

Figure 3.6 The location of Aboriginal sites and their connected zones of archaeological potential. (Source: Near Maps with GML additions)

3.5 Endnotes

- ¹ DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010) p 13.
- ² 2010: Appendix A.
- ³ Wandsnider, LA, and Camilli, EL 1992. The Character of Surface Archaeological Deposits and its Influence on Survey Accuracy. *Journal of Field Archaeological*. 19(2): pp 169–188.
- ⁴ Fanning, P, and Holdaway, S 2001. Stone Artefact Scatters in Western NSW, Australia: Geomorphic Controls on Artefact Size and Distribution. *Geoarchaeology: An International Journal*. 16(6): pp 667–686.

4.0 Scientific Values and Significance Assessment

4.1 Preamble

Aboriginal heritage sites, objects and places hold value for communities in many different ways. The nature of those heritage values is an important consideration when deciding how to manage a heritage site, object or place and balance competing land-use options.

The approach to the Aboriginal heritage assessment is based upon identifying the key Aboriginal heritage values; values that are likely to be both tangible and intangible. This approach needs to consider the values assessment from the scientific and Aboriginal community perspectives, in accordance with Australian best practice documents.

This assessment concerns itself with scientific values only. Aspects of social value, historic values and aesthetic value are assessed in the Aboriginal Cultural Heritage Assessment Report, to which this report is an appendix¹.

The primary guide to management of heritage places is the Australia ICOMOS Burra Charter 1999. The Burra Charter defines cultural significance as:

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.

Places may have a range of values for different individuals or groups.

4.1.1 Assessment Criteria

This assessment has sought to identify Aboriginal heritage objects and sites within the study area and obtain sufficient information to allow the values of those objects and sites to be determined. Following OEH guidelines for assessing scientific value² five key criteria have been considered during the examination of the scientific value/significance of the identified sites and places within the subject area. These criteria are:

- Research potential: does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?
 - Integrity & condition. Integrity refers to the level of modification a site has been subject to (the cultural and natural formation process) and whether the site could yield intact archaeological deposits, which could be spatially meaningful. Condition takes into account the state of the material, which is especially relevant for organic materials;
 - Complexity. The demonstrated or potential ability of a site to yield a complex assemblage (stone, bone and/or shell) and/or features (hearths, fire pits, activity areas);
 - Archaeological potential. The potential to yield information (from sub-surface materials which retain integrity, stratigraphical or not) that will contribute to an understanding of contemporary archaeological interest, or which could be saved for future research potential.

- Connectedness. Whether the site can be connected to other sites at the local or regional level through aspects such as type, chronology, content (i.e. materials present, manufacturing processes), spatial patterning or ethno-historical information;
- Representativeness. How much variability (outside and/or inside the subject area) exists, what is already conserved, how much connectivity is there;
- Rarity. Is the subject area important in demonstrating a distinctive way of life, custom, process, land-use, function or design no longer practised? Is it in danger of being lost or of exceptional interest?
- Education potential. Does the subject area contain teaching sites or sites that might have teaching potential; and
- Archaeological landscapes. The study of the cultural sites relating to Aboriginal peoples within the context of their interactions in the wider social and natural environment they inhabited. Landscapes can be large or small depending upon specific contexts (i.e. local or regional conditions); they may also may be influenced by Aboriginal social and demographic factors (which may no longer be apparent);

A statement of Aboriginal scientific significance has been prepared that summarises the salient values as drawn from the above criteria.

4.2 Scientific Assessment

The study area has been assessed against each of the criteria, defined above:

Research potential

The study area is located within a complex of stone based Aboriginal sites, primarily associated with the large network of creeks that cross the Cumberland Plain. There is the potential for the stone artefacts present to further our understanding of the Darug cultural landscape through analysis and assessment.

Integrity and Condition

Whilst large portions of the study area have been impacted by historical activities, those areas defined as holding archaeological potential (Figure 3.6) appear to have been impacted less than the surrounding landforms. These zones may hold good soil integrity and condition, and as such could possess spatially intact Aboriginal archaeological deposits.

Complexity

Due to varying levels of disturbance across the study area, coupled with the typical characteristics of a bio-turbated duplex soil, the study area is unlikely to contain complex archaeological assemblages and/or features. However, the stone based sites could contain evidence for multiple stone knapping events, which on assessment may yield complex information characteristic of such a site.

Archaeological Potential

Based on the expressions of stone objects observed within the three identified Aboriginal sites, there is a moderate to high potential in some areas of the study area to yield information that would further

archaeological understanding of the region. These zones of archaeological potential have been identified in Figure 3.6.

Connectedness

The study area is connected to known sites in the immediate area as part of network of sites that make up the Darug cultural landscape. Further evidence for Aboriginal heritage, associated with the study area, is likely to be associated with other known sites in the immediate area.

Representativeness

The study area may contain a representative assemblage of stone artefacts, although it is likely that any artefacts present would likely be similar to those recovered from sites in the region. The study area is unlikely to yield a stone assemblage with great variability from others in the region.

Rarity

The study area is unlikely to yield an archaeological deposit that could be considered rare at the local or regional level. However, an assessment of accumulative impact to Aboriginal heritage, in the local area, may find that the extent of similar Aboriginal archaeological sites is now dwindling. As such locations with high archaeological potential are becoming rarer in the context of western Sydney. As such, it could be found that Archbold Road 1 is one of the last remaining landforms that holds high archaeological potential.

Education potential

The study area is unlikely to contain archaeological sites suitable for public educational purposes. However, the stone based resources would possibly hold education potential for Aboriginal people and archaeological students, without specialist knowledge of stone objects.

Archaeological landscapes

The study area is part of the wider Darug cultural landscape on the Cumberland Plain. There is a complex network of streams and creeks across the plain which served as important focal points of traditional Aboriginal activity.

4.2.2 Statement of Scientific Heritage Significance

The subject area is likely to hold a level of scientific significant connected with its potential to yield information relating to stone based archaeological resource. The level of scientific significance needs to be further investigated through an understanding of the nature, extent, condition and integrity of the archaeological resource, within its cultural landscape setting.

4.3 Endnotes

¹ This division is in line with OEH requirements for reporting and assessment, as defined under OEH, 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011). Section 2.4.2 and DECCW, 2010. *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010). Requirement 11.

² OEH, 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011). Page 10.

5.0 Impact Assessment

5.1 Ecologically Sustainable Development

5.1.1 Preamble

An objective of the *NPW Act 1974* is the “conservation of objects places and features ... of cultural value within the landscape, including ... places, objects and features of significance to Aboriginal people ...” (s.2A(1)(b)(i)).

The publication—*Operational Policy: Protecting Aboriginal Cultural Heritage* (DECCW 2009)—provides guidance to proponents in term of Ecologically Sustainable Development (ESD). The following discussion provides an overview of ESD and its application to the current project.

Avoiding or Reducing Impact to Aboriginal Sites

DECC [OEH] needs to balance the sometimes competing tensions between development activities and environment protection when we make decisions. Although the NPW Act gives a high level of protection to known Aboriginal objects [and since the NPW Amendment Regulation 2010 all unknown Aboriginal sites], recent court decisions have reinforced that Part 6 gives the Director General (DG) express powers to consent to the damage, destruction or defacement of Aboriginal objects by development activities. The powers in Part 6 are not inconsistent with the objects of the Act or a requirement to give effect to ESD. (DECC 2009: Section 3.8)

The OEH has three policies that provide guidance with respect to avoiding or reducing impact to Aboriginal sites:

Policy 20

Impacts to significant Aboriginal objects and places should always be avoided wherever possible. We [the OEH] will promote the development (or amendment) of proposals to avoid impacts and therefore avoid the need for s.90 AHIPs.

Policy 21

Where impacts to Aboriginal objects and places cannot be avoided, we will require the proponent or AHIP applicant to develop (or amend) proposals so as to reduce the extent and severity of impacts to significant Aboriginal objects and places through the use of reasonable and feasible measures. Any measures proposed should be negotiated between the proponent or AHIP applicant and the Aboriginal community.

Policy 22

Once all avoidance, minimisation and mitigation options have been adequately explored, we may also consider the appropriateness of any proposed actions having potential Aboriginal cultural heritage benefit. Any actions proposed should be negotiated between the proponent or AHIP applicant and the Aboriginal community.

5.1.2 Principles of Ecologically Sustainable Development

Ecologically Sustainable Development has been defined in section 6 of the *Protection of the Environment Administration Act 1991* (NSW). This requires the integration of economic and environmental considerations (including cultural heritage) in the decision-making process. In regard to Aboriginal cultural heritage, ESD can be achieved by applying the principle of intergenerational equity and the precautionary principle (DECC 2009: 26).

Intergenerational Equity

Intergenerational equity is the principle whereby the present generation should ensure the health, diversity and productivity of the environment for the benefit of future generations.

In terms of Aboriginal heritage, intergenerational equity can be considered in terms of the cumulative impacts to Aboriginal objects and places in a region. If few Aboriginal objects and places remain in a region (for example, because of impacts under previous AHIPs), fewer opportunities remain for future generations of Aboriginal people to enjoy the cultural benefits of those Aboriginal objects and places.

Information about the integrity, rarity or representativeness of the Aboriginal objects and places proposed to be impacted, and how they illustrate the occupation and use of land by Aboriginal people across the region, will be relevant to the consideration of intergenerational equity and the understanding of the cumulative impacts of a proposal.

Where there is uncertainty, the precautionary principle should also be followed. (DECC 2009:26)

The Precautionary Principle

The precautionary principle states that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

In applying the precautionary principle, decisions should be guided by:

a careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment

an assessment of the risk-weighted consequences of various options.

The precautionary principle is relevant to DECC's consideration of potential impacts to Aboriginal cultural heritage where:

the proposal involves a risk of serious or irreversible damage to Aboriginal objects or places or to the value of those objects or places, and

there is uncertainty about the Aboriginal cultural heritage values or scientific or archaeological values, including in relation to the integrity, rarity or representativeness of the Aboriginal objects or places proposed to be impacted.

Where this is the case, a precautionary approach should be taken and all cost-effective measures implemented to prevent or reduce damage to the objects/place. (DECC 2009:26)

With respect to the above OEH policies (Policy 20–22) and ESD the following sections detail specifications for conservation, potential impact, and possible reductions to impact on the identified Aboriginal sites and values in the current study area.

5.2 The Proposed Activity and Impacts to Aboriginal Sites

TNG propose the construction of an Energy From Waste (EFW) electricity generation plant, and associated infrastructure, within the study area (the proposed activity is shown in Figure 5.1). The EFW will receive unsalvageable and economic residue waste from the adjoining Genesis Material Processing Centre (MPC) and Waste Transfer Station (WTS) for thermal conversion and the consequential generation of electrical power. The project aims to manage and convert to energy non-recyclable but combustible waste loads.

The proposal will also include the following ancillary infrastructure:

- Internal roadways;

- Staff amenities;
- Staff parking facilities; and
- Water detention basins.

To undertake this development within the study area, the proposed activity will require cutting and filling the current topography to level the precinct, sinking (via excavation) of foundations, footings and services (such as sewer mains and stormwater drainage into the current soil horizons), construction of a large pad for the warehouse building, and a program of assisted natural regeneration and bushland reconstruction. These activities will result in a range of impacts to the Aboriginal heritage values of the study area. These generally include impacts to topsoil horizons and, thus, in some cases, subsurface archaeological deposits as detailed in Table 5.1.

Table 5.1 Development activities and the type and degree of impacts and harm they may cause to Aboriginal sites.

Activity	Type of Harm	Degree of Harm	Consequence of Harm
Filling of current topography.	Though this may cap a site, it is considered harm by the OEH.	Minimal—caps and preserves sites for future posterity but makes these sites fairly inaccessible.	Conservation with inaccessibility.
Topsoil stripping.	Removal of soil horizons which may contain archaeological deposits.	Destruction of Aboriginal sites.	Loss of information, loss of heritage value.
Removal of trees and/or exotic species, including grasses.	Removal of soil horizons which may contain archaeological deposits.	Partial or total destruction of Aboriginal sites.	Loss of information, loss of heritage value.
Cutting of current topography.	Removal of soil horizons which may contain archaeological deposits.	Destruction of Aboriginal sites.	Loss of information, loss of heritage value.
Sinking (via excavation) of foundations, footings and services.	Removal of soil horizons which may contain archaeological deposits.	Destruction of Aboriginal sites.	Loss of information, loss of heritage value.

5.3 Proposed Conservation of Heritage Sites

Avoidance of Aboriginal heritage sites represents the best heritage outcome as it means no impact to the identified heritage features and thus connected values. An avoidance strategy can be employed for Archbold Road 1 included the zone of high Aboriginal archaeological potential zone at the north of the study area, through creation of a northern conservation area. This action is in keeping with prior designation of conservation areas, detailed in JMCHM 2009.

5.4 Potential Effects arising from Proposed Impacts

Table 5.2 details the potential impacts to the three identified Aboriginal sites located within the study area.¹ The potential effects of the EFW proposal would result in both direct and indirect harm to these sites. The potential indirect harm to the sites would be partial loss of intangible heritage value (especially the cultural setting of the sites). One of the values of any site is its place in the cultural landscape, and its association with other known places. Through the artificial modification of that landscape, sites and places nearby are indirectly affected.

Table 5.2 Identified potential harm to Aboriginal heritage.

Site	Type of Harm	Degree of Harm	Consequence of Harm
Archbold Road 1	Indirect	Partial	Partial loss of heritage value
Archbold Road 2	Indirect	Partial	Partial loss of heritage value
EFW South	Direct—Topsoil stripping and infilling of topography.	Total harm to the Aboriginal archaeological contents and aesthetic setting of this site.	Total loss of information, total loss of heritage value

5.5 Endnotes

¹ After DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010). *Requirement 11*.

6.0 Management, Mitigation & Recommendations

The following management and mitigation statements are made in light of the findings of the study area inspection, background research, predictive modelling, heritage significance assessment, relevant NSW legislation protecting Aboriginal heritage, the OEH Aboriginal Cultural Heritage Assessment Guidelines and consultation with local Aboriginal stakeholders. A total of 3 Aboriginal heritage sites (including PADs) could be impacted by the proposed project. Of these 3, impacts to 3 could be avoided if an appropriate mitigation strategy is employed.

The following management and mitigation statements are based on consideration of:

- legal requirements under the terms of the NPW Act, as amended—which states that it is illegal to harm or desecrate an Aboriginal object without first obtaining an AHIP from the Director-General, OEH, NSW;
- abiding by the new OEH Code of Practice, which was adopted by the *NPW Regulation 2009* (NPW Regulation) made under the NPW Act, and which came into force on 1 October 2010;
- the assessment of the Aboriginal cultural heritage values in the subject area;
- the interests of the local Aboriginal community members who participated in this project; and
- the size of the study area, the size of the remaining areas with archaeological sensitivity and likely impacts posed by the project proposal.

6.1 Recommended Aboriginal Heritage Management and Mitigation Strategy

- Where impacts to heritage sites can be avoided, such as in open space land which are not proposed to have structures or other development on them, avoidance strategies should be employed.
- Previous assessment of the study area (JMcDCHM 2002) state that portions of the study area have moderate to high archaeological potential.
- An assessment by JMcDCHM (2002) recommended that northern and southern portions of the study area should be designated as Core Conservation Zones.
- Test excavation should be undertaken across any areas of PAD that cannot be avoided by direct impacts from the EFW—this is understood to mean the stone artefact site with PAD ‘EFW South’. Test excavation should be used to confirm the condition and extent of the archaeological deposit and to allow for a complete scientific investigation of the site. Test excavation should follow the requirements of the OEH’s Code of Practice.
- Once an assessment of the EFW South has been made, an assessment of cumulative impact should be undertaken for the local area. This is especially important in the context of Aboriginal site conservation, given the extent of development and urban growth.
- Prior land use planning had noted the conservation potential for both Archbold Road 1 and EFW South—project approval may need to consider the loss of Aboriginal heritage values connected

with EFW South. Efforts should be made to retain the other higher value Aboriginal sites in the local region.

- Should a significant Aboriginal archaeological deposit be identified within EFW South, then salvage excavation would be warranted prior to any development impacts occurring. The program of salvage excavation should be comparable in scale and objective to other similar excavations on the Cumberland Plain, with the objective of recovering a statistically assessable assemblage of Aboriginal objects. This management requirement was supported by the Aboriginal RAPs, who determine the need to recover cultural Aboriginal objects prior to development impacts.
- The proponent would need to undertake all future works in collaboration with the Aboriginal community.
- It is recommended that copies of this report be provided to relevant members of the Aboriginal community who registered an interest in this project for their comment and Aboriginal social assessment. All comments received from the community should be attached to this report.
- A digital copy of this report should be forwarded to the OEH for their records and to support future assessment in this region. GML have submitted all new AHIMS cards for previously unrecorded Aboriginal sites to the OEH for inclusion in the AHIMS database.

6.2 Recommendation

Table 6.1 provides a summary of management recommendation for all of known Aboriginal sites, places, landscape and values and areas of archaeological potential (as assessed in Section 4, and detailed in Table 5.1).

Table 6.1 Summary of recommendations for Aboriginal heritage sites

Site	Is the site harmed	Is an impact approval required	The recommended mitigation strategy
Archbold Road 1	Indirectly	No	This site has been determined to hold high Aboriginal archaeological potential. The site may considered to be rare within the local region as cumulative impact has removed many similar sites. Under the principles of ESD and considering the needs of intergenerational equity, this site should be designated a permanent conservation zone and avoided by future development impacts.
Archbold Road 2	Indirectly	No	This site has lower Aboriginal archaeological potential than Archbold Road 1, however management may need to be similar.
EFW South	Directly	Yes, under SSD approval as a condition of consent	This site has high Aboriginal archaeological potential and if it cannot be avoided by the proposed EFW development it should be subject to archaeological test excavation to assess its nature, extent, condition and integrity. This would allow a complete scientific, aesthetic and social value assessment to be made. It is likely that this site would require open area salvage excavation before development impact commenced.

7.0 Appendices

Appendix A

AHIMS Search Results

Appendix B

New AHIMS Site Cards

Appendix A

AHIMS Search Results

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
45-5-1063	Miner Glen 1;MG 1;	AGD	56	297000	6258400	Open site	Valid	Artefact :-	Open Camp Site	98435
45-5-1067	<u>Contact</u> Ropes Creek	Recorders	C Barker					Permits		
		AGD	56	297350	6258660	Open site	Valid	Artefact :-	Open Camp Site	3694,98435
45-5-1068	<u>Contact</u> Roper Road	Recorders	Helen Brayshaw;Ms.Laila Haglund					Permits		
		AGD	56	297130	6258670	Open site	Valid	Artefact :-	Open Camp Site	3694,98435
45-5-0435	<u>Contact</u> Eastern Creek W6	Recorders	Helen Brayshaw;Ms.Laila Haglund					Permits		
		AGD	56	299890	6257880	Open site	Valid	Artefact :-	Open Camp Site	1018,98435
45-5-0437	<u>Contact</u> Eastern Creek W4	Recorders	Susan (Now McIntyre-Tamwoy) McIntyre					Permits		
		AGD	56	299260	6257680	Open site	Valid	Artefact :-	Open Camp Site	1018,98435
45-5-0440	<u>Contact</u> Eastern Creek W5	Recorders	Susan (Now McIntyre-Tamwoy) McIntyre					Permits		
		AGD	56	299760	6258120	Open site	Valid	Artefact :-	Open Camp Site	1018,98435
45-5-0556	<u>Contact</u> Blacktown Southwest 2 Eastern Creek	Recorders	Susan (Now McIntyre-Tamwoy) McIntyre					Permits		
		AGD	56	298750	6257180	Open site	Valid	Artefact :-	Open Camp Site	1007,1050,984 35
45-5-0557	<u>Contact</u> Blacktown Southwest 3 Eastern Creek	Recorders	Jim Kohen					Permits		
		AGD	56	298230	6256880	Open site	Valid	Artefact :-	Open Camp Site	1007,1050,984 35
45-5-0558	<u>Contact</u> Blacktown Southwest 5 Eastern Creek	Recorders	Jim Kohen					Permits		
		AGD	56	300120	6256880	Open site	Valid	Artefact :-	Open Camp Site	1007,1050,984 35
45-5-0559	<u>Contact</u> Blacktown Southwest 7 Colyton	Recorders	Jim Kohen					Permits	2610	
		AGD	56	297710	6257100	Open site	Valid	Artefact :-	Open Camp Site	1007,1050,984 35
45-5-0560	<u>Contact</u> Blacktown Southwest 8 Colyton	Recorders	Jim Kohen					Permits		
		AGD	56	297630	6256600	Open site	Valid	Artefact :-	Open Camp Site	1007,1050,984 35
45-5-0563	<u>Contact</u> Blacktown Southwest 11 Colyton	Recorders	Jim Kohen					Permits		
		AGD	56	297900	6256600	Open site	Valid	Artefact :-	Open Camp Site	1007,1050,984 35
45-5-0564	<u>Contact</u> Blacktown Southwest 12 Colyton	Recorders	Jim Kohen					Permits		
		AGD	56	297350	6258400	Open site	Valid	Artefact :-	Open Camp Site	1007,1050,984 35
45-5-0565	<u>Contact</u> Blacktown Southwest 13 Colyton	Recorders	Jim Kohen					Permits	2318	
		AGD	56	297700	6258200	Open site	Valid	Artefact :-	Open Camp Site	1007,1050,984 35
45-5-0588	<u>Contact</u> Blacktown Southwest 1 Eastern Creek	Recorders	Jim Kohen					Permits		
		AGD	56	300330	6256700	Open site	Valid	Artefact :-	Open Camp Site	98435
	<u>Contact</u>	Recorders	Jim Kohen					Permits		

Report generated by AHIMS Web Service on 11/03/2014 for Sam Cooling for the following area at Lat, Long From : -33.8072, 150.8108 - Lat, Long To : -33.7924, 150.8344 with a Buffer of 1000 meters. Additional Info : Prep of arch assess, Number of Aboriginal sites and Aboriginal objects found is 63

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<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
45-5-0479	Cloyton 4 Cloyton	AGD	56	297200	6259680	Open site	Valid	Artefact :-	Open Camp Site	1018
45-5-0481	<u>Contact</u>	Recorders	Mary Dallas Consulting Archaeologists					Permits		
	Colyton 3 Colyton	AGD	56	297180	6259390	Open site	Valid	Artefact :-	Open Camp Site	1018
45-5-0484	<u>Contact</u>	Recorders	Mary Dallas Consulting Archaeologists,Jim Kohen					Permits	1073,1852	
	Colyton 1 Colyton	AGD	56	297670	6258940	Open site	Valid	Artefact :-	Open Camp Site	1018,98435
45-4-0206	<u>Contact</u>	Recorders	Jim Kohen					Permits	1073	
	RC 1;	AGD	56	297400	6258850	Open site	Valid	Artefact :-	Open Camp Site	2434,98435
45-5-2832	<u>Contact</u>	Recorders	John Edgar					Permits		
	IF:3	AGD	56	299630	6257920	Open site	Valid	Artefact :-		4599
45-5-2833	<u>Contact</u>	Recorders	Dominic Steele Archaeological Consulting					Permits		
	IF:4	AGD	56	299700	6257770	Open site	Valid	Artefact :-		4599
45-5-2834	<u>Contact</u>	Recorders	Dominic Steele Archaeological Consulting					Permits		
	IF:5	AGD	56	299730	6257870	Open site	Valid	Artefact :-		4599
45-5-2835	<u>Contact</u>	Recorders	Dominic Steele Archaeological Consulting					Permits		
	IF:6	AGD	56	299855	6258080	Open site	Valid	Artefact :-		4599
45-5-2806	<u>Contact</u>	Recorders	Dominic Steele Archaeological Consulting					Permits		
	AWL 5	AGD	56	300080	6258200	Open site	Valid	Artefact :-		
45-5-2824	<u>Contact</u>	Recorders	Dominic Steele Archaeological Consulting					Permits		
	AWL 1	AGD	56	300300	6258160	Open site	Valid	Artefact :-		4599
45-5-2825	<u>Contact</u>	Recorders	Dominic Steele Archaeological Consulting					Permits		
	AWL 2	AGD	56	299640	6258320	Open site	Valid	Artefact :-		4599
45-5-2826	<u>Contact</u>	Recorders	Dominic Steele Archaeological Consulting					Permits	2701	
	AWL 3	AGD	56	299630	6258220	Open site	Valid	Artefact :-		4599
45-5-2830	<u>Contact</u>	Recorders	Dominic Steele Archaeological Consulting					Permits	2701	
	IF:1	AGD	56	300130	6258100	Open site	Valid	Artefact :-		4599
45-5-2831	<u>Contact</u>	Recorders	Dominic Steele Archaeological Consulting					Permits	2470	
	IF:2	AGD	56	299630	6258170	Open site	Valid	Artefact :-		4599
45-5-3062	<u>Contact</u>	Recorders	Dominic Steele Archaeological Consulting					Permits	2701	
	EP PAD 1	AGD	56	297553	6256165	Open site	Valid	Potential Archaeological Deposit (PAD) :-, Artefact :-		98432
45-5-3159	<u>Contact</u>	Recorders	Biosis Research Pty Ltd Sydney Office,Navin Officer Heritage Consultants Pty Ltd					Permits	2550,3262,3340	
	RCIF 2	AGD	56	297776	6256537	Open site	Valid	Artefact : 1		
	<u>Contact</u>	Recorders	Environmental Resources Management Australia					Permits		

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Extensive search - Site list report

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Client Service ID : 127926

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
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	<u>Contact</u>	Recorders	Environmental Resources Management Australia							
45-5-3161	RCAS 7	AGD	56	297851	6257499	Open site	Valid	Artefact : 27		Permits
	<u>Contact</u>	Recorders	Environmental Resources Management Australia							
45-5-3162	RCAS 4	AGD	56	297972	6256918	Open site	Valid	Artefact : 7		Permits
	<u>Contact</u>	Recorders	Environmental Resources Management Australia							
45-5-3163	RCAS 5	AGD	56	297990	6256594	Open site	Valid	Artefact : 3		Permits
	<u>Contact</u>	Recorders	Environmental Resources Management Australia							
45-5-3164	RCAS 3	AGD	56	298240	6256720	Open site	Valid	Artefact : 14		Permits
	<u>Contact</u>	Recorders	Environmental Resources Management Australia							
45-5-3165	RCAS 1	AGD	56	298026	6257394	Open site	Valid	Artefact : 5		Permits
	<u>Contact</u>	Recorders	Environmental Resources Management Australia							
45-5-3076	Austral 4	AGD	56	299880	6256380	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) :-		Permits
	<u>Contact</u>	Recorders	Doctor,Jo McDonald							
45-5-3078	Minchinbury Reservoir Artefact Scatter	AGD	56	299976	6257624	Open site	Valid	Artefact : 20		Permits 2308
	<u>Contact</u>	Recorders	Heritage Concepts							
45-5-3201	EC3-PAD1	AGD	56	299764	6258006	Open site	Partially Destroyed	Potential Archaeological Deposit (PAD) :-		Permits 2378
	<u>Contact</u>	Recorders	Jo McDonald Cultural Heritage Management							
45-5-3202	EC3-PAD2	AGD	56	299627	6257876	Open site	Partially Destroyed	Potential Archaeological Deposit (PAD) :-		Permits 2470
	<u>Contact</u>	Recorders	Jo McDonald Cultural Heritage Management							
45-5-3203	AWL9	AGD	56	299660	6257700	Open site	Valid	Artefact : -		Permits 2470
	<u>Contact</u>	Recorders	Jo McDonald Cultural Heritage Management							
45-5-3204	ISF9	AGD	56	299530	6257850	Open site	Valid	Artefact : -		Permits 2470
	<u>Contact</u>	Recorders	Jo McDonald Cultural Heritage Management							
45-5-3205	ISF10	AGD	56	299660	6257850	Open site	Valid	Artefact : -		Permits 2470
	<u>Contact</u>	Recorders	Jo McDonald Cultural Heritage Management							
45-5-3234	EPRC1	GDA	56	297040	6255945	Open site	Valid	Artefact : -		Permits 2470
	<u>Contact</u>	Recorders	Navin Officer Heritage Consultants Pty Ltd							
45-5-3235	Erskine Park 1 (EP1)	AGD	56	296722	6256329	Open site	Valid	Artefact : -		Permits 2550,2666
	<u>Contact</u>	Recorders	Navin Officer Heritage Consultants Pty Ltd							

Report generated by AHIMS Web Service on 11/03/2014 for Sam Cooling for the following area at Lat, Long From : -33.8072, 150.8108 - Lat, Long To : -33.7924, 150.8344 with a Buffer of 1000 meters. Additional Info : Prep of arch assess, Number of Aboriginal sites and Aboriginal objects found is 63

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 Number : 13-0493
Client Service ID : 127926

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
45-5-3286	ISF2 Jacfin	AGD	56	299720	6256730	Open site	Valid	Artefact : -		
45-5-3283	<u>Contact</u> EPP 1	Recorders GDA	Jo McDonald	Cultural Heritage Management				Permits Artefact : 1	2610	
45-5-3284	Contact S Scanlon	Recorders GDA	Navin Officer	Heritage Consultants Pty Ltd,Mr.Charles Dearing				Permits Artefact : 1		
45-5-3312	Contact S Scanlon	Recorders AGD	Navin Officer	Heritage Consultants Pty Ltd,Mr.Charles Dearing				Permits Artefact : -		100562
45-4-0205	Contact RC 2;	Recorders AGD	Navin Officer	Heritage Consultants Pty Ltd				Permits Artefact : -	2666	
45-5-0562	Contact Blacktown Southwest 10 Colyton	Recorders AGD	John Edgar					Permits Artefact : -	Open Camp Site 452	2434,98435
45-5-0482	Contact Colyton 2 Colyton	Recorders AGD	Jim Kohen					Permits Artefact : -	Open Camp Site	1007,1050,984 35
45-5-0561	Contact Blacktown Southwest 9 Colyton	Recorders AGD	Mary Dallas	Consulting Archaeologists				Permits Artefact : -	Open Camp Site 1072,1092,1852	972,1007,1018, 1050,3574
45-5-3842	Contact EPLR1	Recorders GDA	Jim Kohen					Permits Artefact : -		
45-5-3843	Contact RCIF1	Recorders AGD	Mr.Kelvin Officer,	Biosis Research Pty Ltd Sydney Office				Permits Artefact : -	3262,3340	
45-5-3936	Contact ROPES CREEK AS4	Recorders GDA	Mr.Kelvin Officer,	Biosis Research Pty Ltd Sydney Office				Permits Artefact : 1	3262,3340	
45-5-3935	Contact Erskine Park 2 (EP2)	Recorders AGD	Mr.Lyndon Patterson					Permits Artefact : 8		
45-5-3937	Contact ROPES CREEK AS3	Recorders GDA	Navin Officer	Heritage Consultants Pty Ltd				Permits Artefact : 1		
45-5-3938	Contact ROPES CREEK AS2	Recorders GDA	Mr.Lyndon Patterson					Permits Artefact : 1		
45-5-3939	Contact ROPES CREEK AS1	Recorders GDA	Mr.Lyndon Patterson					Permits Artefact : 1		
45-5-3942	Contact Erskine Park AS1	Recorders GDA	Mr.Lyndon Patterson					Permits Artefact : 54		
45-5-4192	Contact EASTERN CREEK IF 1	Recorders GDA	Biosis Research Pty Ltd Sydney Office					Permits Artefact : 1		

Report generated by AHIMS Web Service on 11/03/2014 for Sam Cooling for the following area at Lat, Long From : -33.8072, 150.8108 - Lat, Long To : -33.7924, 150.8344 with a Buffer of 1000 meters. Additional Info : Prep of arch assess, Number of Aboriginal sites and Aboriginal objects found is 63

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.

Appendix B

New AHIMS Site Cards



Aboriginal Site Recording Form



AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office Use Only

Site Number

Date received / / Date entered into system / / Date catalogued / /

Entered by (I.D.)

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

For Further Information Contact:

☐ Nominated Trustee

Title Surname First Name Initials
Organisation
Address
Phone number Fax

☐ Knowledge Holder

Title Surname First Name Initials
Organisation
Address
Phone number Fax

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Office Use
Only

Client on
system

☐

Client on
system

☐

Geographic Location

Site Name

Easting Northing AGD/GDA

Mapsheet

Zone Location Method

Other Registration

Primary Recorder

Title Surname First Name Initials
Organisation
Address
Phone number Fax
Date recorded

Client on
system

☐

page 2

Open Site

Landform

Slope
 degrees

- ☐ Beach
- ☐ Coastal rock platform
- ☐ Dune
- ☐ Intertidal flat
- ☐ Lagoon
- ☐ Tidal Creek

☐ Tidal Flat

☐ Cliff

☐ Crest

☐ Flat

☒ Lower slope

☐ Mid slope

- ☐ Upper slope
- ☐ Plain
- ☐ Ridge
- ☐ Tor
- ☐ Valley flat
- ☐ Levy

- ☐ Stream bank
- ☐ Stream channel
- ☐ Swamp
- ☐ Terrace
- ☐ Terrace flat

☐ Closed forest

☐ Grasslands

☐ Isolated clumps of trees

☒ Open forest

☐ Open woodland

☐ Scrub

☐ Woodland

☐ Cleared

☐ Revegetated

☐ N/A

<input type="checkbox"/>	Conservation
<input type="checkbox"/>	Established urban
<input type="checkbox"/>	Farming-intensive
<input type="checkbox"/>	Farming-low intensity
<input type="checkbox"/>	Forestry
<input checked="" type="checkbox"/>	Industrial
<input type="checkbox"/>	Mining
<input type="checkbox"/>	Pastoral/grazing
<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Semi-rural
<input type="checkbox"/>	Service corridor
<input checked="" type="checkbox"/>	Transport corridor
<input type="checkbox"/>	Urban expansion
<input type="checkbox"/>	N/A

Distance to permanent water source	900	metres
Distance to temporary water source	500	metres
Name of nearest permanent water source	R o p e s C r k	
Name of nearest temporary water	u n n a m e d	

<input type="checkbox"/>	Public	National Park / other Government Dept.
<input type="checkbox"/>	Private	

I.D. (I.D. Office Use only)

GML 2014.	ATR	and	ACHAR.	Proposed	Energy	from
Waste	Facility,	Eastern	Creek,	Lots	2	and
1145808,	3	in	DP			

An aerial photograph of a site, likely a construction or development area. A red boundary line is drawn on the image, enclosing a central area. The site is surrounded by various features, including a road, a body of water, and some buildings. A north arrow is located in the bottom right corner of the photograph. The photograph is overlaid on a grid with directional labels: NW, N, NE, W, E, SW, S, and SE.

General Site Information

Closed Site

Shelter/Cave Formation

- ☐ Boulder
- ☐ Wind erosion
- ☐ Water erosion
- ☐ Rock collapse

Rock Surface Condition

- ☐ Boulder
- ☐ Sandstone platform
- ☐ Silica gloss
- ☐ Tessellated
- ☐ Weathered
- ☐ Other platform

Open Site

Site Orientation

- ☐ N-S
- ☐ NE-SW
- ☐ E-W
- ☐ SE-NW
- ☐ N/A

Condition of Ceiling

- ☐ Boulder
- ☐ Sandstone platform
- ☐ Silica gloss
- ☐ Tessellated
- ☐ Weathered
- ☐ Other platform

Shelter Aspect

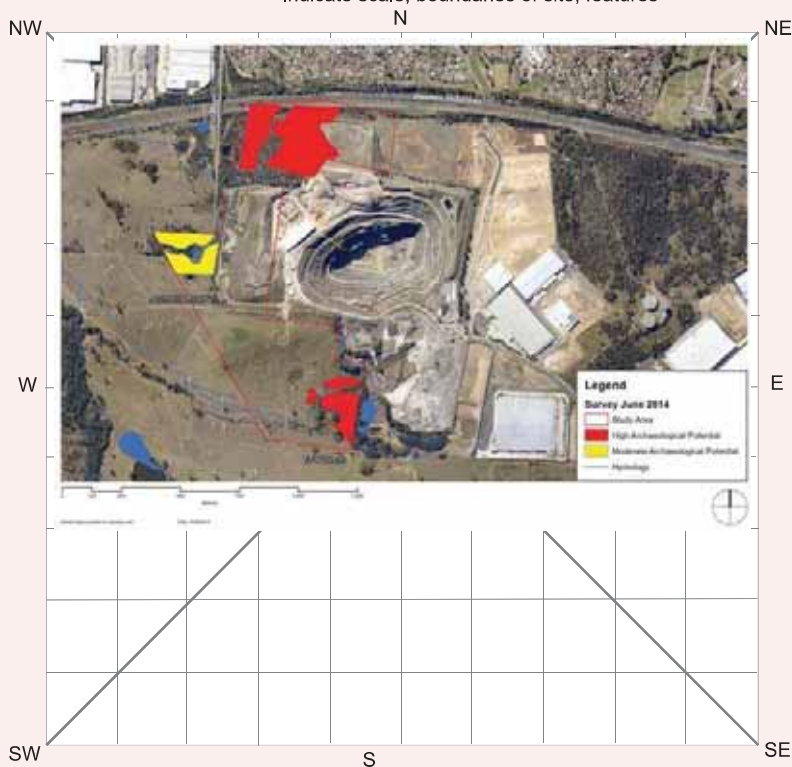
- ☐ North
- ☐ North East
- ☐ East
- ☐ South East
- ☐ South
- ☐ South West
- ☐ West
- ☐ North West

Features

- ☐ 1. Aboriginal Ceremony & Dreaming
- ☐ 2. Aboriginal Resource & Gathering
- ☐ 3. Art
- ☒ 4. Artefact
- ☐ 5. Burial
- ☐ 6. Ceremonial Ring
- ☐ 7. Conflict
- ☐ 8. Earth Mound
- ☐ 9. Fish Trap
- ☐ 10. Grinding Groove
- ☐ 11. Habitation Structure
- ☐ 12. Hearth
- ☐ 13. Non Human Bone & Organic Material
- ☐ 14. Ochre quarry
- ☒ 15. Potential Archaeological Deposit
- ☐ 16. Stone Quarry
- ☐ 17. Shell
- ☐ 18. Stone Arrangement
- ☐ 19. Modified Tree
- ☐ 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

- Internal length
- Internal width
- Shelter height
- Shelter floor area

Open Site Dimensions (m)

- 250 Total length of visible site
- 350 Average width of visible site
- Estimated area of visible site
- 250 Length of assessed site area

The Aboriginal Community has assessed the site as having a high social value.

The Aboriginal Community has assessed the site as having a high social value.

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site has high archaeological potential and scientific value. Vehicle and foot traffic has had some affect on soil conditions but the soil integrity remains largely intact. It is recommended that the site be conserved.

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title	Surname										First Name										Initials	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
Organisation	<input type="text"/>																					
Address	<input type="text"/>																					
Phone number	<input type="text"/>										Fax	<input type="text"/>										

Comments

- | | |
|--------------------------|----------------------|
| <input type="checkbox"/> | A4 location map |
| <input type="checkbox"/> | B/W photographs |
| <input type="checkbox"/> | Colour photographs |
| <input type="checkbox"/> | Slides |
| <input type="checkbox"/> | Aerial photographs |
| <input type="checkbox"/> | Site plans, drawings |
| <input type="checkbox"/> | Recording tables |
| <input type="checkbox"/> | Other |
| <input type="checkbox"/> | Feature inserts-No. |

[illegible]



Aboriginal Site Recording Form



AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office Use Only

Site Number

Date received / / Date entered into system / / Date catalogued / /

Entered by (I.D.)

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

For Further Information Contact:

☐ Nominated Trustee

Title Surname First Name Initials
Organisation
Address
Phone number Fax

☐ Knowledge Holder

Title Surname First Name Initials
Organisation
Address
Phone number Fax

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Office Use
Only

Client on
system

☐

Client on
system

☐

Geographic Location

Site Name

Easting Northing AGD/GDA

Mapsheet

Zone Location Method

Other Registration

Primary Recorder

Title Surname First Name Initials
Organisation
Address
Phone number Fax
Date recorded

Client on
system

☐

page 2

Open Site

Landform

Slope
 degrees

Landform Unit

- ☐ Beach
- ☐ Coastal rock platform
- ☐ Dune
- ☐ Intertidal flat
- ☐ Lagoon
- ☐ Tidal Creek

☐ Tidal Flat

☐ Cliff

☐ Crest

☐ Flat

☒ Lower slope

☐ Mid slope

- ☐ Upper slope
- ☐ Plain
- ☐ Ridge
- ☐ Tor
- ☐ Valley flat
- ☐ Levy

- ☐ Stream bank
- ☒ Stream channel
- ☐ Swamp
- ☐ Terrace
- ☐ Terrace flat

Vegetation

☐ Closed forest

☒ Grasslands

☐ Isolated clumps of trees

☐ Open forest

☐ Open woodland

☐ Scrub

☐ Woodland

☐ Cleared

☐ Revegetated

☐ N/A

Land use

<input type="checkbox"/>	Conservation
<input type="checkbox"/>	Established urban
<input type="checkbox"/>	Farming-intensive
<input checked="" type="checkbox"/>	Farming-low intensity
<input type="checkbox"/>	Forestry
<input type="checkbox"/>	Industrial
<input type="checkbox"/>	Mining
<input checked="" type="checkbox"/>	Pastoral/grazing
<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Semi-rural
<input type="checkbox"/>	Service corridor
<input type="checkbox"/>	Transport corridor
<input type="checkbox"/>	Urban expansion
<input type="checkbox"/>	N/A

Water

Distance to permanent water source	475	metres
Distance to temporary water source	500	metres
Name of nearest permanent water source	R o p e s C r k	
Name of nearest temporary water	u n n a m e d	

Directions for Relocation

Site Location Map

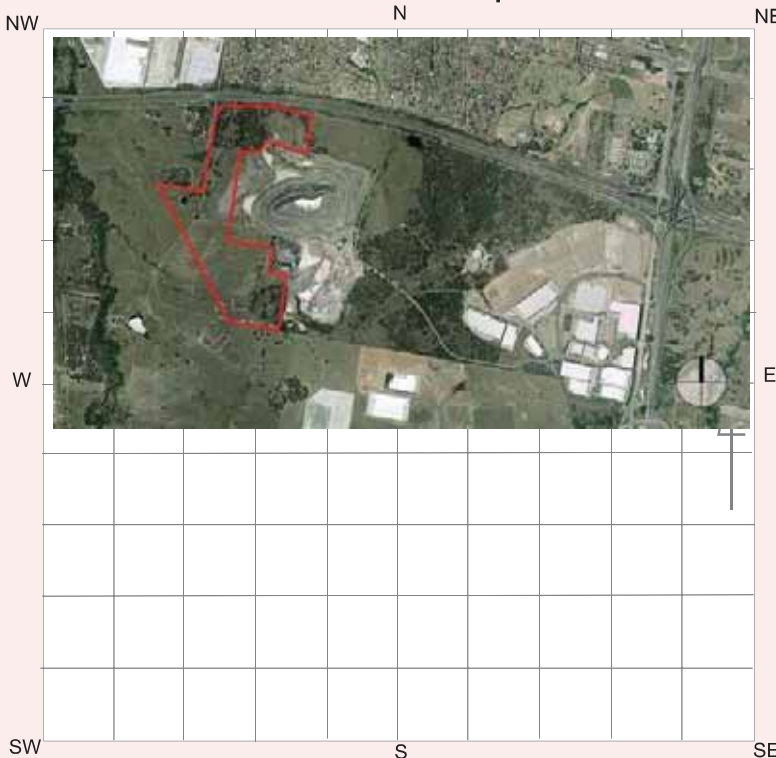
Current Land Tenure

<input type="checkbox"/> Public	National Park / other Government Dept.
<input type="checkbox"/> Private	

Primary report

I.D.		(I.D. Office Use only)
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GML 2014.	ATR	and	ACHAR.	Proposed	Energy	from
Waste	Facility,	Eastern	Creek,	Lots	2	and
3	in	DP				
1145808.						



General Site Information

Closed Site

Shelter/Cave Formation

- ☐ Boulder
☐ Wind erosion
☐ Water erosion
☐ Rock collapse

Rock Surface Condition

- ☐ Boulder
☐ Sandstone platform
☐ Silica gloss
☐ Tessellated
☐ Weathered
☐ Other platform

Open Site

Site Orientation

- ☐ N-S
☐ NE-SW
☐ E-W
☐ SE-NW
☐ N/A

Condition of Ceiling

- ☐ Boulder
☐ Sandstone platform
☐ Silica gloss
☐ Tessellated
☐ Weathered
☐ Other platform

Shelter Aspect

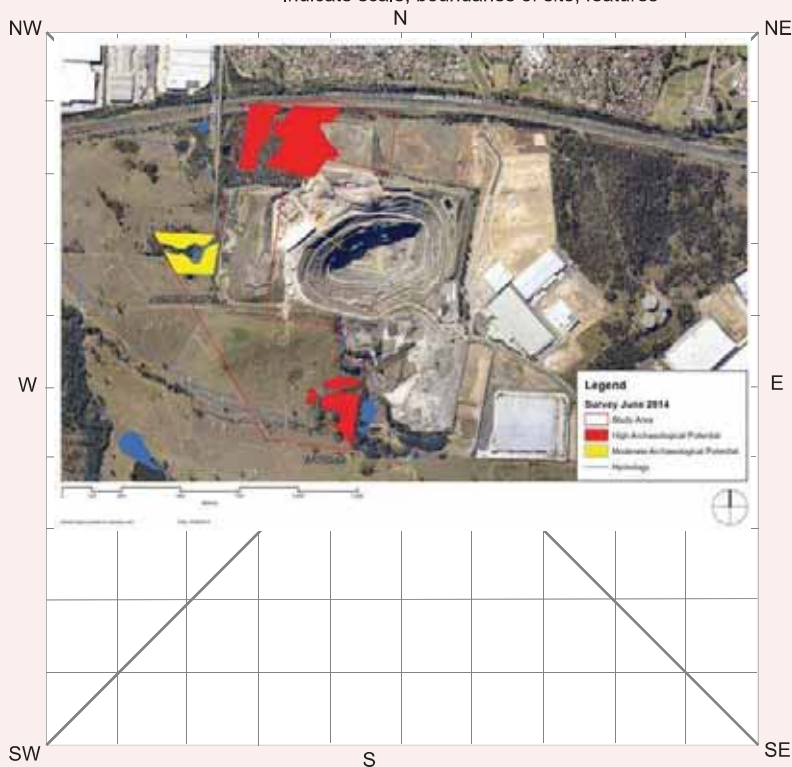
- ☐ North
☐ North East
☐ East
☐ South East
☐ South
☐ South West
☐ West
☐ North West

Features

- ☐ 1. Aboriginal Ceremony & Dreaming
☐ 2. Aboriginal Resource & Gathering
☐ 3. Art
☒ 4. Artefact
☐ 5. Burial
☐ 6. Ceremonial Ring
☐ 7. Conflict
☐ 8. Earth Mound
☐ 9. Fish Trap
☐ 10. Grinding Groove
☐ 11. Habitation Structure
☐ 12. Hearth
☐ 13. Non Human Bone & Organic Material
☐ 14. Ochre quarry
☒ 15. Potential Archaeological Deposit
☐ 16. Stone Quarry
☐ 17. Shell
☐ 18. Stone Arrangement
☐ 19. Modified Tree
☐ 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

- Internal length
 Internal width
 Shelter height
 Shelter floor area

Open Site Dimensions (m)

- Total length of visible site
 Average width of visible site
 Estimated area of visible site
 Length of assessed site area

The Aboriginal Community has assessed the site as having high social value.

[illegible]

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site has moderate archaeological potential and scientific value. Low intensity agriculture and pastoral grazing has had minor impact on the soils condition but the integrity remains largely intact. It is recommended that the site be conserved.

[illegible]

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title	Surname										First Name										Initials	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
Organisation	<input type="text"/>																					
Address	<input type="text"/>																					
Phone number	<input type="text"/>										Fax	<input type="text"/>										

<input type="checkbox"/>	A4 location map
<input type="checkbox"/>	B/W photographs
<input type="checkbox"/>	Colour photographs
<input type="checkbox"/>	Slides
<input type="checkbox"/>	Aerial photographs
<input type="checkbox"/>	Site plans, drawings
<input type="checkbox"/>	Recording tables
<input type="checkbox"/>	Other
<input type="checkbox"/>	Feature inserts-No.

[illegible]



Aboriginal Site Recording Form



AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office Use Only

Site Number

Date received / / Date entered into system / / Date catalogued / /

Entered by (I.D.)

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

For Further Information Contact:

☐ Nominated Trustee

Title Surname First Name Initials
Organisation
Address
Phone number Fax

☐ Knowledge Holder

Title Surname First Name Initials
Organisation
Address
Phone number Fax

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Office Use
Only

Client on
system

☐

Client on
system

☐

Geographic Location

Site Name

Easting Northing AGD/GDA

Mapsheet

Zone Location Method

Other Registration

Primary Recorder

Title Surname First Name Initials
Organisation
Address
Phone number Fax
Date recorded

Client on
system

☐

NPWS Aboriginal Site Recording Form - Site Information

page 2

OPEN/CLOSE SITE ☒ Open Site

Site Context

Landform

- ☐ Mountainous
☐ Plain
☐ Rolling hills
☐ Steep hills
☒ Undulating plain

Slope

degrees

Landform Unit

- ☐ Beach
☐ Coastal rock platform
☐ Dune
☐ Intertidal flat
☐ Lagoon
☐ Tidal Creek

- ☐ Tidal Flat
☐ Cliff
☐ Crest
☐ Flat
☐ Lower slope
☐ Mid slope

- ☐ Upper slope
☐ Plain
☐ Ridge
☐ Tor
☐ Valley flat
☐ Levy

- ☐ Stream bank
☒ Stream channel
☐ Swamp
☐ Terrace
☒ Terrace flat

Vegetation

- ☐ Closed forest
☒ Grasslands
☐ Isolated clumps of trees
☐ Open forest
☐ Open woodland
☐ Scrub
☐ Woodland
☐ Cleared
☐ Revegetated
☐ N/A

Land use

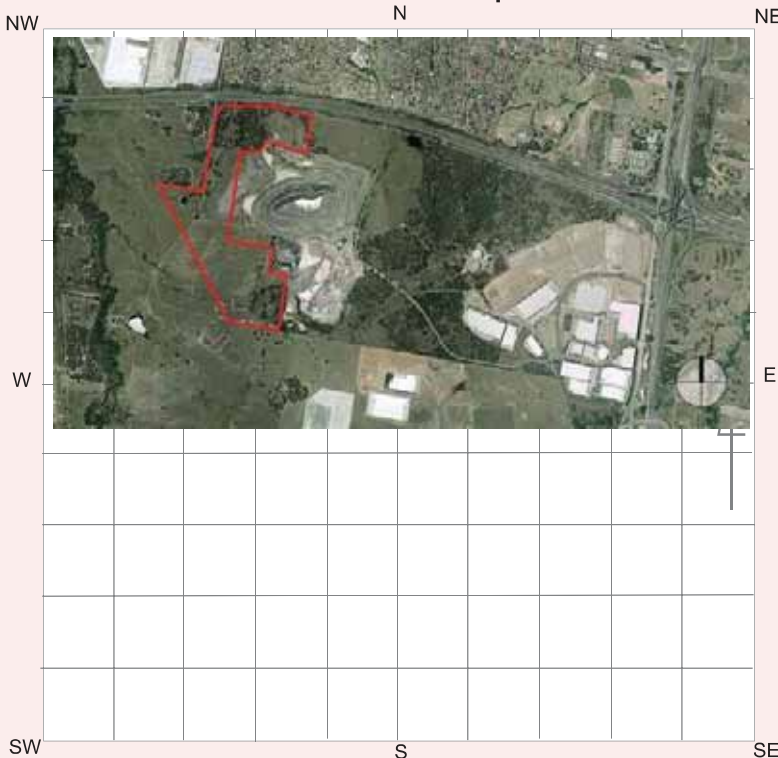
- ☐ Conservation
☐ Established urban
☐ Farming-intensive
☒ Farming-low intensity
☐ Forestry
☐ Industrial
☐ Mining
☒ Pastoral/grazing
☐ Recreation
☐ Semi-rural
☐ Service corridor
☐ Transport corridor
☐ Urban expansion
☐ N/A

Water

Distance to permanent water source metres
 Distance to temporary water source metres
 Name of nearest permanent water source
 Name of nearest temporary water

Directions for Relocation

Site Location Map



Current Land Tenure

- ☐ Public National Park / other Government Dept.
☐ Private

Primary report

I.D. (I.D. Office Use only)

GML 2014. ATR and ACHAR. Proposed Energy from
 Waste Facility, Eastern Creek, Lots 2 and 3 in DP
 1145808.

NPWS Aboriginal Site Recording Form - Site Information

page 3

General Site Information

Closed Site

Shelter/Cave Formation

- ☐ Boulder
☐ Wind erosion
☐ Water erosion
☐ Rock collapse

Rock Surface Condition

- ☐ Boulder
☐ Sandstone platform
☐ Silica gloss
☐ Tessellated
☐ Weathered
☐ Other platform

Open Site

Site Orientation

- ☐ N-S
☐ NE-SW
☐ E-W
☐ SE-NW
☐ N/A

Condition of Ceiling

- ☐ Boulder
☐ Sandstone platform
☐ Silica gloss
☐ Tessellated
☐ Weathered
☐ Other platform

Shelter Aspect

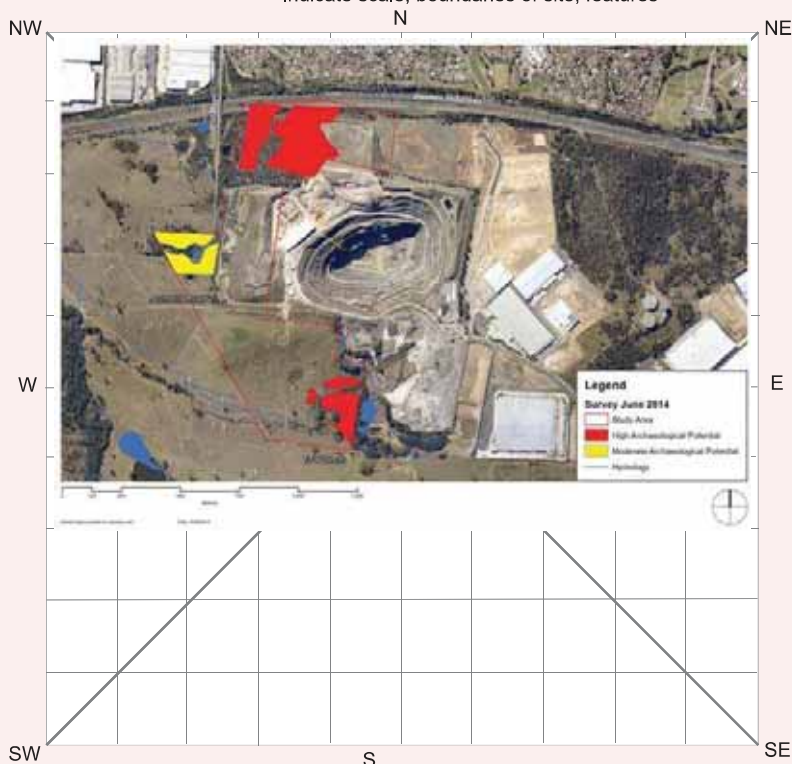
- ☐ North
☐ North East
☐ East
☐ South East
☐ South
☐ South West
☐ West
☐ North West

Features

- ☐ 1. Aboriginal Ceremony & Dreaming
☐ 2. Aboriginal Resource & Gathering
☐ 3. Art
☒ 4. Artefact
☐ 5. Burial
☐ 6. Ceremonial Ring
☐ 7. Conflict
☐ 8. Earth Mound
☐ 9. Fish Trap
☐ 10. Grinding Groove
☐ 11. Habitation Structure
☐ 12. Hearth
☐ 13. Non Human Bone & Organic Material
☐ 14. Ochre quarry
☒ 15. Potential Archaeological Deposit
☐ 16. Stone Quarry
☐ 17. Shell
☐ 18. Stone Arrangement
☐ 19. Modified Tree
☐ 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

- Internal length
 Internal width
 Shelter height
 Shelter floor area

Open Site Dimensions (m)

- 230 Total length of visible site
 200 Average width of visible site
 Estimated area of visible site
 230 Length of assessed site area

The Aboriginal Community has assessed the site as having a high social value.

The Aboriginal Community has assessed the site as having a high social value.

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site has high archaeological potential and scientific value. Low intensity agriculture and pastoral grazing has had some impact on soil conditions, but the site's soil integrity remains largely intact. It is recommended that test excavations be carried out, followed by possible salvage excavations prior to development.

[illegible]

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title	Surname										First Name										Initials	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		
Organisation	<input type="text"/>																					
Address	<input type="text"/>																					
Phone number	<input type="text"/>										Fax	<input type="text"/>										

<input type="checkbox"/>	A4 location map
<input type="checkbox"/>	B/W photographs
<input type="checkbox"/>	Colour photographs
<input type="checkbox"/>	Slides
<input type="checkbox"/>	Aerial photographs
<input type="checkbox"/>	Site plans, drawings
<input type="checkbox"/>	Recording tables
<input type="checkbox"/>	Other
<input type="checkbox"/>	Feature inserts-No.

[illegible]

APPENDIX B

GML 2014 - ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT

Energy From Waste (EFW) Plant, Eastern Creek

Aboriginal Cultural Heritage Assessment

Report prepared for Urbis on behalf of The Next Generation (TNG)

September 2014



Sydney Office 78 George Street Redfern NSW Australia 2016 T +61 2 9319 4811

Canberra Office 2A Mugga Way Red Hill ACT Australia 2603 T +61 2 6273 7540

GML Heritage Pty Ltd ABN 60 001 179 362

www.gml.com.au

Report Register



The following report register documents the development and issue of the report entitled Energy From Waste (EFW) Plant, Eastern Creek—Aboriginal Cultural Heritage Assessment Report, undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
13-0493	1	Final Report	22 September 2014

Quality Assurance

GML Heritage Pty Ltd operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2008.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

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Executive Summary

GML Heritage (GML) Pty Ltd was engaged by The Next Generation NSW Pty Ltd (TNG) to prepare an Aboriginal cultural heritage assessment report (ACHAR) for proposed Energy from Waste (EFW) facility at Eastern Creek project. This report forms part of the Environmental Assessment for the study area prepared under Part 3 of the *Environmental Planning and Assessment Act 1979*.

The aim of this project are:

- to involve the Aboriginal community in decisions with respect to its heritage;
- to identify, assess and report on Aboriginal heritage values within the study area;
- to determine how the EFW project may harm these values; and
- to establish the mechanism for conservation and mitigation of harm to these values.

This ACHAR should be read in conjunction with the Aboriginal archaeological technical report for this study area; the archaeological report details the archaeological field work, scientific assessment, impact assessment and mitigation and management recommendation for the project.

The cultural heritage assessment of the study area, as reported herein, has confirmed the identification of social and scientific Aboriginal values associated with the study area.

The recommendations arising from this report is that the identified Aboriginal site in the south of the study area would be impacted by the proposed development, whilst other Aboriginal sites would be avoided and placed within a conservation offset area.

Aboriginal Cultural Heritage Assessment Report Cover Sheet

Report title	Aboriginal Cultural Heritage Assessment Report for the proposed Energy from Waste (EFW) facility at Eastern Creek	
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1.0 Introduction

GML Heritage (GML) Pty Ltd was engaged by Urbis, on behalf of The Next Generation NSW Pty Ltd (TNG) to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) and an Aboriginal Archaeological Technical Report (ATR) for the proposed Energy from Waste (EFW) facility at Eastern Creek project (Figure 1.1). This report forms part of the Environmental Assessment for the study area prepared under Part 3 (State Significant Development) of the *Environmental Planning and Assessment Act 1979*.

The purpose of this report is to identify whether the study area possesses or has the potential to possess Aboriginal heritage archaeological sites, places, objects, landscapes and/or values, in accordance with the NSW Office of Environment and Heritage (OEH) guidelines for Aboriginal heritage assessment (listed below).

This report provides a preliminary significance assessment of the identified archaeological Aboriginal sites, places, landscapes and/or other potential heritage values. An impact assessment and management recommendations are provided to assist TNG with their future responsibilities for the management of Aboriginal cultural heritage within the study area.

1.1 Project Brief and Study Area

The Energy from Waste (EFW), Eastern Creek project area (the study area), is located at Eastern Creek, Lots 2 and 3 in DP 1145808, within the Blacktown Local Government Area (LGA), south of the M4, east of Ropes Creek, west of the former Pioneer Quarry, and bounded to the west by Archbold Road (Figures 1.1 and 1.2).

TNG proposes to construct an EFW electricity generation plant at the southern end of the study area. The proposed development involves the construction of the EFW energy generation plant, as well as internal roadways, amenities and ablutions, parking facilities, and water detention basins. Any action that disturbs the ground surface has the potential to impact soils that may contain an Aboriginal archaeological deposit. Therefore this assessment has been undertaken in order to determine if there is the potential for Aboriginal objects within the study area, and if so, to what extent they may be impacted through the development proposal. This will allow development of relevant and appropriate Aboriginal cultural heritage management strategies as necessary and appropriate to the study area.

Figure 1.3 depicts the proposed location of the proposed plant. Details of the proposed development impact and location are presented in the Impact Assessment, Section 5.0 of this report. The EFW project will be assessed under the Environmental Planning and Assessment Act (EPA Act) as a State Significant Development (SSD) Project. This report will be used to support a DA for the EFW plant and associated works within the study area.

1.2 Statutory Context

In NSW Aboriginal heritage is principally protected under two Acts:

- the NPW Act; and
- the *Environmental Planning and Assessment Act 1979* (EPA Act).

On 1 October 2010 the mechanisms for the protection and management of Aboriginal heritage places and objects changed with the adoption of the *NPW Amendment (Aboriginal Objects and Places) Regulation 2010*.

New offences relating to the harm to, or desecration of, an Aboriginal object or declared Aboriginal Place were introduced. The definition of 'harm' now includes to destroy, deface, damage or move an Aboriginal object or declared Aboriginal Place. The OEH has stated:

The most significant change is the introduction of tiered offences and penalties. Offences committed with knowledge, in aggravating circumstances or in relation to an Aboriginal Place will attract higher penalties than previously. There is a new strict liability offence of harming Aboriginal objects and of harming or desecrating Aboriginal Places.¹

The strict liability offence of harming Aboriginal objects has a number of defences. The two defences relevant to this project include the statutory defence of due diligence through complying with an adopted industry code of practice (see due diligence below) or compliance with the conditions of an AHIP.

The *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act) provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items through inclusion in schedules to planning instruments such as Local Environmental Plans (LEPs) or Regional Environmental Plans (REPs). Heritage items in planning instruments are usually historic sites but can include Aboriginal objects and places. The EPA Act requires that appropriate measures be taken for the management of the potential archaeological resource by means consistent with practices and standards adopted in meeting the requirements of the NPW Act.

The EFW Plant Development will be assessed as a State Significant Development (SSD) in accordance with Part 3 of the EPA Act. Therefore the requirement for an Aboriginal Heritage Impact Permit (AHIP) in accordance with Section 90 the NPW Act may not apply to this development.

1.3 Approach to Aboriginal Heritage Management

In order to administer the NPW Act and EPA Act, the OEH has issued a series of best practice guidelines and policies. The applicability of these depends upon the approval mechanism for a project. The approach to the preparation of this document was based on the following current best practice guidelines:

- Department of Environment, Climate Change and Water (DECCW) *Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks and Wildlife Act 1974* (April 2010);
- DECCW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (13 September 2010);
- DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010);
- OEH *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011); and
- The Australia ICOMOS *Burra Charter 1999* (Burra Charter).

1.4 Objectives of this Aboriginal Cultural Heritage Assessment

The objectives of this assessment were:

- to undertake identification of Aboriginal community members who can speak for the Country within which the project is located;
- to involve the Aboriginal community in the cultural heritage assessment process;
- to consult with the Aboriginal community and determine their opinions with respect to the project and its potential 'harm' to their cultural heritage
- to understand the range and type of Aboriginal heritage values and places within the study area;
- to determine whether the identified Aboriginal sites and places are a component of a wider Aboriginal cultural landscape;
- to understand how the physical Aboriginal sites relates to Aboriginal tradition within the wider area;
- to prepare a cultural heritage values assessment for all identified aspects of Aboriginal cultural heritage, as identified within this report;
- to determine how the proposed project may impact the identified Aboriginal cultural heritage;
- to aim to minimise impacts to Aboriginal cultural heritage through sensible and pragmatic site and land management;
- to determine where impacts are unavoidable and develop a series of impact mitigation strategies that benefit Aboriginal cultural heritage and the proponent; and
- to provide clear recommendations for the conservation of Aboriginal heritage values and mitigation of any potential impacts to these values.

1.4.1 Reporting Approach

This ACHAR has been prepared in accordance with the requirements of *OEH Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (April 2011)*. This ACHAR should be read in conjunction with the Aboriginal Archaeological Technical Report (ATR) prepared for the study area; the archaeological report details the archaeological field work, scientific assessment, impact assessment and mitigation and management recommendation for the project.

1.5 Investigators and Contributors

The project team's roles, qualifications and affiliations are detailed in Table 1.1. A number of Aboriginal community representatives have assisted in the archaeological assessment's field survey and provided cultural input into the ACHAR and ATR. The list of contributors involved is specified below.

Table 1.1 Investigators and Contributors

Person (Qualification)	Affiliation	Role
Sam Cooling (M. Arch. Science, BA.)	GML	Project Manager, Author

Dr Tim Owen (PhD Aboriginal archaeology, BSc [Hons] International Archaeology)	GML	Project Director, Report Reviewer
Jane McMahon (BA)	GML	Author
Tyler Beebe (BA)	GML	Project Manager, Author
Jen Norfolk	Tocomwall	
Uncle Gordon Workman	DLO	
Paul Goddard	DLO	
John Reilly	DTAC	
Des Dyer	DALC	
Gordon Morton	DACHA	
Tylan Blunden	DCAC	
Philip Khan	KYWG	



Figure 1.1 Regional Study area location. (Source: Nearmaps with GML Additions 2014).



Figure 1.2 Study area. (Source: Nearmaps with GML Additions 2014).



Figure 1.3 Approximate location of proposed plant. (Source: Near Maps with GML additions)

2.0 Aboriginal Community Consultation

2.1 Introduction

This chapter contains specific details of Aboriginal community consultation with regard to the heritage assessment of the study area.

Aboriginal community consultation is required in order to make a valid assessment of Aboriginal heritage values; especially those Aboriginal memories, stories and associations between the Aboriginal people and their traditional lands or Country. Aboriginal people frequently express an enduring connection to their Country, a connection that transcends generations, both past and present. The connection is frequently expressed as a sense of belonging, which may manifest through physical objects or place; alternatively it may be presented as an intangible idea, where an appreciation of an unseen quality or non-materialistic value connects a place in the landscape, tradition, observance, custom, lore belief and/or history to the person or group describing the item, event or value. The notion of intangible, social or community values is essential to Aboriginal people as ‘the effective protection and conservation of this heritage is important in maintaining the identity, health and wellbeing of Aboriginal people’.¹

Aboriginal consultation is required for any assessment of Aboriginal heritage. The OEH specifies that consultation should follow the guideline document ‘*DECCW, Aboriginal cultural heritage consultation requirements for proponents 2010*’ in relation to any study that might eventually be used to support an application under Part 6 of the *National Parks and Wildlife Act 1974*.

These guidelines set out a process for inviting Aboriginal groups to register interest as a party to consultation (including the placing of local press advertisement[s]), seeking responses on the proposed assessment methodology, and seeking comment on proposed assessments and recommendations. The guidelines specify timeframes for each stage of the consultation process.

The Aboriginal community consultation for this project has been carried out in accordance with the OEH guideline. The complete log of all communications between GML and local Aboriginal stakeholders is presented in *Appendix A*. This chapter provides an overview of the consultation process.

2.2 The Process of Consultation

In order to gather social and community views and opinions with respect to Aboriginal heritage, the OEH has established a formal process involving identification, registration, engagement and consultation with Aboriginal peoples who may hold cultural knowledge relevant to determining the significance of an Aboriginal object and/or place.

Adherence with the April 2010 guidelines involves following a number of stages, which include:

- informing Aboriginal people about the nature and scope of the proposal;
- understanding what might be present in the landscape and its cultural significance;
- determining the potential impacts and the proposed strategies to deal with them; and
- reviewing the report.²

The guidelines specify timeframes for each stage of the consultation process. Further details pertaining to these stages are described below.

2.2.1 Stage 1: Notification of Project

The aim of Stage 1 is to 'identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the proposed project'.³ The identification process involves:

- initial letters sent to select government agencies to determine relevant Aboriginal stakeholder groups to contact; and
- placement of a notice in local press, inviting Aboriginal people who hold relevant cultural knowledge to register in the process of community consultation.

A letter notifying all Aboriginal people and the Local Aboriginal Land Council (LALC) about the proposed project must be sent to each individual and group identified through the above steps. Aboriginal people have a minimum of 14 days after the letter is sent or the notice is published in the newspaper to register an interest in the project.

The outcome of Stage 1 is a list of Aboriginal people who have registered to be involved in consultation for the project—the Registered Aboriginal Parties (RAPs). The RAPs are to be involved for the remainder of the project; no Aboriginal consultation outside of the RAPs is required.

2.2.2 Stage 2: Presentation of Information

A letter is to be sent to all RAPs informing them of the project outline, project impacts, the timeline and milestones of the project. Included is a methodology for undertaking field assessment and a request for any information on culturally sensitive areas of local traditional knowledge relating to the study area.

The OEH have determined that Stage 2 must allow 28 days for the RAPs to respond.

2.2.3 Stage 3: Gathering Information

Field assessment could commence four weeks after the Stage 2 package has been sent to the RAPs. During the field assessment, the RAPs may provide knowledge about local traditions and cultural aspects of the study area. Any such information would be presented in the heritage assessment.

2.2.4 Stage 4: Review of Draft Report

Following client review of the draft Aboriginal heritage assessment, each RAP must be provided with the draft report for comment. The OEH stipulates that RAPs should be allowed 28 days to provide comment on the draft report. All community comments would be appended to the report and appear in the final Heritage Assessment.

The Aboriginal community consultation for this project has been carried out in accordance with the OEH guidelines. This chapter provides a brief overview of the consultation process. The complete log of all communications between GML and RAPs is presented in Appendix B of the ATR, following this report.

2.3 Commencement of Consultation (Stage 1)

Letters requesting contact details of Aboriginal people or organisations who may hold cultural knowledge relevant to the study area and any known heritage issues to be taken into consideration (Step 1 notifications) were sent on 5 December 2012 to:

- The NSW OEH Planning and Aboriginal Heritage Section;
- Registrar, *Aboriginal Land Rights Act 1983* (NSW);
- The National Native Title Tribunal (NNTT);
- Native Title Services Corporation (NTSCorp);
- Blacktown City Council (BCC);
- Hawkesbury Nepean Catchment Management Authority (HNCMA); and
- Deerubbin Local Aboriginal Land Council (DLALC).

Responses were received from the OEH; NNTT; NTS Corp; and BCC.

Subsequently, those Aboriginal people who were identified during the Step 1 notifications were contacted via letter on 28 March 2014, providing information regarding the project and inviting them to register an interest (Step 2 notifications). An advertisement for inviting registrations of interest by Aboriginal people with cultural knowledge relevant to the project area was also placed in the Blacktown Advocate on 19 March 2014.

In line with the outcomes of Stage 1 following OEH 2010: Appendix B¹, the following Aboriginal people registered an interest and constitute the Registered Aboriginal Parties (RAPs) for the EFW, Eastern Creek project:

- Darug Land Observations (DLO);
- Tocomwall;
- Darug Aboriginal Cultural Heritage Assessments (DACHA);
- Koomurri Ngunawal Aboriginal Corporation (KNAC);
- HSB Heritage Consultants (HHC);
- Wurrumay Consultants;
- Darug Aboriginal Landcare (DALC);
- Darug Tribal Aboriginal Corporation (DTAC);
- Deerubbin Local Aboriginal Land Council (DLALC);
- Kamilaroi-Yankuntjatjara Working Group (KYWC);
- Gunjee Wong Cultural Heritage Aboriginal Corporation (GCHAC); and

¹ DECCW, Aboriginal cultural heritage consultation requirements for proponents 2010

- Darug Custodian Aboriginal Corporation (DCAC).

A copy of the notification and details of Registered Aboriginal Parties were provided to OEH and Deerubbin LALC on 17 April 2014.

2.4 Presentation of Information (Stage 2)

Each group was provided with written details of the proposed project and the project methodology by registered post on 16 April 2014. Four responses were received from the project RAPs regarding the project methodology. DTAC and DCAC both agreed with the project methodology, however raised concern regarding the number of groups registered for consultation that were not Darug people/not from the area. DTAC representative Mr John Reilly noted that 'only Darug persons should be on Darug Country, such as fieldwork and test excavation'. Ms Leanne Watson of DCAC also noted that the sites in the region are a complex, rather than separate sites, and recommended that the connections between these sites be interpreted through the project. She also stated that the area is of high cultural significance as a Darug landscape. In addition, a response was received from both HHC and KYWC stating their support for the project methodology.

2.5 Participation in Field Assessment

2.5.1 Field Survey

Field survey for the assessment was undertaken on 15 May 2014 and included representatives from seven of the twelve RAPs. The field survey aimed to inspect the study area where ground surface visibility existed, to investigate the current state of the study area, as well as to identify any landforms and areas of low ground disturbance that would be appropriate for test excavation. The survey methodology and project was discussed with the Aboriginal stakeholders prior to and on the day of the survey as mentioned above.

2.6 Gathering Cultural Significance Information (Stage 3)

During the survey, GML archaeologists discussed local Aboriginal heritage values and patterning with the community representatives. This provided an understanding of the local perspective for Aboriginal habitation and subsistence patterns. When Aboriginal sites and areas of archaeological potential were identified, all participants were involved in recording the site, allocating areas of archaeological potential and determining their extents. At the completion of the survey an open discussion was held during which the sites recorded, the archaeological potential and required investigation was discussed and agreed upon by all present. The outcomes of this consultation underwrite the EFW, Eastern Creek Heritage Assessment.

GML's involvement in the EFW project ceased following the field survey. Reporting relating to the assessment, survey and management was provided to this end point. As such, the process under Stage 3 has not been completed under this report. Future consultation processes should continue Stage 3.

2.7 Review of Draft Report (Stage 4)

This report should be provided for viewing by the RAPs (as a record of work and consultation to September 2014)—however, given GML's cessation of involvement in the project post survey, any comments relating to the assessment of the study area should be managed through consequential heritage work.

2.8 Aboriginal Comments Provided to GML

Table 2.1 details all submissions made by the RAPs with respect to the cultural heritage values of the study area. If provided as a written format, the original is presented in Appendix A.

Table 2.1 RAP comments with respect to cultural heritage

#	RAP	Date of Submission	Format	Comment
1	Ms Leanne Watson, DCAC	5 May 2014	Letter	"Our sites are a complex and not all separate sites and recommend that the connections are interpreted throughout the project. Information gathered during these projects is of high significance, once our sites are gone there is no other evidence of the sites or connections. This area has shown in recent excavations and surveys that this is a Darug landscape and there are still numerous parts of our histories to be recorded. Eastern Creek is an area that Darug families have had a connection to for thousands of years as shown in all previous studies, Darug people stayed in this area to present times, the oral histories of this area support the families staying here for thousands of years." (Letter, 5 May 2014).
2	Mr John Reilly, DTAC	6 May 2014	Verbal	Concern with non-Darug people, people 'without permission' participating in fieldwork, particularly test excavations and disturbing the ground.

2.9 GML's Response to the Submissions

GML's response to each submission is detailed in Table 2.2.

Table 2.2 Response to RAP's submissions (# refers to submission as listed in Table 2.1)

#	GML's response
1	No GML response
2	GML advised client that they had a legal obligation to consult with all registered groups—recommendations stemming from the Darug people's concerns, indicate that eight of the twelve RAP's are representatives from Darug groups (and to DLALC), who should be invited to participate in all future fieldwork stages of the project.

2.10 Endnotes

¹ DECCW 2010. NPWS Act 1974. *Fact sheet 1*. September 2010.

¹ DECCW 2010 (April). *Aboriginal cultural heritage consultation requirements for proponents 2010*. DECCW, Sydney.

² List taken from DECCW (2010:10).

³ DECCW (2010:10).

3.0 Aboriginal Cultural Heritage

The purpose of this section is to synthesize available information from previous archaeological and ethnohistorical studies to provide a context and baseline for what is known about Aboriginal cultural heritage in the subject area.

3.1 Ethnohistory

The landscape of the study area, as with much of the Cumberland Plain, was occupied and managed by the Darug (various spellings including 'Dharug', 'Dharrook', 'Dharrook', 'Dhar-rook, etc') people for thousands of years prior to European occupation which inscribed the land with a different pattern and form.¹ The Darug was a language group that represented a number of different groups of people who occupied the Sydney basin from the coast between South Head and the north shore of Botany Bay, out to the edge of the Blue Mountains. Within this area there were approximately 20 different bands, each having a different territory, boundaries and sacred spaces.²

The Wianamatta landscape within which this land sits is a resistant and dynamic landscape. The physical traces that remain, such as Darug campsites and artefacts, and the memories held by people, tell of the environmental and human stories that have occurred through time. The Darug bands used the landscape seasonally, and formed open campsites on the higher ground with ready access to natural water sources such as creeks, billabongs and wetlands. Campsites were selected and moved so people could take advantage of seasonally abundant foods.

Traditionally, Ropes Creek would have provided the Darug people with a source of fresh water, fish, shellfish and aquatic plants used for a variety of purposes. The surrounding plains provided native animals and vegetable foods and other resources including timber and leaves, natural gums and resins that were used for a range of implements and tasks. The Darug would have fired areas within their traditional country to maintain a clear and open understorey. This encouraged the fruiting of plants and the growth of fresh herbage for animals to graze. Wallabies, emus, snakes, bandicoots, possums, swans and other game foods would have been eaten. Roots and tubers including yams would have been dug along the creeks and roasted in open campfires.

Stone was a vital material and its distribution in the landscape played a role in determining people's movements and patterns of trade and exchange with other language groups.³ Stone materials occur in the region as silcrete, silicified tuff (formerly indurate mudstone),⁴ chert and quartz. The Darug used pebbles, cobbles and sometimes boulders in the manufacture of stone tools. Silcrete was a preferred material for tool making.

Though fragmentary and modified by later occupation and development, the rich archaeological evidence comprised of artefact scatters and campsites recorded across the Wianamatta landscape; it is an evocative and important source of information about how the Darug occupied and used their traditional country over thousands of years.

3.2 Archaeological and Landscape Context

This section provides a summary of the review of previous archaeological work and the landscape context provided in Section 2 of the ATR which this report accompanies. Reference should be made to Section 2 of the ATR for detail.

The information obtained by the review of the previous archaeological work and the landscape context gave an understanding of the regional character, and assisted in forming the Aboriginal heritage predictive model relating to the remains for evidence of Aboriginal occupation and use of the study area.

Interactions between people and their surroundings are of integral importance in both the initial formation and the subsequent preservation of the archaeological record. The nature and availability of resources including water, flora and fauna, and suitable raw materials for the manufacture of stone tools and other items had (and continues to have) a significant influence over the way in which people utilize the landscape.

Alterations to the natural environment also impact upon the preservation and integrity of any cultural materials that may have been deposited, whilst current vegetation and erosional regimes affect the visibility and detectability of Aboriginal sites and objects. For these reasons, it is essential to consider the environmental context as a component of any heritage assessment.

3.2.1 Aboriginal Heritage Information Management System (AHIMS)

A search of the OEH AHIMS database of an area approximately 1km surrounding the study area was undertaken on 11 March 2014. The results of the search are shown in Figure 3.1. The search identified 63 recorded Aboriginal sites, which comprised: artefact concentrations (open camp sites), Potential Archaeological Deposits (PADs), and Artefact Sites with PADs. This search indicated that artefact concentrations constitute the predominant remnants recorded in this area. An overview of the AHIMS results are shown in Table 3.1. The complete results of the AHIMS search are provided in Appendix A.

Table 3.1 Results of the AHIMS search

Site Feature	Frequency	Percentage (%)
Artefact Concentrations (Open Camp Sites)	59	94
Artefact Site + PAD	2	3
PAD	2	3
Total	63	100

General patterning indicates that artefact sites dominate the archaeological record. These can be found in any location, on any landform; however recorded sites appear to become denser towards the margins of smaller creek lines and near the confluences of the water courses. However, this is also likely to be influenced by the locations of previous intensive archaeological surveys, with sites tending to decrease in number within areas that have been subject to less intensive archaeological survey (ie within the proposed EFW Plant location; the current study area).

Unregistered Aboriginal Sites

The assessment of prior reports indicated that there were also three recorded, but unregistered Aboriginal sites located within, or in close proximity to, the study area. Details of sites reported on, but not previously AHIMS registered, are provided below. All three of these sites have now been registered with the AHIMS registrar through the course of this project. However, only one of these unregistered sites is located within the current study area.