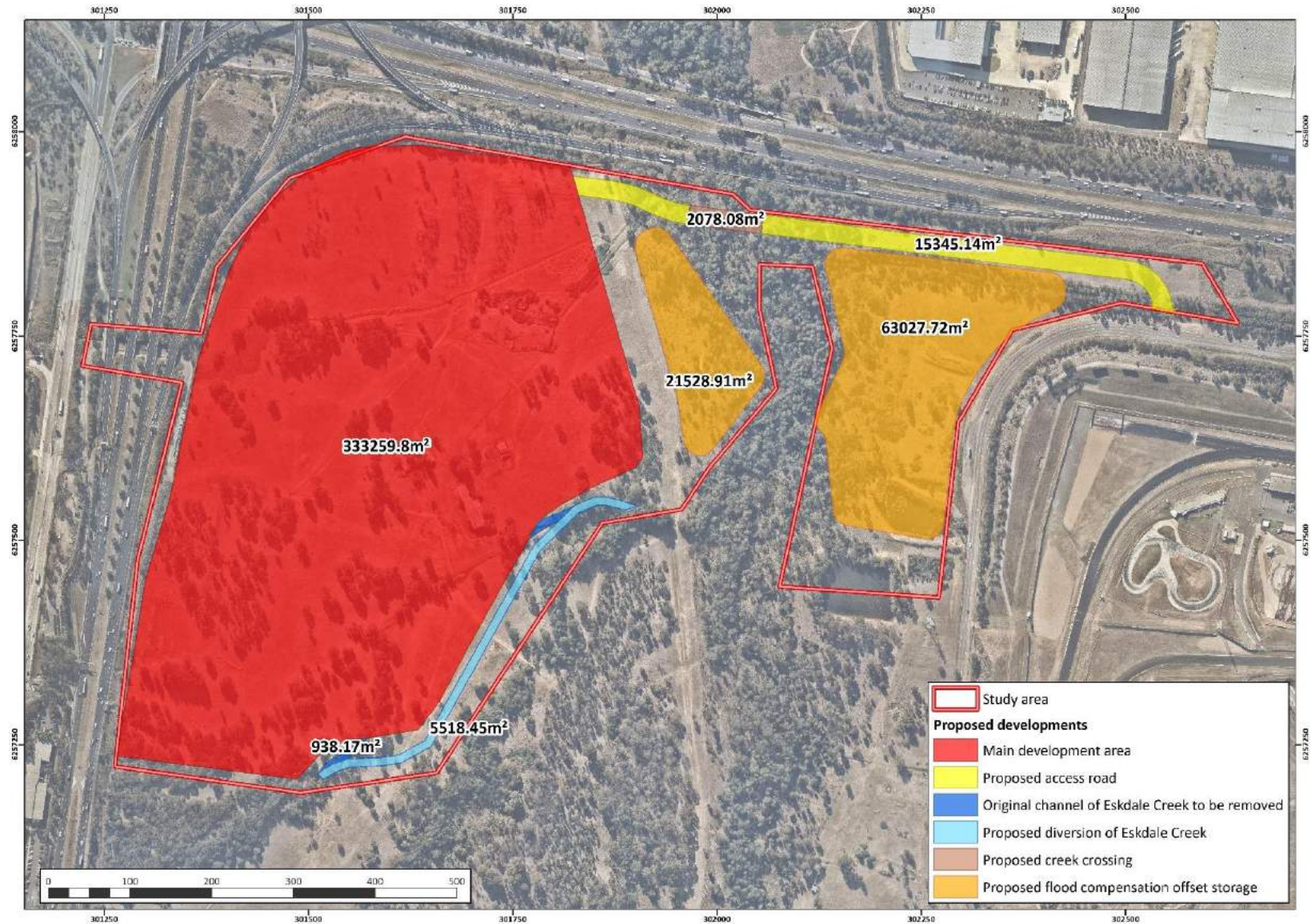
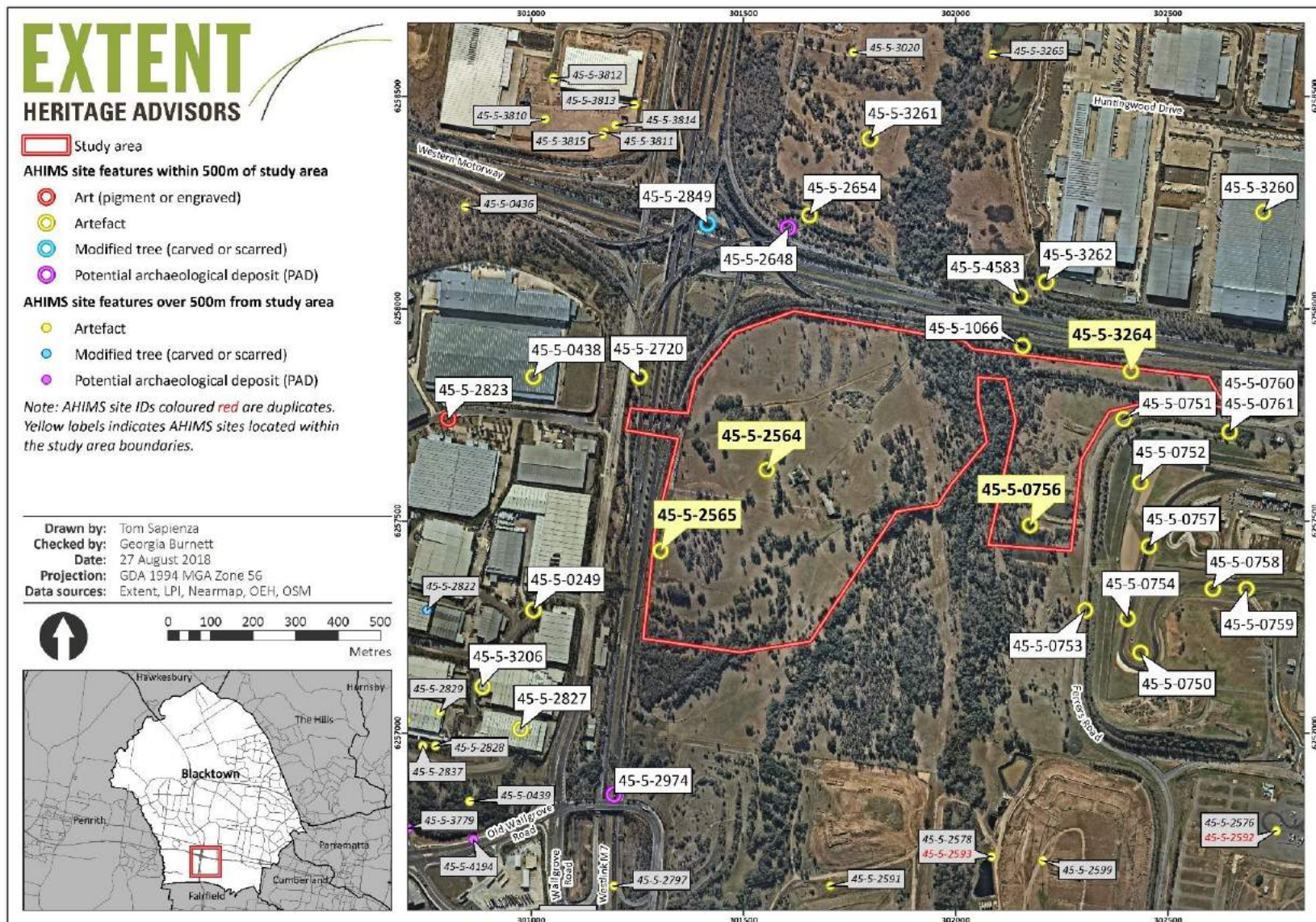


Figure 2. Areas proposed for development within the study area. Note the proposed flood compensation offset storage areas (in orange) are currently under consideration and may be subject to revision or removal.



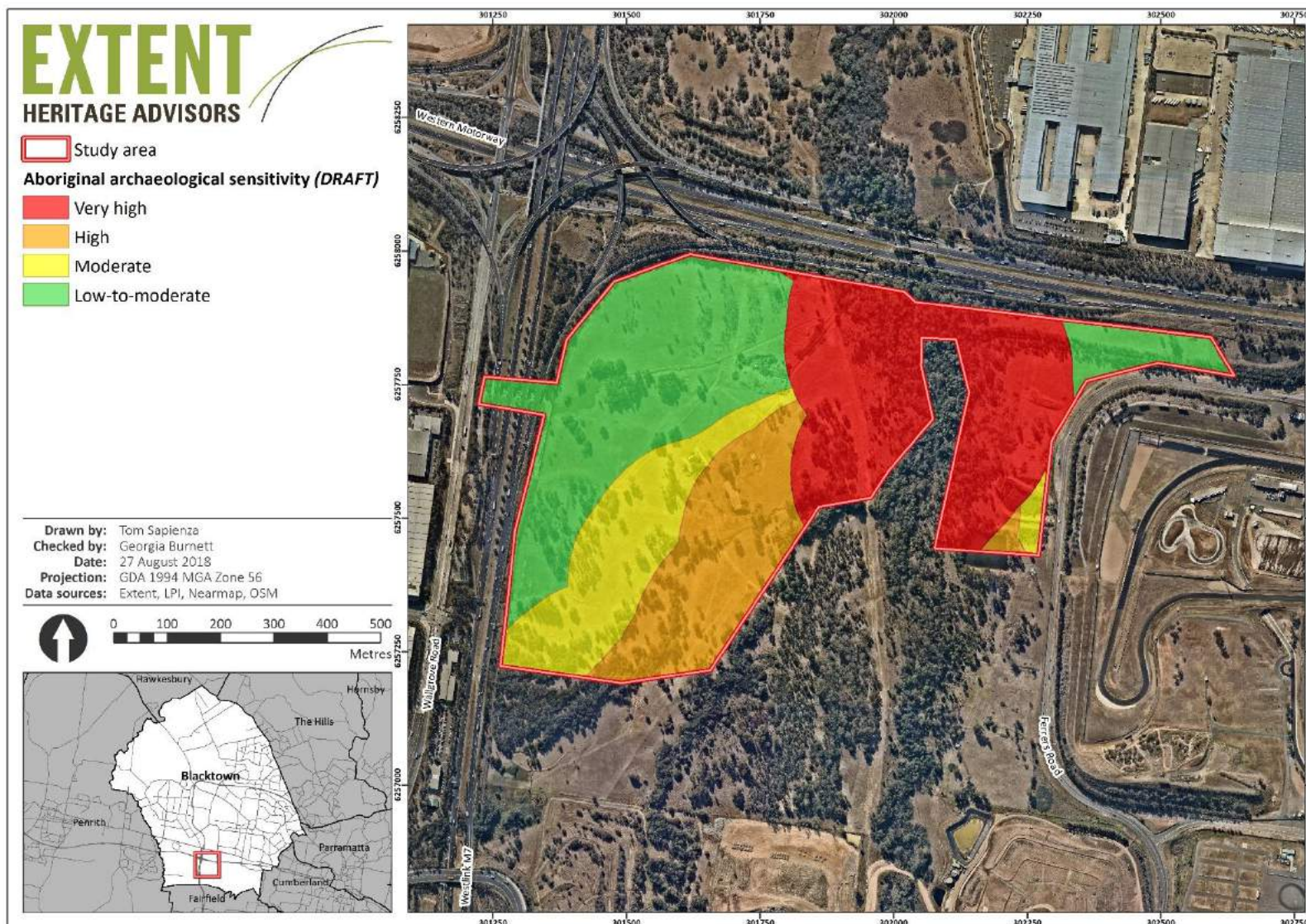


Figure 4. Areas of Aboriginal archaeological potential based on desktop research. These areas would be further refined upon completion of the archaeological survey and would be used to inform the archaeological test excavation program, if required.

Laressa Barry

From: Caza X <cazadirect@live.com>
Sent: Sunday, 16 December 2018 2:26 PM
To: Laressa Barry
Subject: Re: Lighthouse Interchange Business Hub, Eastern Creek - ACHAR Methodology

A1

Indigenous Services

Contact: Carolyn
M: 0411650057
E: Cazadirect@live.com
A: 10 Marie Pitt Place, Glenmore Park, NSW 2745
ABN: 20 616 970 327

Hi
A1 would like to register for consultation and an field work for this project.
I am a traditional owner and hold cultural knowledge and connection to this area
Thank you
Carolyn Hickey

From: Laressa Barry <lbarry@extent.com.au>
Sent: Friday, 14 December 2018 1:52 PM
To: Carolyn .H
Subject: Lighthouse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Dear Carolyn
Thank you for your registration of interest in the Aboriginal cultural heritage assessment of land for the proposed Lighthouse Interchange Business Hub, located at Eastern Creek NSW. The project is currently seeking SSD approval (SSD 9667), and the Proponent, Western Sydney Parklands Trust, is preparing an EIS for these works. Whilst an SSD process, the assessment is being undertaken in accordance with standard OEH guidelines.

Therefore, please find attached a methodology letter for the archaeological survey of the study area, to be undertaken in mid January 2019. At this stage, the ACHAR will be finalised following from the completion of the archaeological survey in February 2019, in order to meet WSPT's SSD submission requirements.

Dependent upon the outcomes of the survey, archaeological test excavation may be required at a later stage, to investigate the sub-surface potential of the study area.

I would appreciate if you could please review the attached methodology documents and provide any feedback or comments to either myself or my colleague Tom Sapienza, **by no later than 16 January 2019**.

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,

Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000



Aboriginal Archaeology Service
INC: 1400988
2/24 Goodwin St Narrabeen
Mobile: 0456 399 687
Email: aas.info@bigpond.com

15th December 2018

Extent Heritage Advisors Pty Ltd

Attention: Tom Sapienza / Laressa Barry

**Re: Lighthorse Interchange Business Hub, Eastern Creek NSW (SSD 9667) –
Proposed Aboriginal Cultural Heritage Assessment Report Methodology**

A.A.S agrees with the recommendations as documented by Extent Heritage Advisors Pty Ltd. AAS would like to see any artefacts collected displayed for all to see in the museum, local library or local government building or reburied in close proximity of the area.

Aboriginal Archaeology Service is seeking *involvement* in all consultation meetings and fieldwork for the above-mentioned project, as we are registered traditional owners of the area. AAS immediate family has lived in the area from 1897 and retains local and oral history on behalf of its first nation people. We have no objection to our information being provided to the Office of Environment and Heritage and the Local Aboriginal Land Council.

AAS can assist with input that can be incorporated into a written assessment of cultural values of the area. We are also able to provide fit staff to assist with work that may involve physical labour. We can provide our schedule of rates and copies of relevant certificates of currency for business insurances on request.

All correspondence should be emailed to AAS.info@bigpond.com and. The area is an important part of our culture and valued by our family.

Yours truly

Laressa Barry

From: lee field <barrabyculturalservices@gmail.com>
Sent: Wednesday, 19 December 2018 12:35 PM
To: Laressa Barry
Subject: Re: Lighthorse Interchange Business Hub, Eastern Creek - ACHAR Methodology
Attachments: FB_423c721a-4cd0-481a-91f8-780e9f111549.png

Dear Laressa

Barraby Cultural Services supports the methodology for this project.
We would like to be considered in the Archaeology survey of this project and test excavations if required.

Kind Regards
Lee Field

On Fri, 14 Dec. 2018, 1:45 pm Laressa Barry <lbarry@extent.com.au> wrote:

Dear Lee

Thank you for your registration of interest in the Aboriginal cultural heritage assessment of land for the proposed Lighthorse Interchange Business Hub, located at Eastern Creek NSW. The project is currently seeking SSD approval (SSD 9667), and the Proponent, Western Sydney Parklands Trust, is preparing an EIS for these works. Whilst an SSD process, the assessment is being undertaken in accordance with standard OEH guidelines.

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Dependent upon the outcomes of the survey, archaeological test excavation may be required at a later stage, to investigate the sub-surface potential of the study area.

I would appreciate if you could please review the attached methodology documents and provide any feedback or comments to either myself or my colleague Tom Sapienza, **by no later than 16 January 2019**.

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,

Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000
lbarry@extent.com.au
extent.com.au

Laressa Barry

From: arika jalomaki <yulayculturalservices@gmail.com>
Sent: Wednesday, 19 December 2018 12:37 PM
To: Laressa Barry
Subject: Re: Lighthorse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Dear Laressa

Yulay Cultural Services supports the methodology for this project and would like to be considered for the archaeology survey and possible test excavations if necessary.

Kind Regards
Arika Jalomaki

On Friday, December 14, 2018, Laressa Barry <lbarry@extent.com.au> wrote:

Dear Arika

Thank you for your registration of interest in the Aboriginal cultural heritage assessment of land for the proposed Lighthorse Interchange Business Hub, located at Eastern Creek NSW. The project is currently seeking SSD approval (SSD 9667), and the Proponent, Western Sydney Parklands Trust, is preparing an EIS for these works. Whilst an SSD process, the assessment is being undertaken in accordance with standard OEH guidelines.

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I would appreciate if you could please review the attached methodology documents and provide any feedback or comments to either myself or my colleague Tom Sapienza, **by no later than 16 January 2019**.

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,

Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000
lbarry@extent.com.au
extent.com.au
Connect with us on:

Tom Sapienza

From: Barking Owl Aboriginal Corporation <barkingowlcorp@gmail.com>
Sent: Tuesday, 18 December 2018 20:29
To: Tom Sapienza
Subject: RAP Response ACHA Methodology RE: proposed Lighthorse Interchange Eastern Creek NSW.

Dear Tom,

Myself and the members of Barking Owl Aboriginal Corporation have agreed and are satisfied with the methodology RE: Proposed Lighthorse Interchange Eastern Creek NSW, and have no further comments or recommendations.

Kind regards

Jody Kulakowski
Director

Barking Owl
Aboriginal Corporation
(BOAC)

•

Laressa Barry

From: WIDESCOPE . <widescope.group@live.com>
Sent: Monday, 7 January 2019 11:55 AM
To: Laressa Barry
Subject: RE: Lighthouse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Hi Laressa

I have reviewed and support Lighthouse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Regards
Steven Hickey

From: Laressa Barry <lbarry@extent.com.au>
Sent: Friday, December 14, 2018 1:48:18 PM
To: WIDESCOPE .
Subject: Lighthouse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Dear Steven

Thank you for your registration of interest in the Aboriginal cultural heritage assessment of land for the proposed Lighthouse Interchange Business Hub, located at Eastern Creek NSW. The project is currently seeking SSD approval (SSD 9667), and the Proponent, Western Sydney Parklands Trust, is preparing an EIS for these works. Whilst an SSD process, the assessment is being undertaken in accordance with standard OEH guidelines.

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I would appreciate if you could please review the attached methodology documents and provide any feedback or comments to either myself or my colleague Tom Sapienza, **by no later than 16 January 2019**.

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,
Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000
lbarry@extent.com.au
extent.com.au
Connect with us on:

Laressa Barry

From: Marilyn Carroll-Johnson <corroboreecorp@bigpond.com>
Sent: Wednesday, 19 December 2018 7:01 PM
To: Laressa Barry
Subject: Re: Lighthorse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Hi Laressa
We agree with the methodology. Thanks

Kind regards
Marilyn Carroll-Johnson
Director CAC

On 14 Dec 2018, at 1:46 pm, Laressa Barry <lbarry@extent.com.au> wrote:

Dear Marilyn

Thank you for your registration of interest in the Aboriginal cultural heritage assessment of land for the proposed Lighthorse Interchange Business Hub, located at Eastern Creek NSW. The project is currently seeking SSD approval (SSD 9667), and the Proponent, Western Sydney Parklands Trust, is preparing an EIS for these works. Whilst an SSD process, the assessment is being undertaken in accordance with standard OEH guidelines.

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Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,
Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000
lbarry@extent.com.au

extent.com.au

Connect with us on:

<[FB_423c721a-4cd0-481a-91f8-780e9f111549.png](#)> <[LinkedIn_ebc4f2a1-55e1-4efe-8f0e-103053dbb87b.png](#)> <[Insta_64ba6810-999a-4a57-a859-66d10d805618.png](#)>
<[christmasgreetingsemail\(005\)_cfce7c99-c4df-47ae-87d6-6d010235d6c1.jpg](#)>

<SYD18198 Lighthorse Interchange ACHAR Methodology - Corroboree.pdf>

Laressa Barry

From: desmond dyer <desmond4552@hotmail.com>
Sent: Wednesday, 26 December 2018 2:37 PM
To: Laressa Barry
Subject: Re: Lighthouse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Hi Laressa,

The Darug Aboriginal Land care, has read your report and we agree with your recommendations and Methodology

Kind regards

Des

From: Laressa Barry <lbarry@extent.com.au>
Sent: Friday, 14 December 2018 1:49 PM
To: desmond dyer
Subject: Lighthouse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Dear Des

Thank you for your registration of interest in the Aboriginal cultural heritage assessment of land for the proposed Lighthouse Interchange Business Hub, located at Eastern Creek NSW. The project is currently seeking SSD approval (SSD 9667), and the Proponent, Western Sydney Parklands Trust, is preparing an EIS for these works. Whilst an SSD process, the assessment is being undertaken in accordance with standard OEH guidelines.

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I would appreciate if you could please review the attached methodology documents and provide any feedback or comments to either myself or my colleague Tom Sapienza, **by no later than 16 January 2019**.

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,

Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000

lbarry@extent.com.au

extent.com.au

Connect with us on:



Wishing you a very happy festive season

*Our offices will be closed from 21 December 2018 and
will reopen on 2 January 2019*



Laressa Barry

From: philip khan <philipkhan.acn@live.com.au>
Sent: Monday, 31 December 2018 12:08 PM
To: Laressa Barry
Subject: RE: Lighthouse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Hi Larissa,

Hope you are well & wishing your a Happy New Year!

I have read the methodology regarding the survey of the area proposed to be under taken in mid January 2019 and am looking forward to be working with you on this project.

Regards
Stefanie

Kamilaroi Yankuntjatjara Working Group
Aboriginal Cultural Heritage Surveys, Lawn Mowing & Fencing
ABN 33 979 702 507
Not registered for GST
78 Forbes Street, Emu Plains NSW 2750
Mobile: 0434545982
Email: philipkhan.acn@live.com.au

Sent from [Mail](#) for Windows 10

From: Laressa Barry <lbarry@extent.com.au>
Sent: Friday, December 14, 2018 1:47:57 PM
To: philipkhan.acn@live.com.au
Subject: Lighthouse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Dear Phil

Thank you for your registration of interest in the Aboriginal cultural heritage assessment of land for the proposed Lighthouse Interchange Business Hub, located at Eastern Creek NSW. The project is currently seeking SSD approval (SSD 9667), and the Proponent, Western Sydney Parklands Trust, is preparing an EIS for these works. Whilst an SSD process, the assessment is being undertaken in accordance with standard OEH guidelines.

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Dependent upon the outcomes of the survey, archaeological test excavation may be required at a later stage, to investigate the sub-surface potential of the study area.

I would appreciate if you could please review the attached methodology documents and provide any feedback or comments to either myself or my colleague Tom Sapienza, **by no later than 16 January 2019**.

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,
Laressa



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: Lighthorse Interchange Business Hub, Eastern Creek

Dear Laressa

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.

Our group promotes Darug Culture and works on numerous projects that are culturally based as a proud and diverse group. It has been discussed by our group and with many consultants and researches that our history is generic and is usually from an early colonists perspective or solely based on archaeology and sites. These histories are adequate but they lack the people's stories and parts of important events and connections of the Darug people and also other Aboriginal people that now call this area home and have done so for numerous generations.

This area is significant to the Darug people due to the evidence of continued occupation, within close proximity to this project site there is a complex of significant sites.

Landscapes and landforms are significant to us for the information that they hold and the connection to Darug people. Aboriginal people (Darug) had a complex lifestyle that was based on respect and belonging to the land, all aspects of life and survival did not impact on

the land but helped to care for and conserve land and the sustenance that the land provided. As Darug people moved through the land there were no impacts left, although there was evidence of movement and lifestyle, the people moved through areas with knowledge of their areas

and followed signs that were left in the landscape. Darug people knew which areas were not to be entered and respected the areas that were sacred.

Knowledge of culture, lifestyle and lore have been part of Darug people's lives for thousands of years, this was passed down to the next generations and this started with birth and continued for a lifetime. Darug people spent a lifetime learning and as people grew older they passed through stages of knowledge, elders became elders with the learning of stages of knowledge not by their age, being an elder is part of the kinship system this was a very complicated system based on respect.

Darug sites are all connected, our country has a complex of sites that hold our heritage and past history, evidence of the Darug lifestyle and occupation are all across our country, due to the rapid development of Sydney many of our sites have been destroyed, our sites are thousands of years old and within the short period of time that Australia has been developed pre contact our sites have disappeared.

The Aboriginal cultural heritage consultation requirements for proponents Section 4.1.8 refers to "Aboriginal organisations representing Aboriginal people who hold cultural knowledge". Recent consultation meetings have revealed that many of these Aboriginal organisations and individuals do not hold cultural knowledge of the Western Sydney area. The increasing involvement of such parties in cultural heritage management means that genuine local Aboriginal organisations are unable to properly care for our cultural heritage.

Many Aboriginal organisations listed in the OEH response letter do not contribute to the Aboriginal community of Western Sydney. Individuals listed in the OEH response letter do not represent the community and while they may be consulted with, should not be employed for their own personal financial benefit.

Our organisation is committed to providing benefits back to our local Aboriginal community through such measures as funding the local Aboriginal juniors' touch football team, painting classes for the local children and donating money to various charities. Employment in cultural heritage activities is source of income that organisations such as ours can use to contribute to beneficial activities and support within the community.

Darug custodian Aboriginal Corporation's site officers have knowledge of Darug land, Darug Culture, Oral histories, landforms, sites, Darug history, wildlife, flora and legislative requirements. We have worked with consultants and developers for many years in Western

Sydney (Darug Land) for conservation, site works, developments and interpretation/education strategie

Darug Custodian Aboriginal Corporation have received and reviewed the report for Lighthorse Interchange Business Hub, Eastern Creek.

We support the recommendations set out in this report.

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

Regards



Justine Coplin

Laressa Barry

From: Bo Field <yurrandaali_cs@hotmail.com>
Sent: Wednesday, 19 December 2018 12:36 PM
To: Laressa Barry
Subject: Re: Lighthorse Interchange Business Hub, Eastern Creek - ACHAR Methodology

Dear Laressa

Yurrandaali Cultural Services supports the methodology for this project and would like to be considered for the Archaeology survey and test excavations if required.

Many thanks
Bo Field

On 14 Dec. 2018 1:46 pm, Laressa Barry <lbarry@extent.com.au> wrote:

Dear Bo

Thank you for your registration of interest in the Aboriginal cultural heritage assessment of land for the proposed Lighthorse Interchange Business Hub, located at Eastern Creek NSW. The project is currently seeking SSD approval (SSD 9667), and the Proponent, Western Sydney Parklands Trust, is preparing an EIS for these works. Whilst an SSD process, the assessment is being undertaken in accordance with standard OEH guidelines.

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I would appreciate if you could please review the attached methodology documents and provide any feedback or comments to either myself or my colleague Tom Sapienza, **by no later than 16 January 2019**.

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,

Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000
lbarry@extent.com.au
extent.com.au
Connect with us on:



BUTUCARBIN ABORIGINAL CORPORATION

PO Box E18, Emerton NSW 2770
28 Pringle Road, Hebersham NSW 2770
Ph: 9832 7167 Fax: 9832 7263
koori@ozemail.com.au
ABN: 83 535 742 276

18th January 2019

To whom it may concern,
Re: methodology

Firstly, I would like to extend my apologies for the delayed email I understand, delayed responses are an issue however, I work part time and unfortunately have not been in the office until today and also have not had much access to work emails as a result of higher management being on holiday leave.

In principle, Butucarbin endorses the proposed methodology. I do believe it is essential to inform RAP's when and they will be employed for site walkover and excavation. Ultimately, this should be included in the timeline. This is important as RAP's may need to re-organise prior commitments.

Yesterday, myself and Jack Gibson attended the site inspection on a voluntary basis. Unfortunately, we could only stay for two hours as we had a meeting to attend. However, if we would have known how long the activity would be, we would have re-arranged our prior commitment. Overall, it was an enjoyable process and we would have liked to stay longer. We agreed, the ground has been majorly disturbed as a result of dairy farming and other human activity. However, the proposed excavation land is near a waterway and ultimately, waterways are a significant resource to Indigenous people in previous times. If there is an opportunity for further work, Butucarbin employees would be more than happy to participate.

Yours Sincerely,

Lowanna Gibson
Project Manager for Butucarbin Cultural Heritage Assessments
B.A Archaeology/Anthropology USYD
Juris Doctor Candidate UTS

Appendix 2-8. Report Review – Feedback Received

Laressa Barry

From: WeTransfer <noreply@wetransfer.com>
Sent: Wednesday, 27 February 2019 12:10 PM
To: Laressa Barry
Subject: There was a problem sending your files



Oops, something went wrong

The people below didn't receive your transfer. It seems like the address you entered didn't work.

warrlan12@outlook.com

Get your files

Check out our [help center](#) for more information, or get in touch with our [support team](#).

Recipients

warrlan12@outlook.com

2 files

SYD18198 Lighthouse Business Hub - Appendices-compressed.pdf

SYD18198 Lighthouse Business Hub Draft ACHAR Feb19.pdf

Message

Hi Phil,

Thank you for your registration and involvement in the Aboriginal Cultural Heritage Assessment of the proposed Light Horse Interchange Business Hub at Eastern Creek, NSW.

Please find a link to download Extent Heritage's draft ACHAR and appendices, for your review.

I would greatly appreciate if you could please review the report and provide any feedback or comments by no later than 27 March 2019.

Please direct your feedback to me via post (Laressa Barry, Extent Heritage Pty Ltd, Level 3, 73 Union Street, Pyrmont NSW 2009), via phone (0295554000) or via email (LBarry@extent.com.au).

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,

Laressa

To make sure our emails arrive, please add noreply@wetransfer.com to your contacts.

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Laressa Barry

From: Laressa Barry
Sent: Wednesday, 27 February 2019 11:51 AM
To: warrlan12@outlook.com; didgengunawalclan@yahoo.com.au; barrabyculturalservices@gmail.com; justinecoplin@optusnet.com.au; yurrandaali_cs@hotmail.com; yulayculturalservices@gmail.com; corrobororeecorp@bigpond.com; aas.info@bigpond.com; boorooberongal@outlook.com; philipkhan.acn@live.com.au; widescope.group@live.com; daruglandobservations@gmail.com; darug_tribal@live.com.au; desmond4552@hotmail.com; wurrumay@hotmail.com; barkingowlcorp@gmail.com; cazadirect@live.com; koori@ozemail.com.au; muragadi@yahoo.com.au; vicki.slater@hotmail.com; srandall@deerubbin.org.au
Cc: Luke Wilson; Dr Alan Williams
Subject: RE: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (email 2 of 2)
Attachments: SYD18198 Lighthorse Business Hub - Appendices-compressed.pdf

Dear Stakeholders,
As per the email below, please find attached the Light Horse Interchange Business Hub ACHAR appendices.
Kind regards,
Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000

lbarry@extent.com.au

extent.com.au

Connect with us on:



EXTENT

HERITAGE ADVISORS
TO AUSTRALIA AND
THE ASIA PACIFIC

SYDNEY | MELBOURNE | BRISBANE | PERTH

From: Laressa Barry
Sent: Wednesday, 27 February 2019 11:49 AM
To: 'warrlan12@outlook.com' <warrlan12@outlook.com>; 'didgengunawalclan@yahoo.com.au' <didgengunawalclan@yahoo.com.au>; 'barrabyculturalservices@gmail.com' <barrabyculturalservices@gmail.com>; 'justinecoplin@optusnet.com.au' <justinecoplin@optusnet.com.au>; 'yurrandaali_cs@hotmail.com' <yurrandaali_cs@hotmail.com>; 'yulayculturalservices@gmail.com' <yulayculturalservices@gmail.com>; 'corroboreecorp@bigpond.com' <corroboreecorp@bigpond.com>; 'aas.info@bigpond.com' <aas.info@bigpond.com>; 'boorooberongal@outlook.com' <boorooberongal@outlook.com>; 'philipkhan.acn@live.com.au' <philipkhan.acn@live.com.au>; 'widescope.group@live.com' <widescope.group@live.com>; 'daruglandobservations@gmail.com' <daruglandobservations@gmail.com>; 'darug_tribal@live.com.au' <darug_tribal@live.com.au>; 'desmond4552@hotmail.com' <desmond4552@hotmail.com>; 'wurrumay@hotmail.com' <wurrumay@hotmail.com>;

'barkingowlcorp@gmail.com' <barkingowlcorp@gmail.com>; 'cazadirect@live.com' <cazadirect@live.com>;
'koori@ozemail.com.au' <koori@ozemail.com.au>; 'muragadi@yahoo.com.au' <muragadi@yahoo.com.au>;
'vicki.slater@hotmail.com' <vicki.slater@hotmail.com>; 'srandall@deerubbin.org.au' <srandall@deerubbin.org.au>
Cc: 'Luke Wilson' <Luke.Wilson@wspt.nsw.gov.au>; Dr Alan Williams <awilliams@extent.com.au>
Subject: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (email 1 of 2)

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Please direct your feedback to me via any of the following methods:

Post: Laressa Barry
Extent Heritage Pty Ltd
Level 3, 73 Union Street
Pymont NSW 2009
Phone: (02) 9555 4000
Email: LBarry@extent.com.au

Thank you in advance for your assistance with this, and should you have any questions please let me know.
Kind regards,
Laressa

Laressa Barry

From: Microsoft Outlook
To: warrlan12@outlook.com
Sent: Wednesday, 27 February 2019 11:54 AM
Subject: Undeliverable: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review

DB5EUR03FT028.mail.protection.outlook.com rejected your message to the following email addresses:

warrlan12@outlook.com (warrlan12@outlook.com)

A communication failure occurred during the delivery of this message. Please try to resend the message later. If the problem continues, contact your email admin.

DB5EUR03FT028.mail.protection.outlook.com gave this error:
Requested action not taken: mailbox unavailable.

Diagnostic information for administrators:

Generating server: MEAPR01MB5047.ausprd01.prod.outlook.com

warrlan12@outlook.com
DB5EUR03FT028.mail.protection.outlook.com
Remote Server returned '550 5.5.0 Requested action not taken: mailbox unavailable.'

Original message headers:

DKIM-Signature: v=1; a=rsa-sha256; c=relaxed/relaxed;
d=extentheritageorg.onmicrosoft.com; s=selector1-extent-com-au;
h=From:Date:Subject:Message-ID:Content-Type:MIME-Version:X-MS-Exchange-SenderADCheck;
bh=BJokV0PKGghAXzInXxljEiXIuGA1IVt9zwddC56szbg=;

b=019wZzrkmTgKma4YufSVQm/KDyiA96p8r8D7B9ACaFo4eF+9I3U51UyQbDKZTRRmdjOPy9OvU2S1lGZqVeic
q8vtRwli9XuyOUj4TuTp4eBQl2JWRL7b34irQ0WIyg4DAW2X3qHu8ojw3LXgFPjilhvTGM7rGLVD8GPF/P4kuQ
I=

Received: from SYBPR01CA0110.ausprd01.prod.outlook.com (2603:10c6:10:1::26) by
MEAPR01MB5047.ausprd01.prod.outlook.com (2603:10c6:220:14::14) with Microsoft
SMTP Server (version=TLS1_2, cipher=TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384) id
15.20.1643.14; Wed, 27 Feb 2019 00:53:32 +0000

Received: from ME1AUS01FT003.eop-AUS01.prod.protection.outlook.com
(2a01:111:f400:7eb4::209) by SYBPR01CA0110.outlook.office365.com
(2603:10c6:10:1::26) with Microsoft SMTP Server (version=TLS1_2,
cipher=TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384) id 15.20.1643.15 via Frontend
Transport; Wed, 27 Feb 2019 00:53:32 +0000

Authentication-Results: spf=fail (sender IP is 40.126.245.16)
smtp.mailfrom=extent.com.au; outlook.com; dkim=none (message not signed)
header.d=none;outlook.com; dmarc=none action=none header.from=extent.com.au;

Received-SPF: Fail (protection.outlook.com: domain of extent.com.au does not
designate 40.126.245.16 as permitted sender) receiver=protection.outlook.com;
client-ip=40.126.245.16; helo=au-emailsignatures-cloud.codetwo.com;

Received: from au-emailsignatures-cloud.codetwo.com (40.126.245.16) by

Laressa Barry

From: WeTransfer <noreply@wetransfer.com>
Sent: Wednesday, 27 February 2019 12:06 PM
To: Laressa Barry
Subject: Your files were sent successfully to warrlan12@outlook.com



Files sent to warrlan12@outlook.com

2 files, 17.2 MB in total • Will be deleted on 27 March, 2019

Thanks for using WeTransfer. We'll email you a confirmation as soon as your files have been downloaded.

Recipients

warrlan12@outlook.com

Download link

<https://we.tl/t-sVWHTssY3m>

2 files

SYD18198 Lighthorse Business Hub - Appendices-compressed.pdf

SYD18198 Lighthorse Business Hub Draft ACHAR Feb19.pdf

Message

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Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,

Laressa

To make sure our emails arrive, please add noreply@wettransfer.com to your contacts.

Sent by extentheritage.wettransfer.com

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Laressa Barry

From: Muragadi <muragadi@yahoo.com.au>
Sent: Friday, 1 March 2019 1:42 PM
To: Laressa Barry
Subject: RE: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (email 1 of 2)

Hi Laressa,

I have read the project information and ACHAR for the above project, I endorse the recommendations made by Extent Heritage, please feel free to contact me if you require further details.

Thanks

Anthony

0418970389

From: Laressa Barry [mailto:lbarry@extent.com.au]
Sent: Wednesday, 27 February 2019 11:49 AM
To: warrlan12@outlook.com; didgengunawalclan@yahoo.com.au; barrabyculturalservices@gmail.com; justinecoplin@optusnet.com.au; yurrandaali_cs@hotmail.com; yulayculturalservices@gmail.com; corroboreecorp@bigpond.com; aas.info@bigpond.com; boorooberongal@outlook.com; philipkhan.acn@live.com.au; widescope.group@live.com; daruglandobservations@gmail.com; darug_tribal@live.com.au; desmond4552@hotmail.com; wurrumay@hotmail.com; barkingowlcorp@gmail.com; cazadirect@live.com; koori@ozemail.com.au; muragadi@yahoo.com.au; vicki.slater@hotmail.com; srandall@deerubbin.org.au
Cc: Luke Wilson <Luke.Wilson@wspt.nsw.gov.au>; Dr Alan Williams <awilliams@extent.com.au>
Subject: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (email 1 of 2)

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Level 3, 73 Union Street
Pyrmont NSW 2009
Phone: (02) 9555 4000
Email: LBarry@extent.com.au

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Kind regards,
Laressa

Laressa Berehowyj

From: arika jalomaki <yulayculturalservices@gmail.com>
Sent: Monday, 25 March 2019 12:58 PM
To: Laressa Barry
Subject: Re: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (REMINDER)
Attachments: image001.png

Dear Laressa

I have read and support the report for Light Horse Interchange Business Hub, Eastern Creek NSW. We wish to be updated in all aspects of the project.

Many Thanks
Arika
Yulay Cultural Services

On Mon, 25 Mar. 2019, 12:50 pm Laressa Barry, <lbarry@extent.com.au> wrote:

Dear Stakeholders,

To those of you who have already responded, thank you for your feedback on Extent's draft ACHAR for the Light Horse Business Hub at Eastern Creek.

The consultation period ends this coming Wednesday the 27th March, so if you have not already done so I invite you to please review the document and provide any feedback, if you so wish.

Thank you again for your involvement in the project and we look forward to working with you in the future.

Kind regards,

Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000
lbarry@extent.com.au
extent.com.au

Connect with us on:





From: Laressa Barry
Sent: Wednesday, 27 February 2019 11:49 AM
To: warrlan12@outlook.com; didgengunawalclan@yahoo.com.au; barrabyculturalservices@gmail.com; justinecoplin@optusnet.com.au; yurrandaali_cs@hotmail.com; yulayculturalservices@gmail.com; corroboreecorp@bigpond.com; aas.info@bigpond.com; boorooberongal@outlook.com; philipkhan.acn@live.com.au; widescope.group@live.com; daruglandobservations@gmail.com; darug_tribal@live.com.au; desmond4552@hotmail.com; wurrumay@hotmail.com; barkingowlcorp@gmail.com; cazadirect@live.com; koori@ozemail.com.au; muragadi@yahoo.com.au; vicki.slater@hotmail.com; srandall@deerubbin.org.au
Cc: Luke Wilson; Dr Alan Williams
Subject: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (email 1 of 2)

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Extent Heritage Pty Ltd

Level 3, 73 Union Street

Pymont NSW 2009

Phone: (02) 9555 4000

Email: LBarry@extent.com.au

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Kind regards,

Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000

lbarry@extent.com.au

extent.com.au

Connect with us on:





**DARUG LAND
OBSERVATIONS PTY LTD
ABN 27 602 765 453**

EMAIL: DARUGLANDOBSERVATIONS@GMAIL.COM
PO BOX 173 ULLADULLA NSW 2539
MOBILE: 0413 687 279

6th March, 2019

Laressa Barry
Extent Heritage Pty Ltd
3/73 Union Street
PYRMONT NSW 2009

Dear Laressa,

**RE: PROPOSED LIGHT HORSE INTERCHANGE BUSINESS HUB,
PART OF LOT 5 DP 804057 & LOT 10 DP 1061237, 165 WALLGROVE
ROAD & 475 FERRERS ROAD, EASTERN CREEK**

Aboriginal Cultural Heritage Assessment

Darug Land Observations Pty Ltd (DLO) has reviewed the draft Aboriginal Cultural Heritage Assessment, and supports the methodology for the proposed redevelopment of industrial and light industrial land use activities, of part of Lot 5 DP 804057 & part of Lot 10 DP 1061237, within the Light Horse Interchange Business Hub, located at 165 Wallgrove Road and 475 Ferrers Road, in Eastern Creek.

In relation to the long-term storage of recovered artefacts, if any, we strongly believe recovered artefacts should be re-buried on Country (the study area).

Furthermore, DLO would like to be involved in the site survey, archaeological test excavations and/or any other form of works to be carried out on the site.

Look forward to working with you on this project.

Yours sincerely,

Jamie Workman
Darug Land Observations Pty Ltd

Uncle Gordon Workman
Darug Elder

Laressa Berehowyj

From: philip khan <philipkhan.acn@live.com.au>
Sent: Friday, 15 March 2019 4:46 PM
To: Laressa Barry
Subject: RE: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (email 2 of 2)

Hi Laressa,

Thank you for sending through your assessment report regarding Light Horse Interchange Business Hub, Eastern Creek (SSD9667) & I agree & support all your recommendations.

Kind Regards
Stefanie

Kamilaroi Yankuntjatjara Working Group
Aboriginal Cultural Heritage Surveys, Lawn Mowing & Fencing
ABN 33 979 702 507
Not registered for GST
78 Forbes Street, Emu Plains NSW 2750
Mobile: 0434545982
Email: philipkhan.acn@live.com.au

Sent from [Mail](#) for Windows 10

From: Laressa Barry <lbarry@extent.com.au>
Sent: Wednesday, February 27, 2019 11:51:09 AM
To: warrlan12@outlook.com; didgengunawalclan@yahoo.com.au; barrabyculturalservices@gmail.com; justinecoplin@optusnet.com.au; yurrandaali_cs@hotmail.com; yulayculturalservices@gmail.com; corroboreecorp@bigpond.com; aas.info@bigpond.com; boorooberongal@outlook.com; philipkhan.acn@live.com.au; widescope.group@live.com; daruglandobservations@gmail.com; darug_tribal@live.com.au; desmond4552@hotmail.com; wurumay@hotmail.com; barkingowlcorp@gmail.com; cazadirect@live.com; koori@ozemail.com.au; muragadi@yahoo.com.au; vicki.slater@hotmail.com; srandall@deerubbin.org.au
Cc: Luke Wilson; Dr Alan Williams
Subject: RE: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (email 2 of 2)

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Laressa

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Phone: (02) 9555 4000
Email: LBarry@extent.com.au

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,
Laressa

Laressa Barry

From: lee field <barrabyculturalservices@gmail.com>
Sent: Wednesday, 13 March 2019 3:13 PM
To: Laressa Barry
Subject: Re: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (email 2 of 2)

Dear Laressa,

Barraby supports the Draft Report associated with the Project at Light Horse Interchange Business Hub, Eastern Creek and wish to be kept informed of all stages of the project.

Many Thanks
Lee Field

On Wed, Feb 27, 2019 at 11:51 AM Laressa Barry <lbarry@extent.com.au> wrote:

Dear Stakeholders,

As per the email below, please find attached the Light Horse Interchange Business Hub ACHAR appendices.

Kind regards,

Laressa

Laressa Barry | BA (Hons)
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<boorooberongal@outlook.com>; 'philipkhan.acn@live.com.au' <philipkhan.acn@live.com.au>;
'widescope.group@live.com' <widescope.group@live.com>; 'daruglandobservations@gmail.com'
<daruglandobservations@gmail.com>; 'darug_tribal@live.com.au' <darug_tribal@live.com.au>;
'desmond4552@hotmail.com' <desmond4552@hotmail.com>; 'wurumay@hotmail.com'
<wurumay@hotmail.com>; 'barkingowlcorp@gmail.com' <barkingowlcorp@gmail.com>; 'cazadirect@live.com'
<cazadirect@live.com>; 'koori@ozemail.com.au' <koori@ozemail.com.au>; 'muragadi@yahoo.com.au'
<muragadi@yahoo.com.au>; 'vicki.slater@hotmail.com' <vicki.slater@hotmail.com>; 'srandall@deerubbin.org.au'
<srandall@deerubbin.org.au>

Cc: 'Luke Wilson' <Luke.Wilson@wspt.nsw.gov.au>; Dr Alan Williams <awilliams@extent.com.au>

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Pymont NSW 2009

Phone: (02) 9555 4000

Email: LBarry@extent.com.au

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Laressa Barry

From: John Reilly <jmreilly228@gmail.com>
Sent: Tuesday, 12 March 2019 12:04 PM
To: Laressa Barry
Subject: Light Horse Interchange

All looks fine.
Please advise further updates.
Kind Regards
John Reilly
Director DNAC (DTAC).

Laressa Berehowyj

From: Laressa Barry
Sent: Monday, 25 March 2019 12:50 PM
To: warrlan12@outlook.com; didgengunawalclan@yahoo.com.au; barrabyculturalservices@gmail.com; justinecoplin@optusnet.com.au; yurrandaali_cs@hotmail.com; yulayculturalservices@gmail.com; corroboreecorp@bigpond.com; aas.info@bigpond.com; boorooberongal@outlook.com; philipkhan.acn@live.com.au; widescope.group@live.com; daruglandobservations@gmail.com; darug_tribal@live.com.au; desmond4552@hotmail.com; wurrumay@hotmail.com; barkingowlcorp@gmail.com; cazadirect@live.com; koori@ozemail.com.au; muragadi@yahoo.com.au; vicki.slater@hotmail.com; srandall@deerubbin.org.au
Cc: Luke Wilson; Dr Alan Williams
Subject: RE: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (REMINDER)

Dear Stakeholders,

To those of you who have already responded, thank you for your feedback on Extent's draft ACHAR for the Light Horse Business Hub at Eastern Creek.

The consultation period ends this coming Wednesday the 27th March, so if you have not already done so I invite you to please review the document and provide any feedback, if you so wish.

Thank you again for your involvement in the project and we look forward to working with you in the future.

Kind regards,

Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000

lbarry@extent.com.au

extent.com.au

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EXTENT

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

SYDNEY | MELBOURNE | BRISBANE | PERTH

From: Laressa Barry
Sent: Wednesday, 27 February 2019 11:49 AM
To: warrlan12@outlook.com; didgengunawalclan@yahoo.com.au; barrabyculturalservices@gmail.com; justinecoplin@optusnet.com.au; yurrandaali_cs@hotmail.com; yulayculturalservices@gmail.com; corroboreecorp@bigpond.com; aas.info@bigpond.com; boorooberongal@outlook.com; philipkhan.acn@live.com.au; widescope.group@live.com; daruglandobservations@gmail.com; darug_tribal@live.com.au; desmond4552@hotmail.com; wurrumay@hotmail.com; barkingowlcorp@gmail.com; cazadirect@live.com; koori@ozemail.com.au; muragadi@yahoo.com.au; vicki.slater@hotmail.com; srandall@deerubbin.org.au

Cc: Luke Wilson; Dr Alan Williams

Subject: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (email 1 of 2)

Dear Stakeholders,

Thank you for your registration and involvement in the Aboriginal Cultural Heritage Assessment of the proposed Light Horse Interchange Business Hub at Eastern Creek, NSW. As you would be aware, the project is currently seeking SSD approval (SSD 9667), and the Proponent, Western Sydney Parklands Trust, is preparing an EIS for these works. Whilst an SSD process, the assessment is being undertaken in accordance with standard OEH guidelines.

Please find attached a copy of the draft ACHAR, for your input and review (I will shortly be sending through a second email containing the report appendices, which are too large to send via email). If you have any problems downloading the report or appendices, please let me know and I will distribute these documents via other methods.

I would greatly appreciate if you could please review the attached ACHAR and provide any feedback or comments at your earliest convenience, but by no later than **27 March 2019**.

Please direct your feedback to me via any of the following methods:

Post: Laressa Barry
Extent Heritage Pty Ltd
Level 3, 73 Union Street
Pyrmont NSW 2009
Phone: (02) 9555 4000
Email: LBarry@extent.com.au

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,

Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000

lbarry@extent.com.au

extent.com.au

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SYDNEY | MELBOURNE | BRISBANE | PERTH

Laressa Berehowyj

From: Bo Field <yurrandaali_cs@hotmail.com>
Sent: Monday, 25 March 2019 12:54 PM
To: Laressa Barry
Subject: Re: RE: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (REMINDER)

Dear Laressa

I have read and agree with the ACHAR for this project. Yurrandaali would like to be updated as the project progresses.

Many Thanks
Bo

On 25 Mar. 2019 at 12:50 pm, <[Laressa Barry](#)> wrote:

Dear Stakeholders,
To those of you who have already responded, thank you for your feedback on Extent's draft ACHAR for the Light Horse Business Hub at Eastern Creek.

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Kind regards,
Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T 02 9555 4000

lbarry@extent.com.au

extent.com.au

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HERITAGE ADVISORS
TO AUSTRALIA AND
THE ASIA PACIFIC

SYDNEY | MELBOURNE | BRISBANE | PERTH

From: Laressa Barry
Sent: Wednesday, 27 February 2019 11:49 AM
To: warrlan12@outlook.com; didgengunawalclan@yahoo.com.au;
barrabyculturalservices@gmail.com; justinecoplin@optusnet.com.au; yurrandaali_cs@hotmail.com;
yulayculturalservices@gmail.com; corroboreecorp@bigpond.com; aas.info@bigpond.com;

boorooberongal@outlook.com; philipkhan.acn@live.com.au; widescope.group@live.com;
daruglandobservations@gmail.com; darug_tribal@live.com.au; desmond4552@hotmail.com;
wurrumay@hotmail.com; barkingowlcorp@gmail.com; cazadirect@live.com; koori@ozemail.com.au;
muragadi@yahoo.com.au; vicki.slater@hotmail.com; srandall@deerubbin.org.au

Cc: Luke Wilson; Dr Alan Williams

Subject: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (email 1 of 2)

Dear Stakeholders,

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I would greatly appreciate if you could please review the attached ACHAR and provide any feedback or comments at your earliest convenience, but by no later than **27 March 2019**.

Please direct your feedback to me via any of the following methods:

Post: Laressa Barry
Extent Heritage Pty Ltd
Level 3, 73 Union Street
Pyrmont NSW 2009
Phone: (02) 9555 4000
Email: LBarry@extent.com.au

Thank you in advance for your assistance with this, and should you have any questions please let me know.

Kind regards,
Laressa

Laressa Barry | BA (Hons)
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T 02 9555 4000
lbarry@extent.com.au

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Laressa Berehowyj

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Monday, 25 March 2019 2:24 PM
To: Laressa Barry
Subject: Re: Light Horse Interchange Business Hub, Eastern Creek, NSW ACHAR - Report review (REMINDER)

Hi Laredo's,

DNC is happy with the Lighthorse Business ACHAR,

Kind regards
Paul Boyd
Director for DNC

[Sent from Yahoo Mail for iPhone](#)

On Monday, March 25, 2019, 12:50 pm, Laressa Barry <lbarry@extent.com.au> wrote:

Dear Stakeholders,

To those of you who have already responded, thank you for your feedback on Extent's draft ACHAR for the Light Horse Business Hub at Eastern Creek.

The consultation period ends this coming Wednesday the 27th March, so if you have not already done so I invite you to please review the document and provide any feedback, if you so wish.

Thank you again for your involvement in the project and we look forward to working with you in the future.

Kind regards,

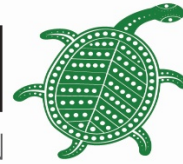
Laressa

Laressa Barry | BA (Hons)
Heritage Advisor/Archaeologist
T [02 9555 4000](tel:0295554000)
lbarry@extent.com.au
extent.com.au
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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

Date: 27/03/19

Subject: Light Horse Interchange Business Hub, Eastern Creek,

Dear Larressa

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.

Our group promotes Darug Culture and works on numerous projects that are culturally based as a proud and diverse group. It has been discussed by our group and with many consultants and researches that our history is generic and is usually from an early colonists perspective or solely based on archaeology and sites. These histories are adequate but they lack the people's stories and parts of important events and connections of the Darug people and also other Aboriginal people that now call this area home and have done so for numerous generations.

This area is significant to the Darug people due to the evidence of continued occupation, within close proximity to this project site there is a complex of significant sites.

Landscapes and landforms are significant to us for the information that they hold and the connection to Darug people. Aboriginal people (Darug) had a complex lifestyle that was based on respect and belonging to the land, all aspects of life and survival did not impact on

the land but helped to care for and conserve land and the sustenance that the land provided. As Darug people moved through the land there were no impacts left, although there was evidence of movement and lifestyle, the people moved through areas with knowledge of their areas

and followed signs that were left in the landscape. Darug people knew which areas were not to be entered and respected the areas that were sacred.

Knowledge of culture, lifestyle and lore have been part of Darug people's lives for thousands of years, this was passed down to the next generations and this started with birth and continued for a lifetime. Darug people spent a lifetime learning and as people grew older they passed through stages of knowledge, elders became elders with the learning of stages of knowledge not by their age, being an elder is part of the kinship system this was a very complicated system based on respect.

Darug sites are all connected, our country has a complex of sites that hold our heritage and past history, evidence of the Darug lifestyle and occupation are all across our country, due to the rapid development of Sydney many of our sites have been destroyed, our sites are thousands of years old and within the short period of time that Australia has been developed pre contact our sites have disappeared.

The Aboriginal cultural heritage consultation requirements for proponents Section 4.1.8 refers to "Aboriginal organisations representing Aboriginal people who hold cultural knowledge". Recent consultation meetings have revealed that many of these Aboriginal organisations and individuals do not hold cultural knowledge of the Western Sydney area. The increasing involvement of such parties in cultural heritage management means that genuine local Aboriginal organisations are unable to properly care for our cultural heritage.

Many Aboriginal organisations listed in the OEH response letter do not contribute to the Aboriginal community of Western Sydney. Individuals listed in the OEH response letter do not represent the community and while they may be consulted with, should not be employed for their own personal financial benefit.

Our organisation is committed to providing benefits back to our local Aboriginal community through such measures as funding the local Aboriginal juniors' touch football team, painting classes for the local children and donating money to various charities. Employment in cultural heritage activities is source of income that organisations such as ours can use to contribute to beneficial activities and support within the community.

Darug custodian Aboriginal Corporation's site officers have knowledge of Darug land, Darug Culture, Oral histories, landforms, sites, Darug history, wildlife, flora and legislative requirements. We have worked with consultants and developers for many years in Western

Sydney (Darug Land) for conservation, site works, developments and interpretation/education strategie

Darug Custodian Aboriginal Corporation have received and reviewed the report for Light Horse Interchange Business Hub, Eastern Creek,

We support the recommendations set out in this report.

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

Regards

A handwritten signature in black ink, appearing to read 'Justine Coplin', is written over a light blue rectangular background.

Justine Coplin

Appendix 3: Archaeological Background

A3-1. Site Type Information

Aboriginal Sites

Aboriginal sites are classified in a number of ways. At the most basic level, sites are recorded as 'closed sites' or 'open sites'. Closed sites are associated with rock shelters, and include other evidence of Aboriginal occupation that may be present, such as accumulated cultural deposit within the shelter ('potential archaeological deposit' or PAD), faunal remains (animal bone or shell), and rock art on the shelter walls (paintings or engravings). Open sites are broadly defined, and encompass all other types of Aboriginal sites identified where there is no rock shelter. The most common types of open sites found in NSW include artefacts, which can occur almost anywhere in the landscape, grinding grooves, rock art across formations, culturally modified trees, and shell deposits (middens) (OEH 2012:7). The presence or absence of stone artefacts is often a defining factor, although it is worth pointing out that almost any site is likely to have at least some associated artefacts, as discard or loss of this most ubiquitous and practically indestructible marker of Aboriginal archaeology is likely to have occurred anywhere that Aboriginal people stopped or gathered for any length of time.

Any one site (or close group of linked sites described as a 'site complex') can contain several different site features. For example, a shelter may have art on the walls, artefacts on the floor surface or outside the shelter, and be predicted to contain faunal remains and further artefacts in the accumulated deposit inside.

A description of terms used to describe different site features is provided in **Table 1**. Other features or types of Aboriginal cultural sites that do not necessarily leave physical evidence may exist or have once existed in the study area however such sites have not previously been recorded reflecting the archaeological focus of the past studies and the loss of traditional knowledge of such places in this area. Similarly there may be places of contemporary significance to Aboriginal people in the precincts and this will require consultation with the Aboriginal community to identify such places.

Table 1: A4-2-1 Aboriginal site feature definitions (OEH 2012:4-5)

Site Feature		Definition
Artefact		Objects such as stone tools, and associated flaked material, spears, manuports, grindstones, discarded stone flakes, modified glass or shell demonstrating evidence of use of the area by Aboriginal people.
Potential Archaeological Deposit (PAD)		An area where Aboriginal objects may occur below the ground surface. The term 'potential archaeological deposit' was first applied in Sydney regional archaeology in the 1980s, and referred to rock shelters that were large enough and with enough accumulated deposit to allow archaeologists to presume that subsurface cultural material was highly likely to be present. Since then it has come to include open sites where the same prediction can be made.
Modified (Carved or Scarred)	Tree or	Trees which show the marks of modification as a result of cutting of bark from the trunk for use in the production of shields, canoes, boomerangs, burials shrouds, for medicinal purposes, foot holds etc., or alternately intentional carving of the heartwood of the tree to form a permanent marker to indicate ceremonial use/significance of a nearby area, again these carvings may also act as territorial or burial markers.

Stone Quarry	Usually a source of good quality stone which is quarried and used for the production of stone tools
Burial	A traditional or contemporary (post-contact) burial of an Aboriginal person, which may occur outside designated cemeteries and may not be marked, e.g. in caves, marked by stone cairns, in sand areas, along creek banks etc.

Stone Artefacts

Aboriginal stone artefacts are an important source of archaeological information because stone is preserved for long periods of time whereas organic materials such as bone, shell, wood and plant fibres often decay. Stone artefacts provide valuable information about technology, economy, cultural change through time and settlement patterning. Stone has also been used for 'relative' dating of sites where direct methods such as radiocarbon dating cannot be applied. A technological sequence for stone artefacts for the region was first described in the late 1940s by Fred McCarthy and has since been refined over time by Hiscock and Attenbrow (Hiscock and Attenbrow 1998, 2005) into the 'Eastern Regional Sequence':

- Capertian – is distinguished by large uniface pebble tools, core tools, horse-hoof cores, scrapers and hammerstones. Backed artefacts occasionally present. Generally dates to before 5,000 years BP.
- Early Bondaian – Aspects of the Capertian assemblage continue, but backed artefacts and ground-edged artefacts increase. Artefacts during this period were predominantly made from fine-grained siliceous stone such as silcrete and tuff. Generally dated from 5,000 BP to 2,800 BP.
- Middle Bondaian – Characterised by backed artefacts, particularly Bondi Points and ground-edged artefacts. Artefacts made from siliceous materials, however quartz becomes more frequent. Generally dated from 2,800 BP to 1,600 BP.
- Late Bondaian – characterised by bipolar technology, eloueras, ground-edged artefacts, and bone and shell artefacts. Bondi points are virtually absent and artefacts are predominantly made from Quartz. Generally dated from 1,600 BP to European contact.

Survivability of the Archaeological Record

The following observations can be made about the nature and survivability of the archaeological record across the Cumberland subregion:

- Archaeological material is often found in areas of sub-surface exposure, such as those caused by erosion.
- Surface evidence (or the absence of surface evidence) does not necessarily indicate the potential, nature or density of sub-surface material. Extensive excavations have shown that areas with no surface evidence often contain sub-surface deposits buried beneath current ground surfaces (JMCHM 2001; Kohen 1984).
- Due to the limitations of surface surveys, test excavation is often required to establish the nature and density of archaeological material.

- Aboriginal cultural material is more likely to survive in areas that contain remnant portions of the pre-European soil profile, in contrast to landforms that have been impacted by historical or recent disturbances.
- The potential for survival of any archaeological sites will largely depend on the degree of past disturbance.
- Past disturbance to the soil profile can be due to European activity such as clearing, ploughing, grazing, and urban development and/or due to environmental factors such as flooding events, erosion and colluvial movement. These activities may disturb, erode or remove the natural soil profile completely.
- Aboriginal stone artefacts are more likely to survive because stone is preserved for long periods of time whereas organic materials such as bone, shell, wood and plant fibres decay.
- A major impact of more than 200 years of post-contact settlement on Aboriginal sites would have been the destruction of carved and scarred trees, which would have been removed as part of clearing for agricultural activities and the construction of infrastructure such as buildings and roads. However, there is some potential for culturally modified trees to survive in areas where there are stands of remnant native vegetation.

A3-2. AHIMS Sites

A copy of the AHIMS search and Site Cards are provided in the subsequent pages.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : SYD18198

Client Service ID : 358029

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-2576	EC2	AGD	56	302650	6256580	Open site	Valid	Artefact : -	Open Camp Site	98435
	Contact	Recorders	Kerry Navin,Mr.Kelvin Officer							
								Permits	1382	
45-5-2577	EC4	AGD	56	302250	6256320	Open site	Valid	Artefact : -	Open Camp Site	98435
	Contact	Recorders	Mr.Kelvin Officer							
								Permits		
45-5-2578	EC3	AGD	56	301980	6256520	Open site	Valid	Artefact : -	Open Camp Site	98435
	Contact	Recorders	Mr.Kelvin Officer							
								Permits		
45-5-2580	EC6	AGD	56	302480	6256280	Open site	Valid	Artefact : -	Isolated Find	98435
	Contact	Recorders	Mr.Kelvin Officer							
								Permits	1444	
45-5-2581	EC7	AGD	56	302700	6256150	Open site	Valid	Artefact : -	Open Camp Site	98435
	Contact	Recorders	Mr.Kelvin Officer							
								Permits	1382	
45-5-2564	IF1	AGD	56	301450	6257430	Open site	Valid	Artefact : -	Isolated Find	98435
	Contact	Recorders	Kerry Navin,Mr.Kelvin Officer							
								Permits		
45-5-2565	IF2	AGD	56	301200	6257240	Open site	Valid	Artefact : -	Isolated Find	98435
	Contact	Recorders	Kerry Navin,Mr.Kelvin Officer							
								Permits		
45-5-1066	Eastern Creek 1 EC 1	GDA	56	302157	6257912	Open site	Destroyed	Artefact : -	Open Camp Site	3694,98435
	Contact	Recorders	Helen Brayshaw,Ms.Laila Haglund,Kelleher Nightingale Consulting Pty Ltd,Miss.Kri							
								Permits	4001	
45-5-0436	Eastern Creek W3	AGD	56	300740	6258050	Open site	Valid	Artefact : -	Open Camp Site	1018,98435
	Contact	Recorders	Doctor.Susan McIntyre-Tamwoy							
								Permits		
45-5-0438	Eastern Creek W2	AGD	56	300900	6257650	Open site	Valid	Artefact : -	Open Camp Site	1018,98435
	Contact	Recorders	Doctor.Susan McIntyre-Tamwoy							
								Permits	2569	
45-5-0439	Eastern Creek W1	AGD	56	300750	6256650	Open site	Valid	Artefact : -	Open Camp Site	1018,98435
	Contact	Recorders	Doctor.Susan McIntyre-Tamwoy							
								Permits		
45-5-0249	Wallgrove Wallgrove Road	AGD	56	300900	6257100	Open site	Valid	Artefact : -	Open Camp Site	367,1018,9843 5,98444,98677
	Contact	Recorders	Ms.Laila Haglund							
								Permits	1573,1609	
45-5-0741	WDD1	AGD	56	301840	6255920	Open site	Valid	Artefact : -	Open Camp Site	98435
	Contact	Recorders	Margrit Koettig							
								Permits		
45-5-0743	WDD3	AGD	56	301650	6255750	Open site	Valid	Artefact : -	Open Camp Site	1501,1530,984 35
	Contact	Recorders	Margrit Koettig							
								Permits		
45-5-0750	EC12 (Eastern Creek)	AGD	56	302330	6257000	Open site	Valid	Artefact : -	Open Camp Site	1644,1646,181 4,98435
	Contact	Recorders	Elizabeth Rich,Laura-Jane Smith							
								Permits	131	
45-5-0751	EC11 (Eastern Creek)	AGD	56	302290	6257550	Open site	Destroyed	Artefact : -	Open Camp Site	1644,1646,181 4,98435
	Contact	Recorders	Elizabeth Rich,Laura-Jane Smith							
								Permits	131	

Report generated by AHIMS Web Service on 17/07/2018 for Alan Williams for the following area at Lot : 10, DP:DP1061237 with a Buffer of 1000 meters. Additional Info : Development of ACHA for SSD project. Number of Aboriginal sites and Aboriginal objects found is 72

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : SYD18198

Client Service ID : 358029

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-0752	EC10 (Eastern Creek)	AGD	56	302330	6257400	Open site	Valid	Artefact : -	Open Camp Site	1644,1646,1814,98435
	<u>Contact</u>	<u>Recorders</u>	Elizabeth Rich,Laura-Jane Smith					<u>Permits</u>	131	
45-5-0753	EC9 (Eastern Creek)	AGD	56	302200	6257100	Open site	Valid	Artefact : -	Open Camp Site	1644,1814,98435
	<u>Contact</u>	<u>Recorders</u>	Elizabeth Rich,Mr.David Crew					<u>Permits</u>		
45-5-0756	EC6 (Eastern Creek)	AGD	56	302070	6257300	Open site	Valid	Artefact : -	Open Camp Site	1644,98435
	<u>Contact</u>	<u>Recorders</u>	Elizabeth Rich,S Lalor,Mr.David Crew					<u>Permits</u>		
45-5-0757	EC5 (Eastern Creek)	AGD	56	302350	6257250	Open site	Valid	Artefact : -	Open Camp Site	1644,98435
	<u>Contact</u>	<u>Recorders</u>	Elizabeth Rich,S Lalor,Mr.David Crew					<u>Permits</u>		
45-5-0758	EC4 (Eastern Creek)	AGD	56	302500	6257150	Open site	Valid	Artefact : -	Open Camp Site	1644,98435
	<u>Contact</u>	<u>Recorders</u>	Elizabeth Rich,S Lalor,Mr.David Crew					<u>Permits</u>		
45-5-0588	Blacktown Southwest 1 Eastern Creek	AGD	56	300330	6256700	Open site	Valid	Artefact : -	Open Camp Site	98435
	<u>Contact</u>	<u>Recorders</u>	Jim Kohen					<u>Permits</u>	4218	
45-5-0759	EC3 (Eastern Creek)	AGD	56	302580	6257150	Open site	Valid	Artefact : -	Open Camp Site	1644,98435
	<u>Contact</u>	<u>Recorders</u>	Elizabeth Rich,S Lalor,Mr.David Crew					<u>Permits</u>		
45-5-0760	EC2 (Eastern Creek)	AGD	56	302540	6257520	Open site	Valid	Artefact : -	Open Camp Site	1644,98435
	<u>Contact</u>	<u>Recorders</u>	D Drew,Elizabeth Rich,S Lalor					<u>Permits</u>		
45-5-2614	Eastern Creek 9	AGD	56	301890	6256000	Open site	Valid	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>		
45-5-2648	Eastern Creek PAD 20	AGD	56	301500	6258000	Open site	Destroyed	Potential Archaeological Deposit (PAD) : -		103782
	<u>Contact</u>	<u>Recorders</u>	Australian Museum Consulting (AM Consulting)					<u>Permits</u>	1317,1566	
45-5-2591	EC1	AGD	56	301600	6256450	Open site	Valid	Artefact : -		
	<u>Contact</u> John Gallard	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>		
45-5-2592	EC2 (Duplicate copy see 45-5-2576)	AGD	56	302650	6256580	Open site	Valid	Artefact : -		
	<u>Contact</u> Colin Gale	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>		
45-5-2593	EC3 (Duplicate copy of 45-5-2578)	AGD	56	301980	6256520	Open site	Valid	Artefact : -		
	<u>Contact</u> Colin Gale	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>		
45-5-2594	EC4 (Duplicate copy of 45-5-2577)	AGD	56	302250	6256320	Open site	Valid	Artefact : -		
	<u>Contact</u> John Gallard	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>		
45-5-2595	EC5 (Duplicate copy of 45-5-2579)	AGD	56	302350	6256300	Open site	Valid	Artefact : -		
	<u>Contact</u> John Gallard	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>	1444	
45-5-2596	EC6 (Duplicate copy of 45-5-2580)	AGD	56	302480	6256280	Open site	Valid	Artefact : -		
	<u>Contact</u> John Gallard	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>		

Report generated by AHIMS Web Service on 17/07/2018 for Alan Williams for the following area at Lot : 10, DP:DP1061237 with a Buffer of 1000 meters. Additional Info : Development of ACHA for SSD project. Number of Aboriginal sites and Aboriginal objects found is 72

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : SYD18198

Client Service ID : 358029

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-2597	EC7 (Duplicate copy of 45-5-2581)	AGD	56	302700	6256150	Open site	Valid	Artefact : -		
	Contact Colin Gale	Recorders	Navin Officer Heritage Consultants Pty Ltd							
45-5-2599	WSRA 1	AGD	56	302100	6256510	Open site	Valid	Artefact : -		
	Contact John Gallard	Recorders	Navin Officer Heritage Consultants Pty Ltd							
45-5-2601	IF1	AGD	56	302290	6256350	Open site	Valid	Artefact : -		
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd							
45-5-2797	WSO-OS-8	AGD	56	301090	6256450	Open site	Valid	Artefact : -		
	Contact	Recorders	Mrs.Robynne Mills							
45-5-2836	IF:7	AGD	56	300600	6256840	Open site	Valid	Artefact : -		4599,98444,10 0449
	Contact	Recorders	Dominic Steele Archaeological Consulting							
45-5-2837	IF:8	AGD	56	300640	6256780	Open site	Valid	Artefact : -		4599,100449
	Contact	Recorders	Dominic Steele Archaeological Consulting							
45-5-2654	PL-05-1	AGD	56	301550	6258030	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Central West Archaeological and Heritage Services Pty Ltd							
45-5-2822	WBP 1	AGD	56	300650	6257100	Open site	Valid	Modified Tree (Carved or Scarred) : -		98444
	Contact	Recorders	Dominic Steele Archaeological Consulting							
45-5-2823	AWL 8	AGD	56	300700	6257550	Open site	Valid	Art (Pigment or Engraved) : -		98444
	Contact	Recorders	Dominic Steele Archaeological Consulting							
45-5-2827	AWL 4	AGD	56	300870	6256820	Open site	Valid	Artefact : -		4599,98444
	Contact	Recorders	Dominic Steele Archaeological Consulting							
45-5-2828	AWL 6	AGD	56	300670	6256780	Open site	Valid	Artefact : -		4599,98444,10 0449
	Contact	Recorders	Dominic Steele Archaeological Consulting							
45-5-2829	AWL 7	AGD	56	300680	6256860	Open site	Valid	Artefact : -		4599,98444,10 0449
	Contact	Recorders	Dominic Steele Archaeological Consulting							
45-5-2849	SO-ST 2 (A, B, C, D & E)	AGD	56	301310	6258010	Open site	Destroyed	Modified Tree (Carved or Scarred) : -		4015,98084
	Contact	Recorders	Australian Museum Consulting (AM Consulting),Megan Mebberson							
45-5-2974	Lucan Park PAD	AGD	56	301090	6256666	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Megan Mebberson							
								Permits	1597	
								Permits	1941	

Report generated by AHIMS Web Service on 17/07/2018 for Alan Williams for the following area at Lot : 10, DP:DP1061237 with a Buffer of 1000 meters. Additional Info : Development of ACHA for SSD project. Number of Aboriginal sites and Aboriginal objects found is 72

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : SYD18198

Client Service ID : 358029

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-5-2985	Austral 3	AGD	56	300770	6256000	Open site	Valid	Artefact : 1		
	Contact	Recorders	Doctor.Jo McDonald							
45-5-3020	EC_AMBS_04	AGD	56	301654	6258414	Open site	Valid	Artefact : -	Permits 1994	
	Contact	Recorders	Matthew Kelleher							
45-5-3206	ISF11	AGD	56	300780	6256920	Open site	Valid	Artefact : -	Permits 2150	
	Contact	Recorders	Jo McDonald Cultural Heritage Management see GML							
45-5-3260	WSP 13	GDA	56	302724	6258228	Open site	Valid	Artefact : 1		100103
	Contact S Scanlon	Recorders	Jo McDonald Cultural Heritage Management see GML							
45-5-3261	WSP 14	GDA	56	301798	6258400	Open site	Valid	Artefact : 1		100103
	Contact S Scanlon	Recorders	Jo McDonald Cultural Heritage Management see GML							
45-5-3262	WSP 15	GDA	56	302212	6258063	Open site	Valid	Artefact : -		100103
	Contact S Scanlon	Recorders	Jo McDonald Cultural Heritage Management see GML							
45-5-3264	WSP 17	GDA	56	302412	6257853	Open site	Valid	Artefact : 1		100103
	Contact S Scanlon	Recorders	Jo McDonald Cultural Heritage Management see GML							
45-5-3265	WSP 18	GDA	56	302087	6258599	Open site	Valid	Artefact : 1		100103
	Contact S Scanlon	Recorders	Jo McDonald Cultural Heritage Management see GML							
45-5-2720	PAD-OS-8	AGD	56	301150	6257650	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Mrs.Robynne Mills							
45-5-2579	EC5	AGD	56	302350	6256300	Open site	Valid	Artefact : -	Isolated Find	98435
	Contact	Recorders	Mr.Kelvin Officer							
45-5-0761	EC1 (Eastern Creek)	AGD	56	302540	6257520	Open site	Valid	Artefact : -	Open Camp Site	1644,98435
	Contact	Recorders	Elizabeth Rich,S Lalor,Mr.David Crew							
45-5-3434	Parramatta SWC PAD	AGD	56	300320	6256325	Open site	Valid	Potential Archaeological Deposit (PAD) : 1	Permits 131	
	Contact	Recorders	Heritage Concepts							
45-5-0754	EC8 (Eastern Creek)	AGD	56	302300	6257080	Open site	Valid	Artefact : -	Open Camp Site	1644,1814,984 35
	Contact	Recorders	Elizabeth Rich,S Lalor,Mr.David Crew							
45-5-0755	EC7 (Eastern Creek)	AGD	56	302750	6257000	Open site	Valid	Artefact : -	Open Camp Site	1644,98435
	Contact	Recorders	Elizabeth Rich,S Lalor,Mr.David Crew							
45-5-3779	Link Road PAD	GDA	56	300711	6256775	Open site	Valid	Potential Archaeological Deposit (PAD) : -	Permits 3206	
	Contact	Recorders	Mr.Oliver Brown							
45-5-3810	Q1 (Prospect)	GDA	56	301032	6258446	Open site	Valid	Artefact : 1		101797

Report generated by AHIMS Web Service on 17/07/2018 for Alan Williams for the following area at Lot : 10, DP:DP1061237 with a Buffer of 1000 meters. Additional Info : Development of ACHA for SSD project. Number of Aboriginal sites and Aboriginal objects found is 72

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : SYD18198

Client Service ID : 358029

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	Jo McDonald Cultural Heritage Management see GML					<u>Permits</u>		
45-5-3811	Q2 (Prospect)	GDA	56	301173	6258417	Open site	Valid	Artefact : 1		101797
	<u>Contact</u>	<u>Recorders</u>	Jo McDonald Cultural Heritage Management see GML					<u>Permits</u>		
45-5-3812	Q3 (Prospect)	GDA	56	301053	6258543	Open site	Valid	Artefact : 1		101797
	<u>Contact</u>	<u>Recorders</u>	Jo McDonald Cultural Heritage Management see GML					<u>Permits</u>		
45-5-3813	Q4 (Prospect)	GDA	56	301243	6258480	Open site	Valid	Artefact : 1		101797
	<u>Contact</u>	<u>Recorders</u>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti					<u>Permits</u>		
45-5-3814	Q5 (Prospect)	GDA	56	301198	6258432	Open site	Valid	Artefact : 1		101797
	<u>Contact</u>	<u>Recorders</u>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti					<u>Permits</u>		
45-5-3815	Q6 (Prospect)	GDA	56	301168	6258410	Open site	Valid	Artefact : 1		101797
	<u>Contact</u>	<u>Recorders</u>	Jo McDonald Cultural Heritage Management see GML,Kelleher Nightingale Consulti					<u>Permits</u>		
45-5-2600	WSRA 2	AGD	56	302090	6255900	Open site	Valid	Artefact : -		
	<u>Contact</u> Colin Gale	<u>Recorders</u>	Navin Officer Heritage Consultants Pty Ltd					<u>Permits</u>		
45-5-4284	Erskine Park Link Road 2	GDA	56	301017	6256543	Open site	Valid	Artefact : 1		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Alan Williams					<u>Permits</u>	3625	
45-5-4194	CONSERVATION AREA PAD	GDA	56	300863	6256750	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Alan Williams					<u>Permits</u>	3625	
45-5-4583	M4-02 Eastern Creek	GDA	56	302152	6258029	Open site	Destroyed	Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	Helen Brayshaw,Kelleher Nightingale Consulting Pty Ltd, Miss.Kristen Taylor					<u>Permits</u>	4001	
45-5-4726	Lot 40 PAD	GDA	56	300521	6257112	Open site	Valid	Potential Archaeological Deposit (PAD) : -, Artefact : -		
	<u>Contact</u>	<u>Recorders</u>	GML Heritage Pty Ltd + Context - Surry Hills, Doctor.Tim Owen, Doctor.Tim Owen					<u>Permits</u>	4136	

Report generated by AHIMS Web Service on 17/07/2018 for Alan Williams for the following area at Lot : 10, DP:DP1061237 with a Buffer of 1000 meters. Additional Info : Development of ACHA for SSD project. Number of Aboriginal sites and Aboriginal objects found is 72

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National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 9585 6444

Standard Site Recording Form

Revised 5/88



45-5-2564

1:250,000 map sheet:

Sydney

NPWS Code

HEAD OFFICE USE ONLY:

NPWS Site no:

45-5-2564

Site types:

Accessioned by:

Date:

Data entered by:

Date:

Owner/Manager:

Address:

AMG Grid reference

Full reference - please include leading digits

301450 mE

25K

6257430 mN

5/6

25K

Scale of map used for grid reference
Please use largest scale available[✓] 25K, 50K
(preferred)

[] 100K

[] 250K

1:25K, 50K, 100K map name:

Prospect

Site name: IF 1

Locality/property name: Eastern Creek

NPWS District:

Region: Sydney

Reason for investigation

possible expansion of Eastern Creek Waste depot

Portion no:

Parish:

Photos taken? no

How many attached?

How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff)
(Draw diagram on separate sheet)

see attached map

Other sites in locality?

yes

Site Types include:

artefact scatters

Are sites in NPWS Register?

yes

Have artefacts been removed from site? unknown - When? -

By whom?

Deposited where? -

Is site important to local Aborigines?

Give contact(s) name(s) + address(es)

Contacted for this recording?

no

(Attach additional information separately) if not, why not?

Verbal/written reference sources (including full title of accompanying report)

Proposed Expansion of Eastern Creek Regional Waste Depot
Preliminary Archaeological AssessmentNPWS Report
Catalogue #

Checklist

surface visibility.

damage/disturbance/

threat to site

Condition of site

Recommendations for management & protection (attach separate sheet if necessary)

see report

Site recorded by:

Address/institution:

NAVIN OFFICER
HERITAGE CONSULTANTS
102 JERVOIS ST
DEAKIN ACT 2600

Date:

October 1999

5. FIELD INSPECTION RESULTS

5.1 Aboriginal Sites

Two isolated finds were recorded within the boundaries of the subject site. These finds comprise a red-brown silcrete flake exposed in a dirt track cutting just west of the ex-RAAF transmitting station (IF1) and a white chert flake on the eroded edge of a minor drainage line in the area's west (IF2) (Figure 3). No mature trees bearing scars of Aboriginal origin are evident in the area.

While this assessment may be said to be accurate in terms of Aboriginal scarred trees, the extremely low levels of ground surface visibility encountered in the area must be viewed as a highly limiting factor in the identification of any potential stone artefact scatter sites in the area.

Subsequently, the mostly negative survey results in this respect should not be viewed as an accurate reflection of artefact scatter site occurrence in the area.

5.2 Potential Archaeological Deposit (PAD)

The alluvial flats and creek corridors occurring in the southeast section of the study area and the alluvial flats along the length of Eastern Creek within the study area are considered to be archaeologically sensitive landform zones (Figure 4). Previous archaeological work on the Cumberland Plain and in other regions provides universal evidence of the very high potential for such landforms to exhibit the greatest localised concentrations of subsurface archaeological material. While the Reedy and Eastern Creek corridors fall within the boundaries of the protective buffer zones of the proposed development, the intervening alluvial flats and banks of at least two minor creek lines containing water holes would be directly threatened by any northward expansion of the waste depot.

5.3 Surface Visibility

Conditions of surface visibility at the time of field survey were extremely poor with a thick grassy cover being evident across practically all landscape surfaces. A minimal quantity of satisfactory exposure was encountered at only a few locations including patches of narrow linear soil surface along the gas pipeline route and the eroded fringes of some minor drainage lines in the western part of the study area. In all, archaeological exposure in the subject site at the time of survey may be said to have been negligible.

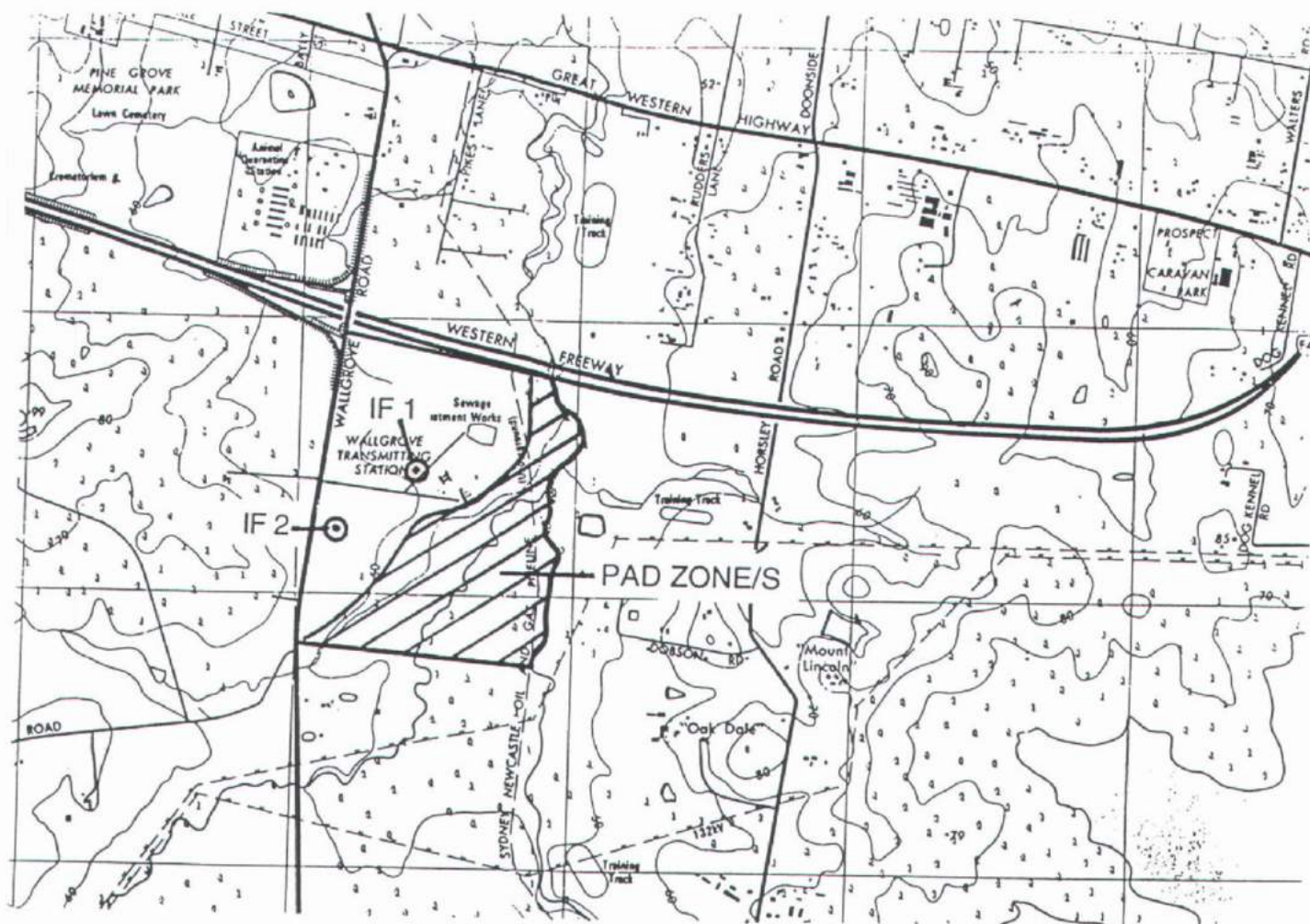


Figure 4 The study area - showing location of isolated finds and area of Potential Archaeological Deposit (PAD) identified in the course of field survey (Prospect 1:25000 2nd Edition)

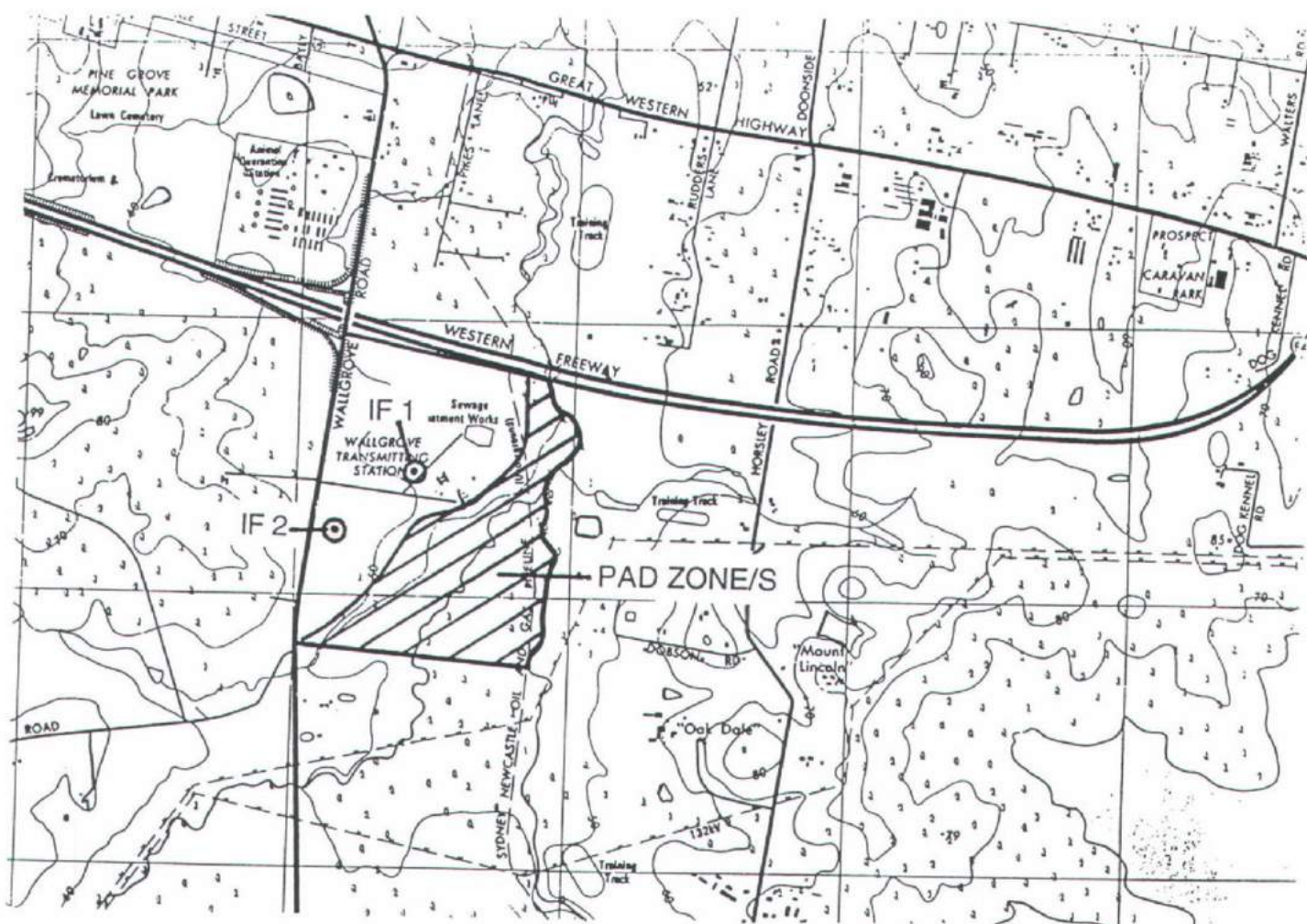


Figure 4 The study area - showing location of isolated finds and area of Potential Archaeological Deposit (PAD) identified in the course of field survey (Prospect 1:25000 2nd Edition)

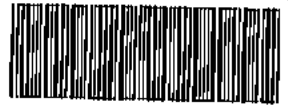


National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 9585 6444

Standard Site Recording Form

Revised 5/88



45-5-2565

1:250,000 map sheet: Sydney NPWS Code

AMG Grid reference

Full reference - please include leading digits

250K 250K
 3 0 1 2 0 0 mE 6 2 5 7 2 4 0 mN
 25K 5/6 25K

Scale of map used for grid reference
Please use largest scale available

[✓] 25K, 50K (preferred) [] 100K [] 250K

1:25K, 50K, 400K map name:

Prospect

HEAD OFFICE USE ONLY:

NPWS Site no:

45-5-2565

Site types:

Accessioned by:

Date:

Date entered by:

Date:

Owner/Manager:

Address:

Site name:

IF 2Locality/property name: Eastern Creek

NPWS District:

Region: Sydney

Reason for investigation

possible expansion of Eastern Creek Waste depot

Portion no:

Parish:

Photos taken? no

How many attached?

How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff)
(Draw diagram on separate sheet)see attached map

Other sites in locality?

yes

Site Types include:

artefact scatters

Are sites in NPWS Register?

yesHave artefacts been removed from site? unknown When? -

By whom?

Deposited where? -

Is site important to local Aborigines?

Give contact(s) name(s) + address(es)

Contacted for this recording?

no

(Attach additional information separately) If not, why not?

Verbal/written reference sources (including full title of accompanying report)

NPWS Report
Catalogue #

Proposed Expansion of Eastern Creek Regional Waste Depot
Preliminary Archaeological Assessment

Checklist

surface visibility

damage/disturbance/

threat to site

Condition of site

Recommendations for management & protection (attach separate sheet if necessary)

ref report

Site recorded by:

Address/institution

NAVIN OFFICER
 HERITAGE CONSULTANTS
 102 JERVOIS ST
 DEAKIN ACT 2600

Date:

October 1999

5. FIELD INSPECTION RESULTS

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Conditions of surface visibility at the time of field survey were extremely poor with a thick grassy cover being evident across practically all landscape surfaces. A minimal quantity of satisfactory exposure was encountered at only a few locations including patches of narrow linear soil surface along the gas pipeline route and the eroded fringes of some minor drainage lines in the western part of the study area. In all, archaeological exposure in the subject site at the time of survey may be said to have been negligible.



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220
Standard Site Recording Form

New Recording ☒ Additional

information ☐

SITE IDENTIFICATION					
Site name	WSP 17			NPWS Site Number	45-5-3264
Owner/manager					
Owner Address					
LOCATION					
Location	Western Sydney Parklands, Doonside				
How to get to the site	Enter off Great Western Highway, site beyond gate at end of Rudders Lane.				
1:250,000 map name					
AMG Zone	56	AMG Easting	302412	AMG Northing	6257853
Method for grid reference		Map scale (if method = map)		Map name	
NPWS District Name (see map)				NPWS Zone (see map)	
Portion no.				Parish	
SITE DESCRIPTION					
Site type(s)	Open artefact scatter			Site type code (NPWS use only)	
Description of site and contents CHECKLIST: eg. length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock. DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types. ART: area of decorated surface, motifs, colours, wet/dry pigment, engraving technique, no. of figures, sizes, patination. BURIALS: number & condition of bone, position, age, sex, associated artefacts. TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth. QUARRIES: rock type, debris, recognisable artefacts, percentage quarried	<p>Area c. 20 x 20m on and along dirt track through property used for grazing horses. Property at end of Rudders Lane and immediately adjacent to M4, at southern extent of study area.</p> <p>3 x silcrete flakes 3 x silcrete fragments 1 x silcrete flake (c.30m closer to E creek) 1 x silcrete fragment (c.30m closer to E creek)</p> <p>Area to W and E of scatter quite disturbed - orange and yellow clay dumped on surface, ploughing, horses grazing and dug out dams. Eastern Creek c. 200m W. Vegetation is mostly regeneration pines and gums along M7 closer to Barham Rd. and typical creek vegetation at Eastern Creek.</p> <p>Attach photographs and sketches, eg. plan & section of shelter. Do NOT dig, disturb or damage site or contents.</p>				

Version: June 1998

Data entered by:

Date entered:

Jedronka

9/11/06



Aboriginal Sites Register of NSW

NPWS, PO Box 1967, Hurstville NSW 2220

Standard Site Recording Form

SITE ENVIRONMENT				
Land form	Hill slope	Aspect	Slope	
Mark position of the site				
Local rock type		Land use/effect		
Distance from drinking water	c. 200m (W of E Creek)	Source		
Resource zone (eg. estuarine, river, forest)	Eastern Creek	Vegetation	Regeneration pines and gums along M4	
Edible plants		Faunal resources (include shellfish)		
Other exploitable resources (eg. ochre)				
Are there other sites in the locality		Are they in the Sites Register	Other site types include	
SITE MANAGEMENT				
Site condition	Poor	Along dirt track through property used for grazing horses		
Management recommendations				
Have artefacts been removed from site	No	When		
By whom		Deposited at		
Consent applied for	<input type="checkbox"/>	Consent issued	<input type="checkbox"/>	
Date of issue		Consent number		
SITE INSPECTION AND RECORDING				
Reason for investigation				
Were local Aborigines contacted or present for the recording	<input type="checkbox"/> Not contacted <input checked="" type="checkbox"/> Contacted and present <input type="checkbox"/> Contacted but not present	Names and addressees	Anthony Hunter Deerubbin LALC	
Is the site important to local Aborigines				
Verbal/written reference sources		ASR report number(s) (or title)	C-	C-
Photographs taken		No. of Photos attached		
Site recorded by	Amy Stevens	Date of recording	18 th September, 2006	
Address/institution	Jo McDonald Cultural Heritage Management Pty Ltd 77 Justin Street, Lilyfield, NSW 2040			

Version: June 1998

Data entered by:

Date entered:

Consent To Destroy #214

[] New recording

[] Additional Info



National Parks and Wildlife Service

Box 1987, Hurstville NSW 2220. Tel: (02) 585 6444
Standard Site Recording Form Revised 5/88



45-5-0756

NPWS Code

1:250,000 map sheet: SYDNEY

AMG Grid reference

Full reference - please include leading digits

250K
302070 mE 6257300 mN
25K 5/6 25K

Scale of map used for grid reference
Please use largest scale available

[X] 25K, 50K (preferred) [] 100K [] 250K

1:25K, 50K, 100K map name: PROSPECT

HEAD OFFICE USE ONLY:

NPWS Site no: 45-5-756

Site types: open

Accessioned by: RCH Date: 15.12.89

Date entered by: RCH Date: 15.12.89

Owner/Manager: NSW Govt

Address: PREMIER'S DEPT

Site name: EC 6

Locality/property name: EASTERN CREEK

NPWS District: SOUTH-MER

Region: CENTRAL

Reason for investigation

Aboriginal Site Survey at proposed Sydney International Grand Prix Circuit

Portion no:

Parish: Prospect

Photos taken?

How many attached?

How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff.
(Draw diagram on separate sheet.)

Travel south along Honeysuckle Road from Great Western Highway
Continue south for 850m from Pt everpass. Turn west on Dobson Road and
follow to end. Site is north from gate about 175m and 150m west of
that point on dam walls

Other sites in locality? YES

Site Types include: Scattered Tree, open

Are sites in NPWS Register? YES

Have artefacts been removed from site? ?

When?

By whom?

Deposited where?

Is site important to local Aborigines? YES

Give contact(s) name(s) + address(es)

DARUK LALC
MT DRUITT RD
MT DRUITT

Contacted for this recording? YES

(Attach additional information separately) If not, why not?

Verbal/written reference sources (including full title of accompanying report).

Archaeological Survey of Proposed Sydney International Grand Prix Circuit

C-1644

NPWS Report
Catalogue #

Checklist:
surface visibility,
damage/disturbance/
threat to site

Condition of site: Totally destroyed by the construction of
the dam walls. Artefacts are all that are left

Recommendations for management & protection (attach separate sheet if necessary):

Collection

Site recorded by: Drew Erich

S Lohar

Date:

13/11/89

Address/institution: 69 Sunnyside St
Tempe

Daruk
LALC

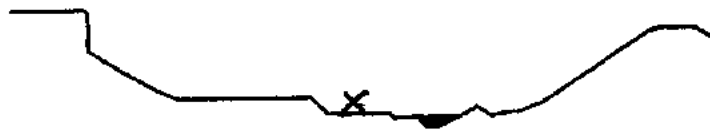
X
227

SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no:

1. Land form a. beach/hill slope/ridge top, etc: **Creek Flat**
d. mark on diagram provided or on your own sketch the position of the site:

- b. site aspect: **West?** c. slope: **<10%**
e. Describe briefly: **Located on Creek flats now developed as Dams**



- f. Local rock type: **Wianamatta Shale** g. Land use/effect: **Rural / Destroyed**

2. Distance from drinking water: **150m** Source: **Eastern Creek**

3. Resource Zone associated with site (estuarine, riverine, forest etc): **Riverine**

4. Vegetation: **Dense Woodland along Creek**

5. Edible plants noted: **—**

6. Faunal resources (include shellfish): **—**

7. Other exploitable resources (river pebbles, ochre, etc): **Extraction Sites Erskine Park, Plumpton**

Site type

Open.

DESCRIPTION OF SITE & CONTENTS.

Note state of preservation of site & contents Do NOT dig, disturb, damage site or contents.

35 Artefacts located on 2 dam walls. —
The north wall of southern dam and south wall of northern dam. Possible Manufacturing Site
Artefacts recorded are.

1. Red Silicate Fine grained Flake - Broad Platform with Carter use wear 30x20x10mm
2. Red Silicate F/g Flake - Focal Platform - 35% carter
3. Red Silicate Amorphous Flake Piece 28x20x9mm
4. Orange Silicate Flake - Broad platform 22x14x7mm
5. Weathered Salmon Silicate Amorphous Flake piece 35x21x7mm
6. Red Mottled Silicate Flake Broad Platform - 32x19x12mm
7. Dark Red Silicate - Medium Grained Amorphous Flake Piece
8. Dark Red Silicate Laminate Flake piece 30x23x5 36x17x12
9. Dark Red Silicate (Red) Amorphous Flake 31x20x8 40% carter on 2 Surfaces
10. Buff Indurated Microlite/chart? Broken Flake 25x22x7
11. Mottled chert Flake - Focal Platform 20x20x6 Stop fracture on dorsal platform
12. White/Brown Mottled Silicate Frag - 19x11x5
13. Red Silicate Flake with Focal Platform 16x9x4
14. Mottled Red/white Silicate Laminate Focal Platform 10x12x3
15. Dark Red Silicate Flake with Focal Platform 13x12x2
16. Red Silicate Flake with Focal Platform 17x11x2
17. Red/Brown Laminate Flake Piece 17x9x6
18. Red/Grey Silicate Flake Piece - Platform missing 15x20x5
19. Grey/Dk Red Silicate Amorphous Flake Piece 18x9x9
20. Brown Silicate Laminate Flake piece 15x12x2
21. Brown Silicate Backed Blade 22x8x3 - asymmetrical, unused Backing from front to back
22. Red Silicate Flake - unmodified 40x35x20

1-22 Found on north wall of Southern Dam
Attach sketches etc. eg. plan & section of shelter, show relation between site contents, indicate north, show scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.

CHECKLIST TO HELP length, width, depth, height of site, shelter, deposit, structure, element eg. tree scar, grooves in rock.

DEPOSIT: colour, texture, estimated depth, stratigraphy, contents-shell, bone, stone, charcoal, density & distribution of these, stone types, artefact types.

ART area of surface decorated, motifs, colours, wet, dry pigment, technique of engraving, no. of figures, sizes, patination.

BURIALS: number & condition of bone, position, age, sex, associated artefacts.

TREES: number, alive, dead, likely age, scar shape, position, size, patterns, axe marks, regrowth

QUARRIES: rock type, debris, recognisable artefacts, percentage quarried.

OTHER SITES EG. structures (fish traps, stone arrangements, bora rings, mia mias), mythological sites, rock holes, engraved groove channels, contact sites (missions massacres cemeteries) as appropriate

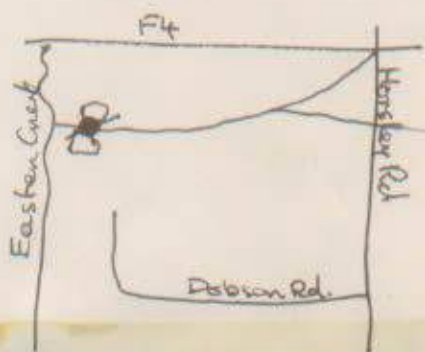
EC6
antefacts (23-35) located over a distance of 15m along the top of Southern wall at Northern Dam

- 23 - Red fine grain Silcrete Flake with Focal Platform 15x16x6
- 24 - Red/Brown Chert Flake 15x12x2
- 25 - Milky Quartz Amorphous Flake Piece 11x6x4
- 26 - Red Silcrete Amorphous Flake Piece 8x8x5
- 27 - Red Silcrete Amorphous Flake Piece 9x7x5
- 28 - Grey Silcrete Flake with broad Platform 13x14x4 - broken distally
- 29 - Red Silcrete Flake with Focal Platform 15x18x4
- 30 - Grey Silcrete Flake with Focal Platform 17x15x5
- 31 - Red Silcrete Flake with Focal Platform 10x12x2
- 32 Red Silcrete Lamellate Flake piece - < 10mm
- 33 Red Silcrete Lamellate Flake piece - < 10mm
- 34 Red Silcrete Amorphous Flake piece < 10mm
- 35 Black Chert Flake with Focal Platform 21x15x4 Pebble Cortex dorsal platform - 40%

N.B. - All measurements are mm

Strong likelihood of additional antefacts being located by a more detailed investigation.

Location



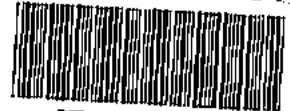
View of EC6. - Northern wall of Southern Dam.



National Parks and Wildlife Service

Box 1967, Hurstville NSW 2220. Tel: (02) 585 6444

Standard Site Recording Form Revised 5/88



45-5-1066

1:250,000 map sheet: SYDNEY NPWS Code 14.5

AMG Grid reference 302060 mE 6257750 mN
 Full reference - please include leading digits
 250K 250K
 25K 25K
 5/8

Scale of map used for grid reference [✓] 25K, 50K [] 100K [] 250K
 Please use largest scale available (preferred)

1:25K, 50K, 100K map name: PROSPECT

HEAD OFFICE USE ONLY:

NPWS Site no: 45-5-1066Site types: Open CampsiteAccessioned by: MPW Date: 12-2-97

Data entered by: _____ Date: _____

Owner/Manager: RTAAddress: 81 Flushcombe Rd
BlacktownSite name: Eastern Creek 1 Locality/property name: ProspectNPWS District: North Mt. Region: Sydney Zone

Reason for investigation

M4 Motorway Upgrade

Portion no: Road Reserve Blacktown City Council
 Parish:

Photos taken? see report
 How many attached?

How to get to the site (refer to permanent features, give best approach to site eg. from above, below, along cliff.
 (Draw diagram on separate sheet.)

Site is on M4 road reserve 80-160 metres east of Eastern Creek bridge,
south of noise barrier fence, south of west bound carriageway.

Other sites in locality? Yes Site Types include: Open Sites
 Are sites in NPWS Register? y

Have artefacts been removed from site? No When?
 By whom? Deposited where?

Is site important to local Aborigines?
 Give contact(s) name(s) + address(es) Luke Hickey v Tony Blandall
Baruk LALC
PO Box 1184 Mt Druitt Village 2770

Contacted for this recording? y
 (Attach additional information separately) If not, why not?

Verbal/written reference sources (including full title of accompanying report)

M4 Upgrade Archaeological Survey for Aboriginal SitesH Grayshaw v L Haglund August 1996NPWS Report
Catalogue #C-3694

Checklist:
 surface visibility,
 damage/disturbance/
 threat to site

Condition of site: Largely disturbed but may retain basal part of 4 horizon
in small area.

Recommendations for management & protection (attach separate sheet if necessary):

Consent to Destroy with monitoringSite recorded by: H. Grayshaw + L. HaglundDate: 5/8/96

Address/institution: 51 Thompson St
Drumbyre 2047

SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no:

1. Land form a. beach/hill slope/ridge top, etc: *creek bank, flood plain* b. site aspect: c. slope:
- d. mark on diagram provided or on your own sketch the position of the site: e. Describe briefly:



See below

- f. Local rock type: *Cumberland Plain Shales* g. Land use/effect: *- road + bridge building*

2. Distance from drinking water: *200m* Source: *Eastern Creek*

3. Resource Zone associated with site (estuarine, riverine, forest etc): *creek/woodland*

4. Vegetation: *Cumberland Plain woodland*

5. Edible plants noted:

6. Faunal resources (include shellfish):

7. Other exploitable resources (river pebbles, ochre, etc):

Site type:

Open Site

DESCRIPTION OF SITE & CONTENTS.

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

1 Eastern Creek 1

South of westbound carriageway. From 80 to 160 metres east of the Eastern Creek bridge, south of the noise barrier fence, 11 artefacts were recorded, 9 of silcrete, one of chert and one of indurated mudstone. Nine of the artefacts were in two exposures either side of an artificial drainage line and the others were 40 and 50 metres further east. Unit A sediments were barely present in the southern [5x2 metre] exposure and in the northern exposure these sediments were only about 2 cm deep. The area to the south of the drainage line, which has been modified, is indicated in aerial photographs taken at the time this bridge was being constructed to have been disturbed. The situation north of the drainage line is not clear, but given the proximity of the raised approach to the bridge it is unlikely that significant undisturbed cultural deposits remain.

As in the area of concern the basal part of the A-horizon seemed to be retained, though possibly somewhat disturbed, there is some potential for this to retain an accumulation of stone artefacts.

CHECKLIST TO HELP:
length, width, depth,
height of site, shelter,
deposit, structure,
element eg. tree scar,
grooves in rock.

DEPOSIT: colour,
texture, estimated
depth, stratigraphy,
contents-shell, bone,
stone, charcoal, density
& distribution of these,
stone types, artefact
types.

ART: area of surface
decorated, motifs,
colours, wet, dry
pigment, technique of
engraving, no. of
figures, sizes,
patination.

BURIALS: number &
condition of bone,
position, age, sex,
associated artefacts.

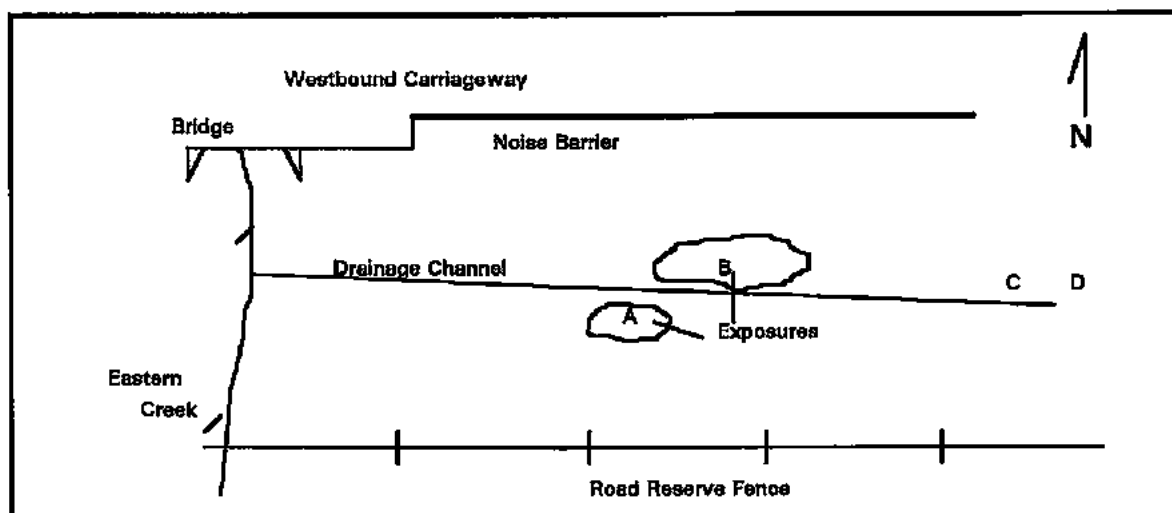
TREES: number, alive,
dead, likely age, scar
shape, position, size,
patterns, axe marks,
regrowth.

QUARRIES: rock type,
debris, recognisable
artefacts, percentage
quarried.

OTHER SITES EG.
structures (fish traps,
stone arrangements,
bone rings, mic mias),
mythological sites, rock
holes, engraved groove
channels, contact sites
(missions massacres
cemeteries) as
appropriate

Attach sketches etc. eg. plan & section of shelter, show relation between site contents, indicate north, show scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.



Eastern Creek 1 Sketch Plan
[Not to Scale]

Aboriginal Site Impact Recording Form

AHIMS Registrar

PO Box 1967, Hurstville 2220 NSW

- 1 This form must be completed following impacts to AHIMS sites that are:
 - a) a result of test excavation carried out in accordance with the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW*
 - b) authorised by an Aboriginal Heritage Impact Permit (AHIP) issued by the Office of Environment and Heritage (OEH)
 - c) undertaken for the purpose of complying with Director General's Requirements issued by the Department of Planning and Infrastructure (DP&I) for:
 - State Significant Development (SSD - Part 4),
 - State Significant Infrastructure (SSI - Part 5.1), or
 - A Major Project (Part 3A - now repealed) under the *Environmental Planning and Assessment Act 1979 (EP&A Act)*, or
 - d) authorised by a SSD/SSI/Part 3A consent/approval under the EP&A Act.
- 2 Completed forms must be submitted to the AHIMS Registrar (www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm).
- 3 This form is intended to complement (not replace) the AHIMS Site Recording Form. Where there is a need to provide detailed information about the nature of a site, use the AHIMS Site Recording Form.
- 4 This form does not replace the need to submit reports to OEH (as a condition of an AHIP or SSD/SSI/Part 3A consent/approval). This form must be submitted in addition to any reports.

AHIMS site ID: 45-5-1066

Date recorded: 06-10-2017

Site impact authorisation (select one)	Reference numbers, dates
<input type="checkbox"/> Archaeological Code (The impacts to this site were the result of test excavation carried out in accordance with the <i>Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW</i> .)	Date OEH was notified (under requirement 15c of the Code): OEH Regional office notified:
<input checked="" type="checkbox"/> AHIP (The impacts to this site were authorised by an AHIP.)	AHIP number: C0002113 Date issued/signed: 2016-09-05 AHIMS permit ID/number: 4001
<input type="checkbox"/> SSD/SSI/Part 3A application (The impacts to this site were undertaken for the purposes of complying with Director General's Requirements issued by the DP&I)	Project number:
<input type="checkbox"/> SSD/SSI/Part 3A approved project (The impacts to this site were authorised by a consent/approval under Parts 4/5.1/3A of the EP&A Act.)	Date Director General's Requirements issued: or Date of project approval:

Site status following impacts:

- ☐ Not a site (The investigations concluded that this is not a site.)
☐ Valid site (The investigations confirmed that this is an Aboriginal site.)
☐ Partially destroyed (The site was partially destroyed following authorised impacts; a portion of the site remains in situ.)
☒ Destroyed (The site was completely destroyed following authorised impacts.)

Site Location Information:

Site name: Eastern Creek 1 EC 1

Easting: 302157 Northing: 6257912 Coordinates must be in GDA (MGA)

Horizontal Accuracy (m): 0

Zone: 56 Location method: Non-Differential GPS

Recorder Information:

(The person responsible for the completion and submission of this form)

Title Surname First name

Ms. Taylor Kristen

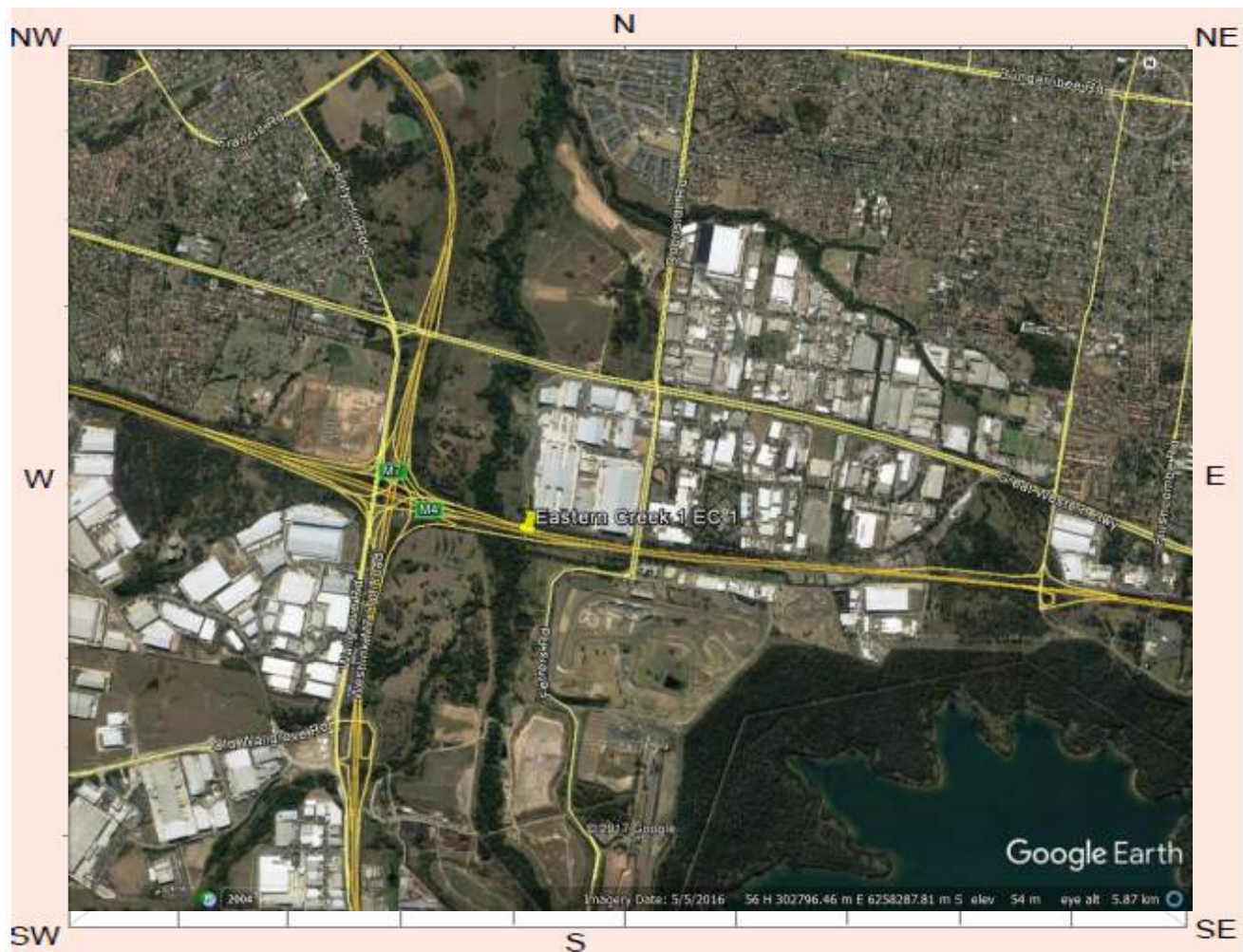
Organisation: Kelleher Nightingale Consulting Pty Ltd

Address: Level 10, Bligh St, Sydney NSW 2000

Phone: 0292325373 E-mail: kristen.taylor@knconsult.com.au

Location map

Clearly demarcate the original AHIMS site boundary, show the boundaries of impacted areas and the areas where the site remains in situ. Display map coordinates.



Features:

Number of features

Length of feature(s) extent (m)

Width of feature (s) extent (m)

1.

Artefact

11

75

50

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

Scar Length (cm)

Scar Width (cm)

Scar shape

Tree Species

Description:

Eleven artefacts were identified during a survey conducted by Brayshaw and Haglund in 1996 which included nine silcrete, one chert and one indurated mudstone artefacts.

Features:

Number of features

Length of feature(s) extent (m)

Width of feature (s) extent (m)

2.

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

Scar Length (cm)

Scar Width (cm)

Scar shape

Tree Species

Description:

Features:

Number of features

Length of feature(s) extent (m)

Width of feature (s) extent (m)

3.

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

Scar Length (cm)

Scar Width (cm)

Scar shape

Tree Species

Description:

Features:

Number of features

Length of feature(s) extent (m)

Width of feature (s) extent (m)

4.

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

Scar Length (cm)

Scar Width (cm)

Scar shape

Tree Species

Description:

Features:

Number of features

Length of feature(s) extent (m)

Width of feature (s) extent (m)

5.

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

Scar Length (cm)

Scar Width (cm)

Scar shape

Tree Species

Description:

Methodology and results

Summary of the methodology and results of the activity or works undertaken through the authorised impacts, as relevant to the AHIMS site

In accordance with the conditions of AHIP # C0002113, site Eastern Creek 1 EC 1 has been completely impacted by upgrade works for the M4 Western Motorway.

Management recommendations

Summary of any management recommendations for the AHIMS site

None, as the site has been completely impacted.

Post-investigation significance

Discuss if the scientific/archaeological or cultural significance of the site has changed in light of the results of the investigations or works conducted at the site.

The site had been disturbed by past land use and the portion within the project area was affected by construction activities, considered to have been highly disturbed. In accordance with AHIP# C0002113, the site has since been completely been impacted.

Additional comments

Site photographs

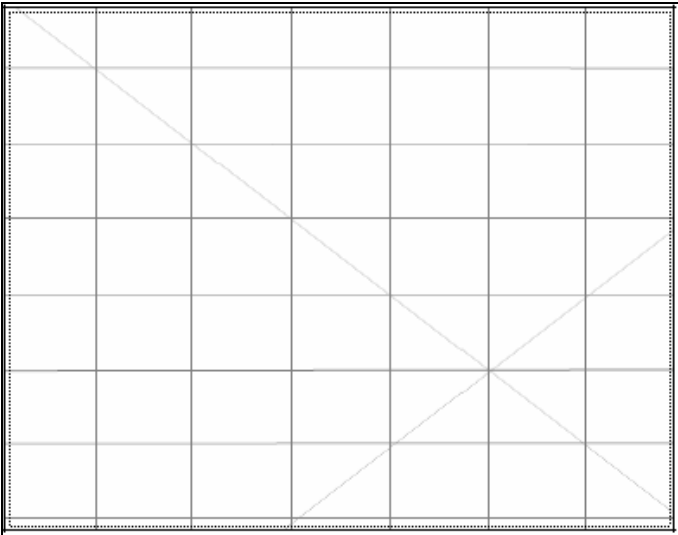
Include photographs of the authorised impacts activity, as relevant to the AHIMS site. Please keep photo size to a maximum of 200 kb.



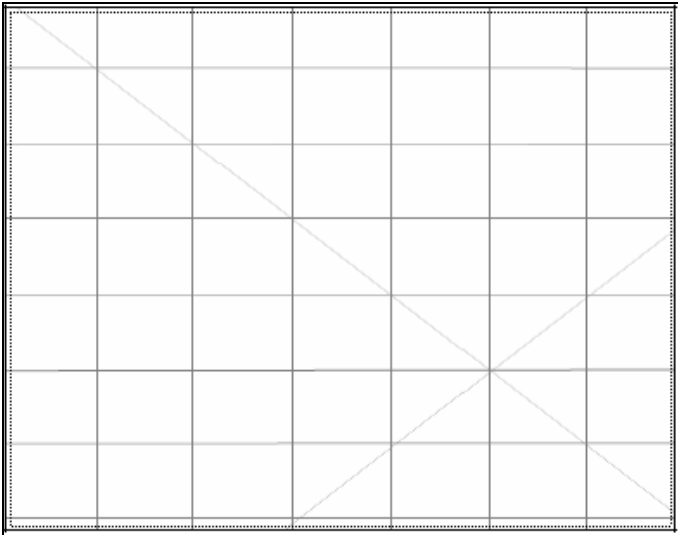
Description: Image of 45-5-1066 oriented west.



Description: Aerial image of 45-5-1066.



Description:



Description:

AHIMS site ID: 45-5-5183

Date recorded: 07-02-2019

Site Location Information

Site name: LIBH AS1

Easting: 301494 Northing: 6257538 Coordinates must be in GDA (MGA)

Horizontal Accuracy (m): 5

Zone: 56 Location method: Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title Surname First name

Mrs. Barry Laressa

Organisation: AHMS

Address: 3/73 Union St Pyrmont NSW 2009

Phone: 0295554000 E-mail: lberehowyj@ahms.com.au

Site Context Information

Land Form Pattern: Rolling Hills Land Use: Pastoral/Grazing

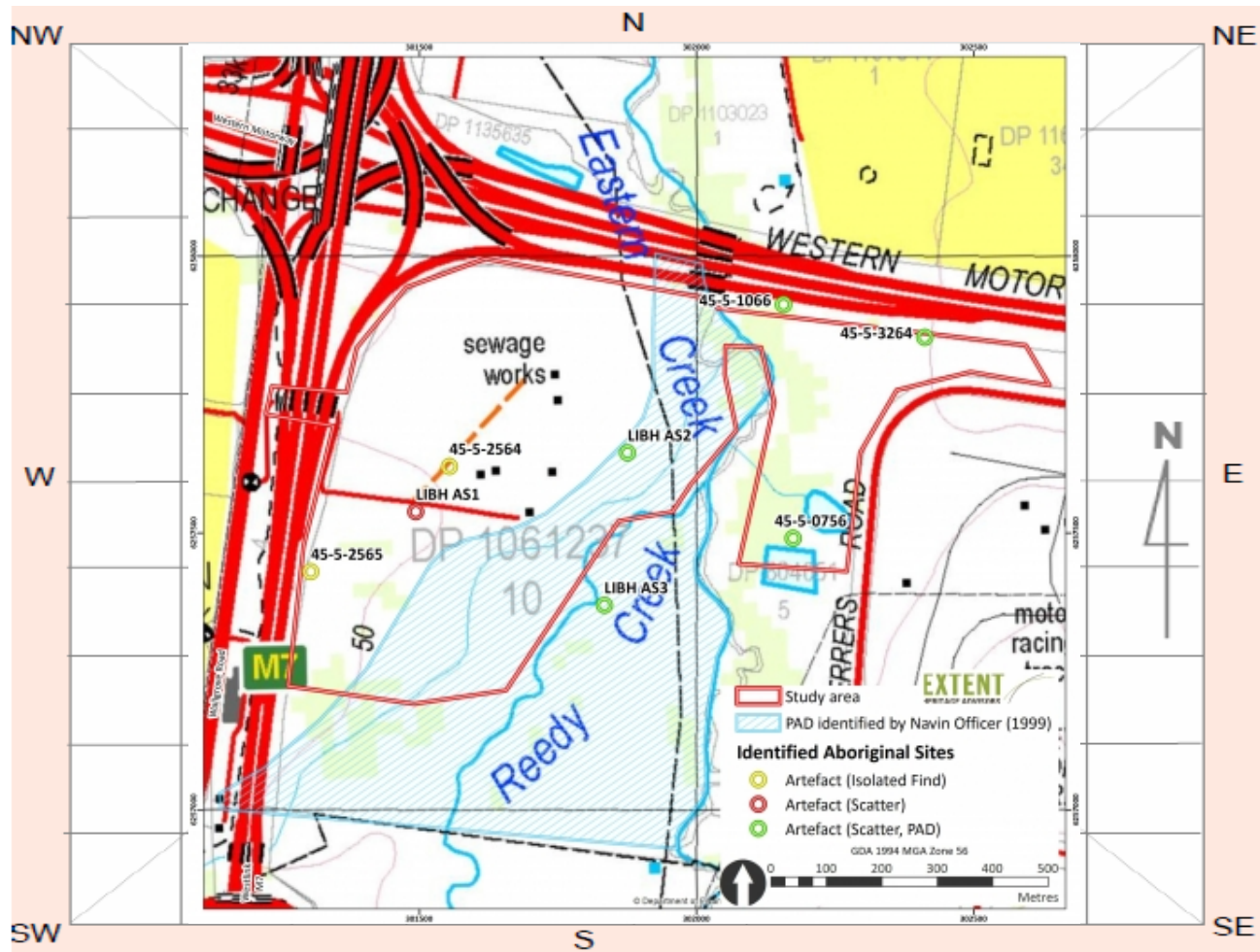
Land Form Unit: Slope Vegetation: Cleared

Distance to Water (m): 190 Primary Report: Extent Heritage 2019 Lighthorse Interchange Business Hub ACHAR

How to get to the site: Travelling southbound along Wallgrove Rd, take the 165 Wallgrove Rd turnoff, taking the underpass beneath the M7 motorway. At the entrance to the property, travel eastbound for ~155m along the asphalt road. The site is 10m south of the road

Other site information: Archaeological test excavation recommended in order to further characterise and investigate nature, significance and distribution of cultural resource.

Site location map



Site contents information

open/closed site:

Open

Site condition:

Erosion

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
1. Artefact	3	2	2				

Description:

Three red silcrete flakes: 10x5x3mm, 20x20x10mm and 30x20x10mm, located 10m south of the asphalt road that leads to the transmission station. Scatter visible in area of ground surface exposure within an eroded soil profile characterised by manganese/ironstone gravels onto basal clays.

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees			
				Scar Depth (cm)	Regrowth (cm)	Scar shape	Tree Species
2.							

Description:

Features:

3.

Number of
featuresLength of
feature(s)
extent (m)Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)Regrowth
(cm)

Scar shape

Tree Species

Description:

Features:

4.

Number of
featuresLength of
feature(s)
extent (m)Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)Regrowth
(cm)

Scar shape

Tree Species

Description:

Features:

5.

Number of
featuresLength of
feature(s)
extent (m)Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)Regrowth
(cm)

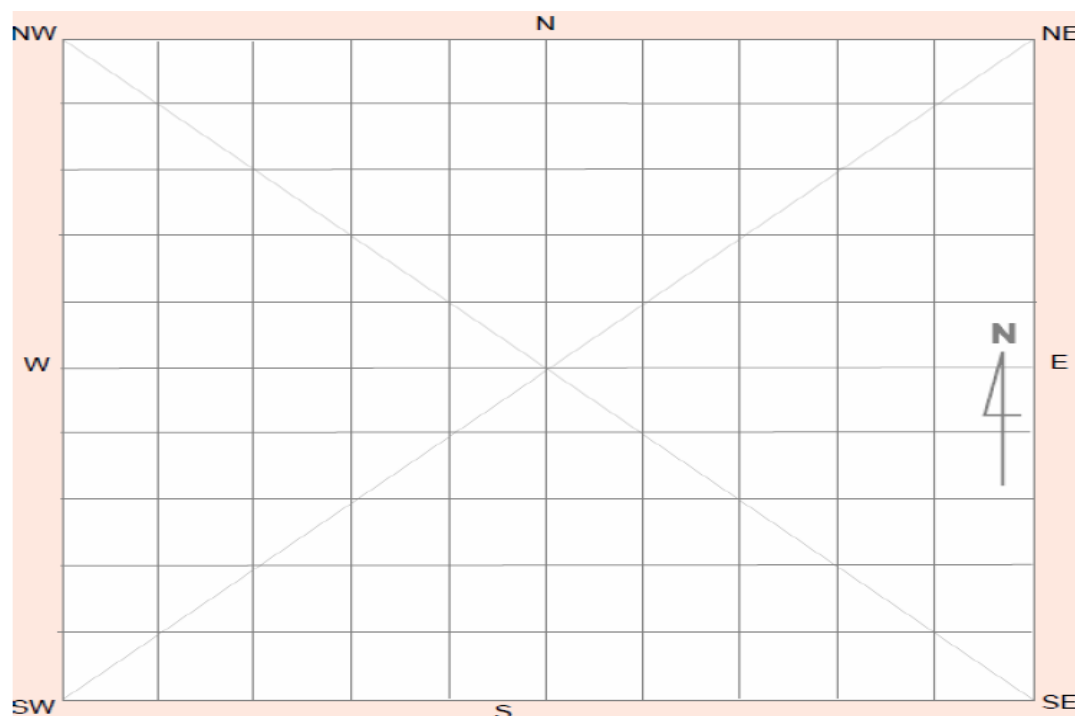
Scar shape

Tree Species

Description:

Other Site
Info:

Archaeological test excavation recommended in order to further characterise and investigate nature, significance and distribution of cultural resource.

Site plan

Site photographs



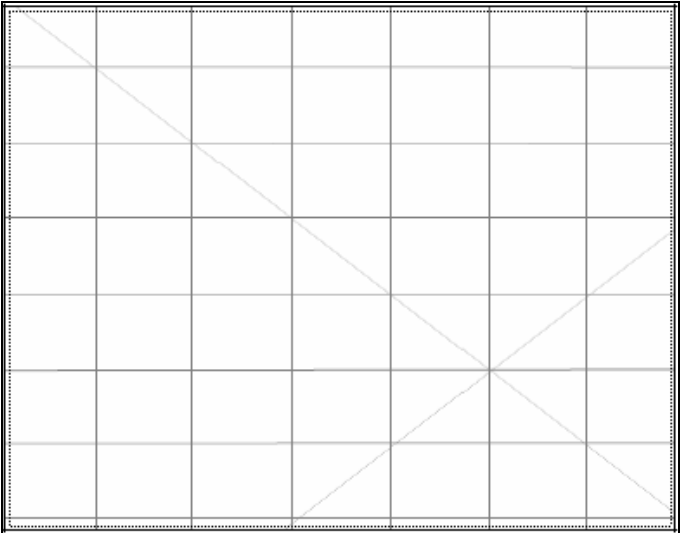
Description: General location of artefact scatter in ground surface exposure, view north.



Description: General location of artefact scatter in ground surface exposure, view east.



Description: Detail red silcrete flake, LIBH AS1



Description:

Site restrictions

Do you want to Restrict this site?: ☐

Restriction type: Gender ☐ General ☐ Location ☐

Why is this site restricted?:

Further information contact

Title

Surname

First name

Organisation:

Address:

Phone:

E-mail:

AHIMS site ID: 45-5-5185

Date recorded: 07-02-2019

Site Location Information

Site name: LIBH AS2

Easting: 301876 Northing: 6257644 Coordinates must be in GDA (MGA)

Horizontal Accuracy (m): 5

Zone: 56 Location method: Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title Surname First name
Mrs. Barry Laressa

Organisation: AHMS

Address: 3/73 Union St Pyrmont NSW 2009

Phone: 0295554000 E-mail: lberehowyj@ahms.com.au

Site Context Information

Land Form Pattern: Rolling Hills Land Use: Pastoral/Grazing

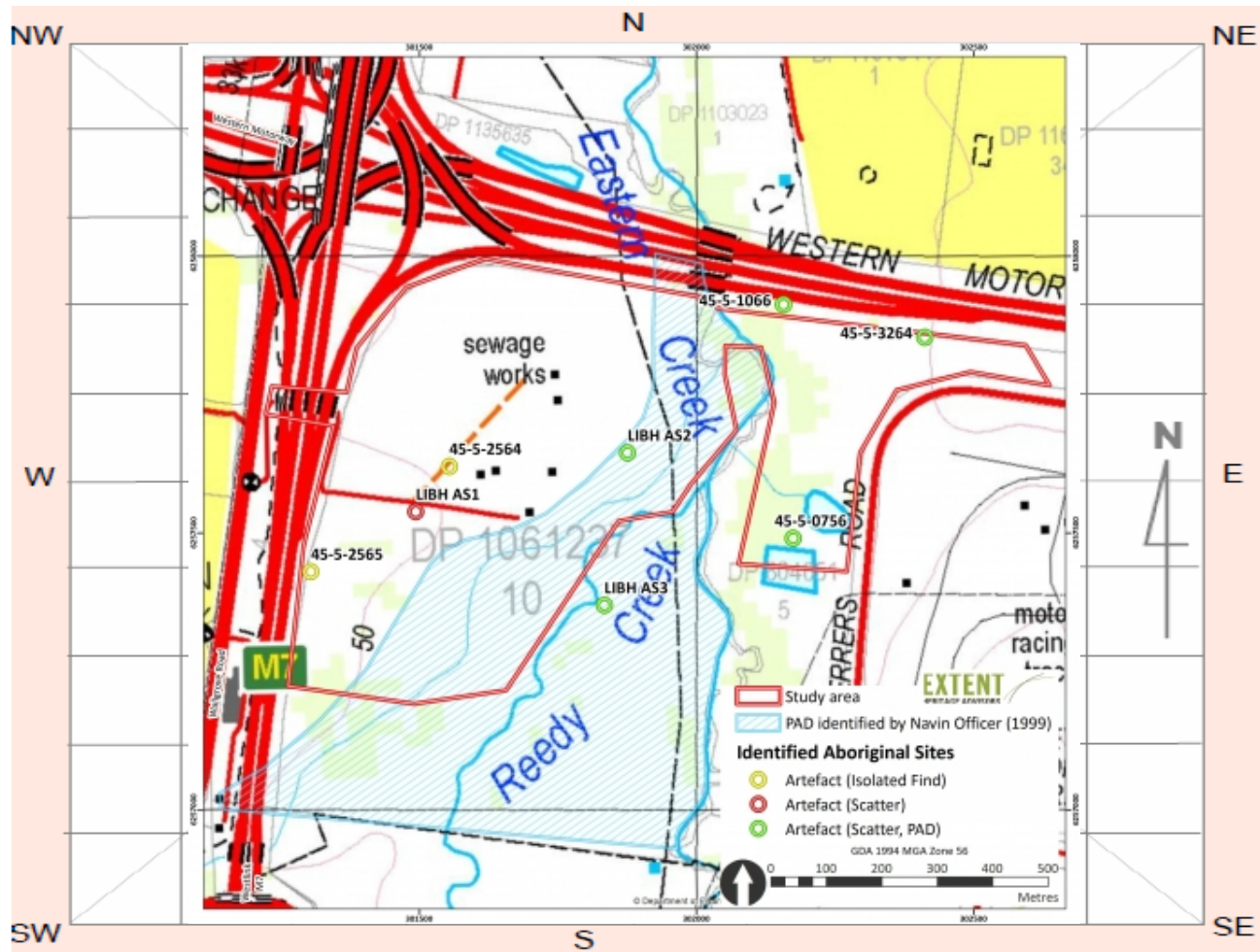
Land Form Unit: Slope Vegetation: Isolated clumps of trees

Distance to Water (m): 50 Primary Report: Extent Heritage 2019. Lighthorse Interchange Business Hub ACHAR

How to get to the site: Enter the property at 165 Wallgrove Road, Eastern Creek. The site is within a stand of trees 200m northeast of the Transmission Station buildings, and 50m west of the gas pipeline easement.

Other site information: Archaeological test excavation recommended to further characterise site extent, nature and significance.

Site location map



Site contents information

open/closed site:

Open

Site condition:

Disturbed

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees
				Scar Depth (cm)Regrowth (cm)Scar shapeTree Species
1. Artefact	2	10	1	<div></div> <div></div> <div></div> <div></div>

Description:

Artefact scatter of 2 IMTC artefacts: 20x20x20mm (flake) and 30x25x15mm (core). Site located along the eastern bank of a former tributary of Eastern Creek within a stand of trees within a silty clay soil profile, and 50m west of the gas pipeline trench.

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees
				Scar Depth (cm)Regrowth (cm)Scar shapeTree Species
2.				<div></div> <div></div> <div></div> <div></div>

Description:

Features:

3.

Number of
featuresLength of
feature(s)
extent (m)Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)Regrowth
(cm)

Scar shape

Tree Species

Description:

Features:

4.

Number of
featuresLength of
feature(s)
extent (m)Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)Regrowth
(cm)

Scar shape

Tree Species

Description:

Features:

5.

Number of
featuresLength of
feature(s)
extent (m)Width of
feature (s)
extent (m)

Scarred Trees

Scar Depth
(cm)Regrowth
(cm)

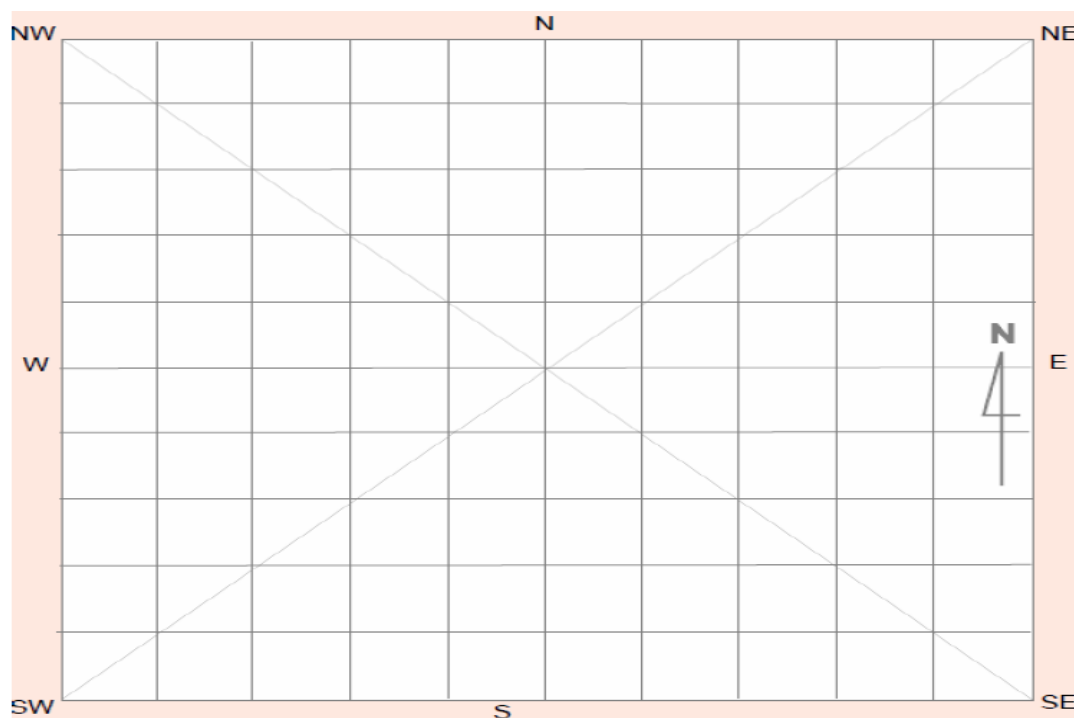
Scar shape

Tree Species

Description:

Other Site
Info:

Archaeological test excavation recommended to further characterise site extent, nature and significance.

Site plan

Site photographs



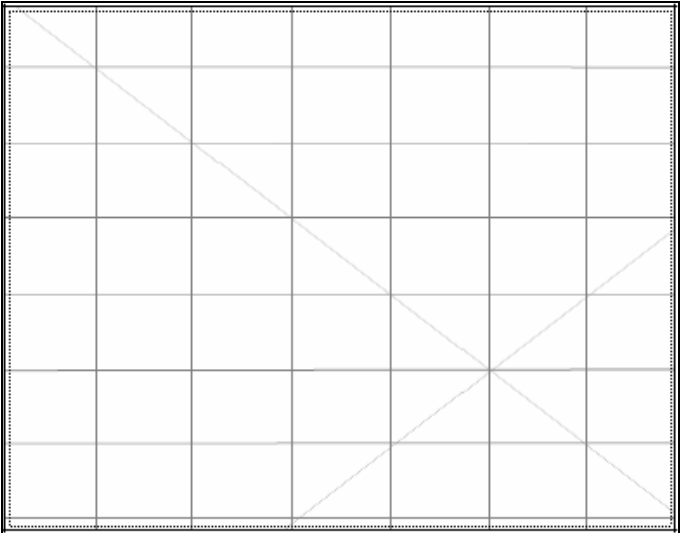
Description: General location of artefact scatter in exposure amongst trees, view east.



Description: Detail IMTC flake



Description: Detail IMTC core with negative flake scars



Description:

Site restrictions

Do you want to Restrict this site?: ☐

Restriction type: Gender ☐ General ☐ Location ☐

Why is this site restricted?:

Further information contact

Title

Surname

First name

Organisation:

Address:

Phone: E-mail:

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID: 45-5-5184

Date recorded: 07-02-2019

Site Location Information

Site name: LIBH AS3

Easting: 301834 Northing: 6257369 Coordinates must be in GDA (MGA)

Horizontal Accuracy (m): 5

Zone: 56 Location method: Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

Title Surname First name
Mrs. Barry Laressa

Organisation: AHMS

Address: 3/73 Union St Pyrmont NSW 2009

Phone: 0295554000 E-mail: lberehowyj@ahms.com.au

Site Context Information

Land Form Pattern: Floodplain Land Use: Pastoral/Grazing

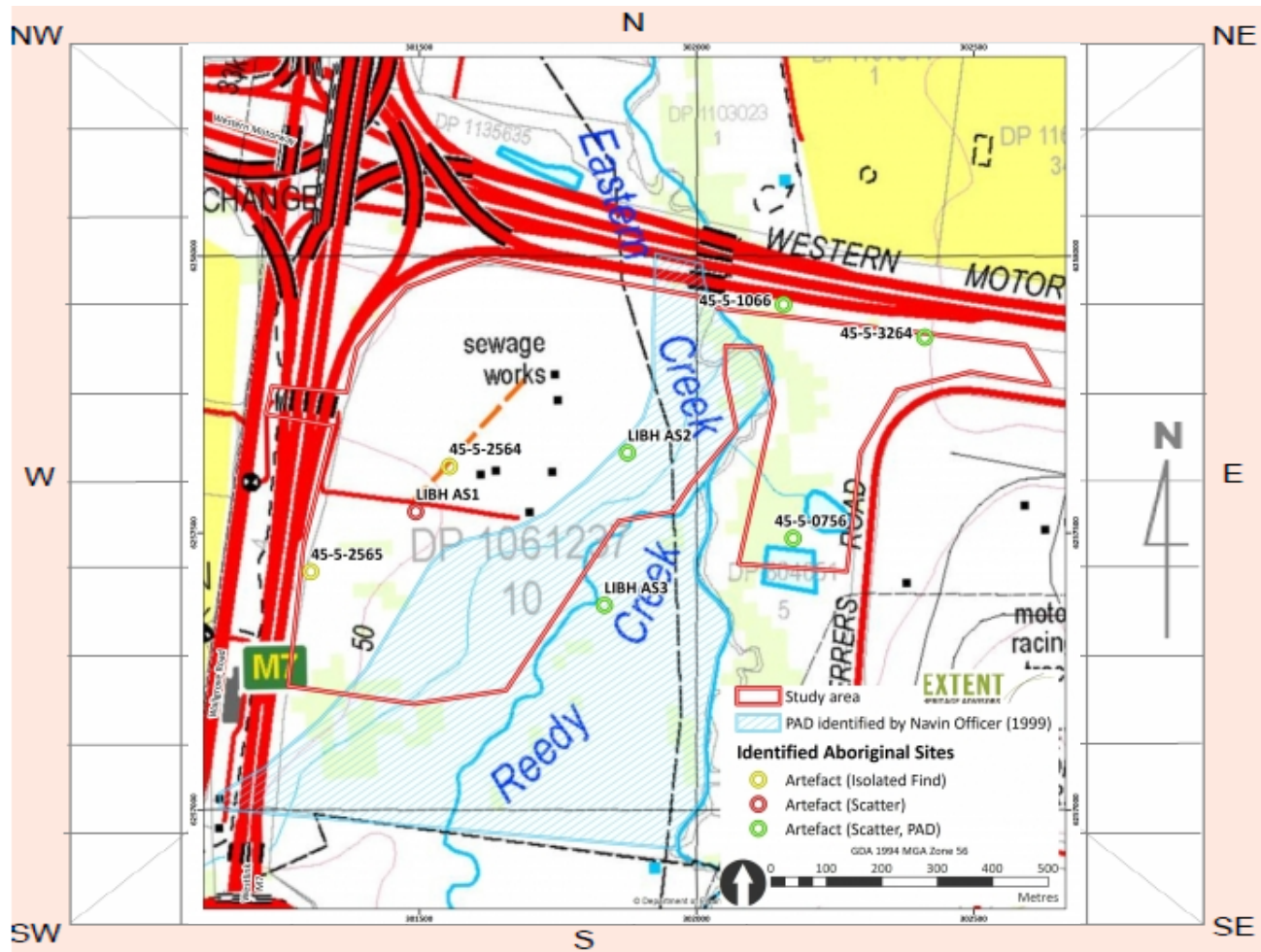
Land Form Unit: Levee Vegetation: Open Forest

Distance to Water (m): 5 Primary Report: Extent Heritage 2019. Lighthouse Interchange Business Hub ACHAR

How to get to the site: Enter the property at 165 Wallgrove Road, Eastern creek, and travel to the end of the asphalt road. Travel southeast for 215m to a bridge crossing Reedy Ck. The site is located on the eastern creekbank, 65m northeast of bridge.

Other site information: Archaeological test excavation recommended to characterise the nature, extent and significance of the Aboriginal archaeological resource.

Site location map



Site contents information

open/closed site: Site condition:

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees
				Scar Depth (cm) Regrowth (cm) Scar shape Tree Species
1. <input type="text" value="Artefact"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<div><div></div><div></div><div></div><div></div></div>

Description:

4 silcrete and 1 IMTC artefacts: 20x10x10mm, 10x10x5mm, 5x8x5mm, 20x10x5mm, and 15x10x5mm. Visible in exposures on dirt track along eastern bank of Reedy Creek.

Features:

	Number of features	Length of feature(s) extent (m)	Width of feature (s) extent (m)	Scarred Trees
				Scar Depth (cm) Regrowth (cm) Scar shape Tree Species
2. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<div><div></div><div></div><div></div><div></div></div>

Description:

Features:

3.

Description:

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

Scar shape

Tree Species

Features:

4.

Description:

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

Scar shape

Tree Species

Features:

5.

Description:

Scarred Trees

Scar Depth (cm)

Regrowth (cm)

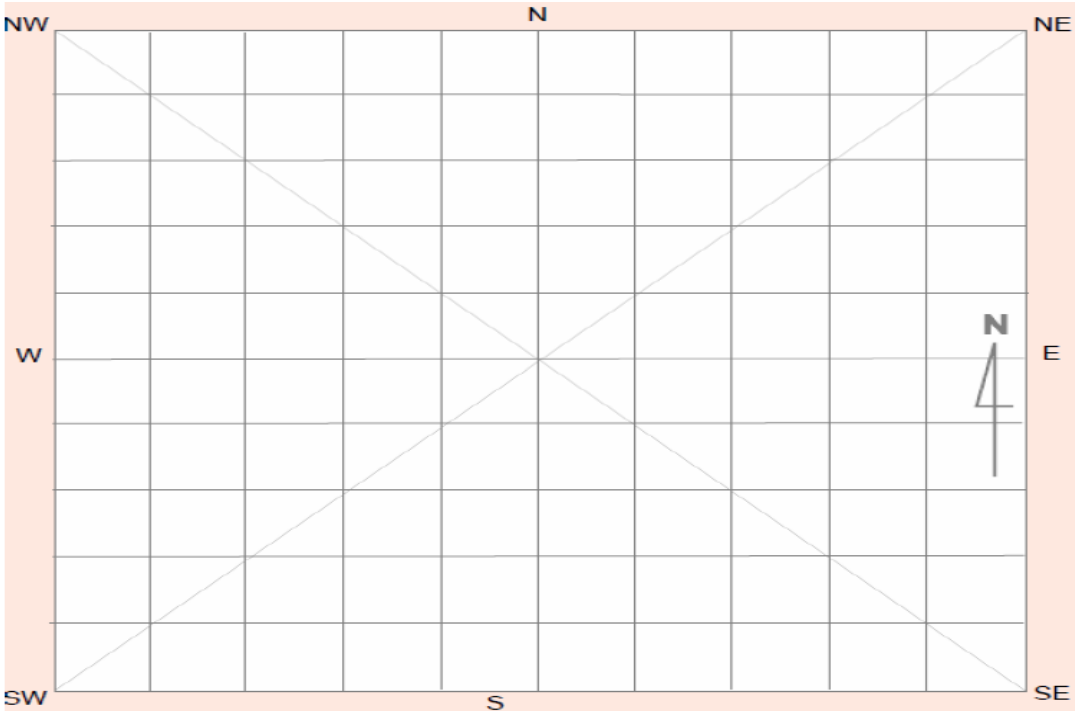
Scar shape

Tree Species

Other Site Info:

Archaeological test excavation recommended to characterise the nature, extent and significance of the Aboriginal archaeological resource.

Site plan



A photograph showing a dirt road or path that curves through a grassy field. The foreground is dominated by the light brown, sandy soil of the path, which is sparsely covered with green grass. The path leads towards a dense line of trees and shrubs in the background. The foliage is thick and green, suggesting a forest or wooded area. The lighting is bright, indicating a sunny day.

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Restriction type: ☐ Gender ☐ General ☐ Location

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Title	Surname	First name
<input type="text"/>	<input type="text"/>	<input type="text"/>
Organisation:	<input type="text"/>	
Address:	<input type="text"/>	
Phone:	<input type="text"/>	E-mail: <input type="text"/>

Appendix 4: How Significance was Assessed

General

While all Aboriginal objects in NSW are protected under NSW legislation, the NPW Act, 1974 recognises that the destruction of sites may be necessary to allow other activities or developments to proceed. In order for the State regulator to make informed decisions on such matters, a consideration of the significance of cultural heritage places and objects is an important element of the cultural heritage assessment process. The heritage significance of Aboriginal archaeological sites can be assessed using the four criteria outlined in the Burra Charter; aesthetic, historic, scientific, and social or spiritual (Australia ICOMOS, 2013).

Significance Levels and Thresholds

Most cultural places and objects are of cultural value to at least some individuals or community groups. The assessment process requires the analysis and ranking of significance. Australia has a four tiered system of heritage protection that has been implemented across all levels of government i.e. Commonwealth, State and Local governments (see Appendix 1 for details on legislation). While heritage in NSW is managed under NSW legislation it is compliant with this four tiered system. Under this system, cultural heritage places and objects once identified are assessed according to their significance at World, National, State and Local levels and whether they are above or below threshold for listing or protection. For ease of discussion here we can set aside discussion of world heritage places as such places must meet a threshold of 'Outstanding Universal Value' (OUV) and such places are unlikely to occur in the study area. It is a requirement of this process that the higher levels will meet and exceed the thresholds for the level below. In other words a place or object of World Heritage Significance will also be of National significance and so on. This process can be visualised as shown in Figure 1 where each of the protected categories of Local, State and National are subset of each other and indeed a broader inventory of places that have been assessed and considered. It can be seen that places that meet the threshold for a particular level of significance will have met the thresholds for the levels below: e.g. nationally significant places will as a pre requisite have satisfied the thresholds for State significance and Local significance.

In NSW 'State heritage significance', in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item, and 'Local heritage significance', in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item (S 4A, NSW Heritage Act 1977).

In assessing the significance of sites aspects such as rarity and representativeness and the integrity (sometimes referred to as the intactness of the site) must be considered. Generally speaking a site or object that is rare will have a heightened significance although a site that is suitable of conservation as 'representative' of its type will also be significant. Conversely an extremely rare site may no longer be significant if its integrity has been sufficiently compromised. For example a rare Pleistocene era site that would normally be considered of high scientific significance may be below threshold if the site has suffered substantial subsurface damage.

A summary of these values is presented below.



Figure 1: A4-1. The tiered heritage system operating in Australia

Aesthetic Significance

This criterion refers to aspects of sensory perception and the ability of the site to elicit emotional responses referred to as sensory or sensori-emotional values. The guidelines to the Burra Charter note that assessment may include consideration of the form, scale, colour, texture and material of the item or place, as well as sounds and smells. With regard to pre-contact Aboriginal cultural heritage sites, the placement within the landscape would be considered under this criterion as would memoryscapes and the ability of the site to transmit such memories. It is important to consider that sensori-emotional values are not always equated with “beauty”; for example massacre sites or sites of incarceration may have value under this criterion. Individual artefacts, sites and site features may also have aesthetic significance.

Table 2: A4-1. A summary of criteria and rankings used to determine a site's significance

Criterion	Threshold indicators State	Threshold local	indicator	Below threshold for significance
Aesthetic	<p>The site or object elicits a strong emotional response and is part of a state or national narrative.</p> <p>Is set within a landscape that inspires awe.</p>	<p>The site is known or suspected of eliciting strong responses from the local community.</p> <p>While similar sites may exist elsewhere they are rare in the local area.</p>		<p>The site or object does not elicit a relevant sensori-emotional response; or</p> <p>The site has been disturbed to the extent that it can no longer elicit a relevant sensori-emotional response.</p>
Historic	<p>The site or object is important in representing an aspect of history important to the State or National as reflected in the Australian (and State) Historical Thematic Framework</p>	<p>The site or object is rare in the local area; and</p> <p>Would provide strong opportunities for interpretation to the public.</p> <p>The site illustrates elements of the history of the local area</p>		<p>The site is common in the local area, does not provide opportunities for interpretation to the public and does not contribute substantially to an understanding the historic themes relevant to the local area and/or the State.</p> <p>(Note – individuals may still feel attachment for sites below threshold)</p>
Cultural and or spiritual	<p>The site or object is important to an understanding of pre or post contact Aboriginal cultural life in NSW.</p> <p>The site or object is part of a Dreaming story or track.</p> <p>The site or object is part of ongoing ceremony or ritual.</p> <p>Substantial cultural knowledge about this site exists within the relevant Aboriginal community or custodians for this site or has been previously documented.</p>	<p>The site is important to local Aboriginal community, or subset of the community, and this importance can be articulated.</p>		<p>There is little or no knowledge in the Aboriginal community about this site or object.</p> <p>The knowledge that does exist falls into the category of family history and is not generally relevant to the broader Aboriginal community, and/or Aboriginal historical narrative.</p> <p>(Note – individuals may still feel attachment for sites below threshold)</p>
Scientific (archaeological)	<p>The site or object has potential to answer key questions about Aboriginal culture and society in NSW or Australia as a whole pre or post contact.</p> <p>The site or object is unique and/or rare and intact; or</p> <p>The site is the best representative (and intact) example of a type of site that may be common, but not conserved elsewhere.</p>	<p>The site or object is rare in the local area; and</p> <p>It provides potential to learn more about a little understood aspect of Aboriginal cultural or society in the local area.</p> <p>The site has a high artefact density, and is large enough in size to be used to interpret larger scale questions about technology and occupation in the local area.</p>		<p>The site or object is common in the local area and/or the state.</p> <p>The site does not have excavation /research potential or the site is common but has some potential information to be salvaged.</p>

Historic Significance

The guidelines to the Burra Charter include the following discussion of historic significance:

A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

In relation to Aboriginal cultural heritage, many post-contact places and sites would have historic value. Pre-contact places and items may also be significant according to this criterion, although the association with historic figures, events, phases or activities may be more difficult to establish. Places of historic significance may include sacred or ceremonial sites, sites of resistance battles and massacres, and archaeological sites with evidence of technological developments.

Social and Spiritual Significance

In Aboriginal heritage this criterion concerns the relationship and importance of sites to the contemporary Aboriginal community. Aspects of social and spiritual significance include people's traditional and contemporary links with a place or object as well as an overall concern by Aboriginal people for sites and their continued protection. Aboriginal cultural values may partially reflect or follow on from archaeological values, historic values, aesthetic values or be tied to values associated with the natural environment. This criterion requires the active participation of Aboriginal people in the assessment process as it is their knowledge and values that must be articulated.

Scientific Significance

Scientific value is associated with the research potential of a site. Rarity and representativeness are also related concepts that are taken into account. Research potential or demonstrated research importance, is considered according to the contribution that a heritage site can make to present understanding of human society and the human past. Heritage sites, objects or places of high scientific significance are those which provide an uncommon opportunity to provide information about the specific antiquity of people in an area, or a rare glimpse of artistic endeavour or a chronological record of cultural change of continuity through deep archaeological stratigraphy.

The comparative rarity of a site is a consideration in assessing scientific significance. A certain site type may be "one of a kind" in one region, but very common in another. Artefacts of a particular type may be common in one region, but outside the known distribution in another.

The integrity of a site is also a consideration in determining scientific significance. While disturbance of a topsoil deposit with artefacts does not entirely diminish research value, it may limit the types of questions that may be addressed. A heavily cultivated paddock may be unsuited to addressing research questions of small-scale site structure, but it may still be suitable for answering more general questions of implement distribution in a region and raw material logistics.

The capacity of a site to address research questions is predicated on a definition of what the key research issues are for a region. In the region including the study area, the key research issues revolve around the chronology of Aboriginal occupation and variability in stone artefact manufacturing technology. Sites with certain backed implements from the Holocene are very common, but sites with Pleistocene evidence are extremely rare, and hence of extremely high significance if found.