

HERITAGE ARCHAEOLOGY HISTORY ▼ ASSESSMENT MANAGEMENT INTERPRETATION

ABORIGINAL HERITAGE ASSESSMENT REPORT



PROSPECT SOUTH PLANNING PROPOSAL

Mary Dallas Consulting Archaeologists

March 2018

Report to the Office of Strategic Lands



Introduction

This report has been prepared by MDCA [Mary Dallas Consulting Archaeologists] on behalf of the Office of Strategic Lands. The aim of this document is to inform future planning proposals for a surplus parcel of land and several adjacent private parcels of land located at South Prospect (**Figure 1**). The subject land is currently zoned RU4 (Primary Production Small Lots) but is being considered for rezoning for industrial purposes (IN1 and IN2).

This report has been prepared to determine whether rezoning and potential future industrial use may impact any known or potential Aboriginal heritage values within the subject land. It updates and supersedes a previous Aboriginal heritage assessment prepared by MDCA which included the entire subject lands and additional areas to the east. Contact has been made with Blacktown City Council who have provided advice (via a letter of advice on 17 March, 2017) on the studies to be carried out to meet the needs of the Planning Proposal. This report has therefore been prepared to address the information required by Council relative to Aboriginal heritage. The report is a companion document to a historical archaeological assessment (European Heritage), which has been prepared separately by MDCA's historical archaeologist.

The subject land

The subject land comprises around 13.8 hectares (including internal roadways) and is bounded to the north by the M4 Motorway corridor, to the east by a vacant allotment (Lot 4 in DP1192514) above Girraween Creek, to the south by the Americold Refrigerated Warehousing facility and Lot 9 in DP374325, and to the south and west Reconciliation Road (**Figure 2**). It is situated within the Blacktown Local Government Area³, Parish of Prospect and lies within the Office of Environment and Heritage Metropolitan Sydney Region. The subject land is primarily owned by the Office of Strategic Lands, but the remainder includes roadways and easements owned by Blacktown City Council, and several allotments currently owned by other private and government owners. The land currently consists of former farmland, cleared paddocks, rural/residential blocks, a small number of residences and incidental buildings, and a haulage business (**Figure 3**). All are set along Reservoir Road and/or Thornley Road, which effectively divide the land into three distinct areas.

A concept plan for the proposed rezoning of the subject land for future industrial use is shown in

¹ MDCA 2007. Due Diligence Study - Aboriginal Archaeology, Department of Planning Lands, Prospect (Report to DBL Property Pty Ltd).

² MDCA 2018. *Prospect South Planning Proposal. Historic (European) Heritage Assessment* (Report to the Office of Strategic Lands).

³ Except part of Lot 18 DP802753 which is within Cumberland LGA.

⁴ The relevant lot numbers comprising the subject land are OSL: Lot 3/DP1152914; Lots 10-15/DP448744; Lot 18/DP802723; Lots 24 & 26/DP181210. RMS Lot 25/DP181210. Evenden: Lots A & C/DP374323; Lot D/DP374324. Siddique/Sahid: Lots 10 & 11/DP801209. Reservoir Developments Pty Ltd Lot 10/DP374325. RMS: Lot 17 DP802753.



Figure 4. Rezoning would not of itself impact Aboriginal heritage items that may occur within the subject land, but would facilitate future development proposals. The current assessment has therefore sought to identify the extent of any Aboriginal heritage items within the subject land as a basis for determining any constraints and opportunities with respect to future development.



Figure 1. The general location of the subject land (red shading). [Maps 2017]

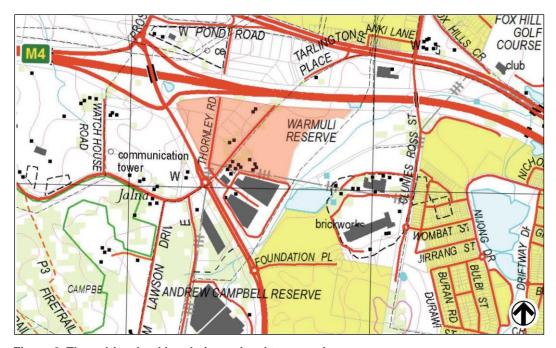


Figure 2. The subject land in relation to local topography.

[Prospect 1:25,000 topographic map]





Figure 3. Aerial view of the subject lands.



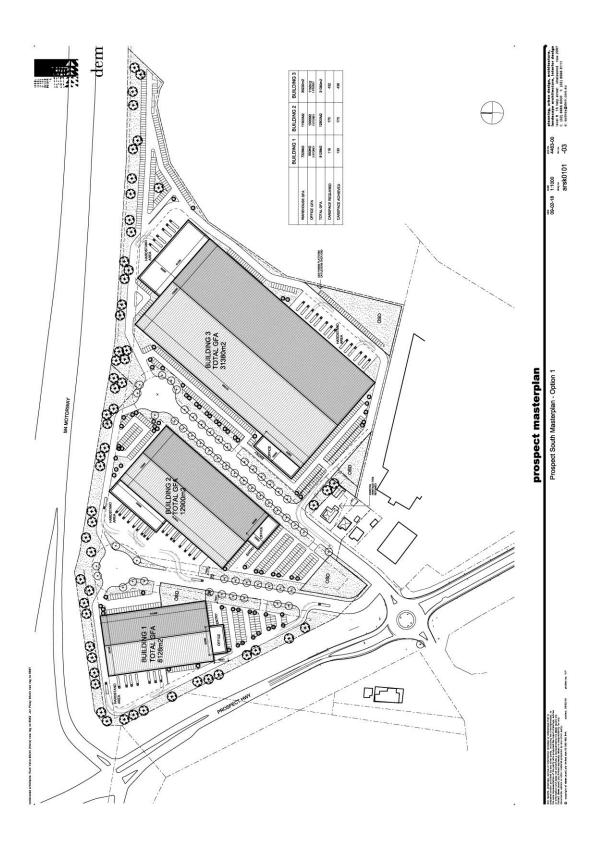


Figure 4. Initial Concept Plan for Industrial Rezoning of the subject land.

[Office of Strategic Lands].



Aboriginal Community Consultation

For the purposes of the current Aboriginal Heritage Assessment, consultation was undertaken with the Deerubbin Local Aboriginal Land Council (DLALC), who have a statutory responsibility "to promote the protection of Aboriginal culture and the heritage of Aboriginal persons" within their boundaries, which includes the current subject land. A representative of the DLALC (Steve Randall) participated in a site inspection on 3 October 2017. The DLALC then provided a letter outlining their views on the subject land. As shown in **Attachment 2**, the DLALC has no specific concerns regarding rezoning of the subject land, noting the extensive disturbance that is evident across the property.

Environmental Context

The subject land is situated on the central Cumberland Plain which is characterised by low undulating hills dissected by numerous watercourses with shallow valleys and relatively large watersheds fed by semi-permanent and ephemeral streams. The subject land sits within the upper reaches of the Parramatta Creek catchment, at the headwaters of Girraween Creek, which drains the land and flows to the northeast into Toongabbie Creek. The headwaters of Blacktown Creek, which also flows into Toongabbie Creek are located over a low rise about a kilometre west of the subject land. Immediately south of the subject land are Prospect Hill and an unnamed hill containing the Greystanes trig, south of which is the Georges River catchment with water draining to the southeast and eventually into Botany Bay.

Topographically the subject land is in an unremarkable location on relatively flat ground to the west of Girraween Creek, which is likely to have been a semi-permanent source of freshwater, with permanent flow about a kilometre or more downstream from the subject land. This creek is fed by a small unnamed and partially channelised drainage line flowing east across the subject land and visible as an incised channel to the east of Reservoir Road.

The subject land is underlain by Bringelly Shale bedrock of the Triassic Wianamatta Group. A large volcanic (igneous) intrusion known as Prospect Hill is present immediately south of the subject land. This hill may have included basalt or dolerite from which ground stone axes could have been manufactured though there is no archaeological or historical evidence that this occurred. The shale bedrock in and around the subject land does not contain stone suitable for artefact manufacture and

⁶ Clark, N.R. & Jones, D.C. (eds). 1991. *Penrith 1:100,000 Geological Sheet 9030* (New South Wales Geological Survey, Sydney).

⁵ Aboriginal Land Rights Act 1983, s52(1)(m).

⁷ Jo McDonald Cultural Heritage Management Pty Ltd 2002. *Archaeological Survey for Aboriginal Heritage Sites at the Former CSIRO Animal Research Laboratory, Prospect NSW* (Report prepared for Rose Consulting Group on behalf of Stockland Constructors Pty Ltd).



the closest known sources of fine grained cryptocrystalline rocks suitable for stone artefact manufacture, such as silcrete or quartz are located some distance to the west.

Soils within the subject land (and immediately adjacent areas) are described as the Blacktown Soil Landscape which is characterised in contexts such as the subject land by up to 30cm of friable brownish black loam (A1 horizon) and up to 20cm of hard setting brown clay loam (A2) over clay subsoil (Bannerman & Hazelton 1990).8 These soils are residual soils formed by the in situ weathering of the parent material (in this case shale bedrock). Archaeological deposits in these soils are likely to be restricted to the A horizon and are vulnerable to natural erosion and historical disturbance. Both of these factors can easily remove or significantly disturb any archaeological deposits located within them. Potentially, the eastern end of the subject land is characterised by

fluvial sediments of the South Creek Soil Landscape which on the creek banks is often associated with up to 50cm of loose brown sandy loam (A1 Horizon) and up to 15cm of brown apedal clay loam on clay subsoil. There is no outcropping bedrock present within the subject land.

Vegetation in and around the subject land would have been Cumberland Plain Woodland characterised by mixed Grey Box (Eucalyptus moluccana), Forest Red Gum (Eucalyptus tereticornis) and Narrow-leaved Ironbark (Eucalyptus crebra) woodland with an understorey of grasses and shrubs.9 The subject land would have been typical of the surrounding area of creeks and forests, which would have supplied Aboriginal people with a range of foods and raw materials.

Historical Land Use

That the general vicinity of the subject land was used by Aboriginal people before the arrival of European is beyond question and the archaeological evidence of this use is discussed below. Despite a prevailing view to the contrary, Aboriginal people continued to live in and around growing colonial settlements well into the nineteenth century, though the nature of this existence varied across the Sydney region.¹⁰ Several studies of post-European contact Aboriginal history have been undertaken that consider the Prospect area and surrounds, but it is likely that more sources of information exist which are yet to be consulted.¹¹

Brook, J & Kohen, J. 1991. The Parramatta Native Institution and the Black Town: A History (New South Wales University Press; Kensington); Kohen, J. 1993. The Darug and their neighbours (Darug Link in association with Blacktown and District Historical Society; Blacktown); Flynn, M. 1997. Holroyd History and the Silent Boundary

⁸ Bannerman, S.M. & Hazelton, P.A. 1990. Soil Landscapes of the Penrith 1:100,000 Sheet (Soil Conservation Service of NSW, Sydney).

⁹ Benson, D. & Howell, J. 1995. Taken for Granted, The bushland of Sydney and its Suburbs. (Kangaroo Press;

¹⁰ Irish, P. 2017. Hidden In Plain View: The Aboriginal People of Coastal Sydney (NewSouth Publishing, Sydney).

¹¹ E.g.



The Prospect Hill area centred around Prospect and Girraween Creeks, was the site of some of the first land grants in the fledgling colony in 1791 and was the site of armed conflicts in the 1790s and early 1800s between Aboriginal people and European farmers, as well as a conciliation meeting to attempt to end the violence. This has been recognised in the addition of the Prospect Hill area to the State Heritage Register (see below). Also, several archaeological sites recorded on the southern side of Prospect Reservoir contained bottle glass worked by Aboriginal people indicate their ongoing presence in this area after the arrival of Europeans. The side of Prospect Reservoir contained bottle glass worked by Aboriginal people indicate their ongoing presence in this area after the arrival of Europeans.

Aboriginal people continued to use the area well into the nineteenth century. From the 1810s to early 1830s annual Aboriginal feasts were held in Parramatta by the colonial government for the various Aboriginal groups still living around Sydney and adjacent areas. In the lead up to one of the feasts in the early 1830s, James Hassall, then attending the Kings School, went on an excursion to an Aboriginal settlement near Prospect (the exact location was not specified). He noted that there were several hundred people camped with their various groups, and carrying out ritual combats. St Bartholomews Church, several hundred metres to the northwest of the subject land, continued to be used by Aboriginal people throughout the 19th century for baptisms and burials, which indicates that they were still passing through the area in his period.

There is no known evidence however to suggest that the specific area of the subject land was used as a major historical campsite, ceremonial area, mission or reserve or has more recent historical Aboriginal associations according to extensive Aboriginal community consultation undertaken by MDCA in relation to the 2013 Blacktown City Wide Aboriginal Heritage Study. There is currently no specific documented evidence known relating to the historical use of the subject land by Aboriginal people, though it may have been traversed by people accessing St Bartholomews Church.

The study area has been subject to large scale impacts since the arrival of Europeans in the area. The European history of the subject land is outlined in detail in the accompanying MDCA European heritage assessment report, but the following points are noted in relation to the potential survival of Aboriginal archaeological evidence with reference to **Figures 5-7**:

Project (Unpublished Research Report); MDCA 2013. Blacktown City Wide Aboriginal Heritage Study (Report to Blacktown City Council).

8

¹² Flynn 1997.

¹³ Goward, T. 2011, *Aboriginal Glass Artefacts of the Sydney Region* (Honours Thesis, Archaeology Department, University of Sydney); Irish, P. & Goward, T. 2012. "Where's the evidence? The archaeology of Sydney's Aboriginal history", *Archaeology in Oceania* 47:60-68.

¹⁴ Brook & Kohen 1991

¹⁵ Hassall, J. 1902. *In Old Australia: Records and Reminiscences from 1794* (R.S. Hews and Co, Brisbane):17-18.



- The Prospect area was the location for some of the earliest land grants of the fledgling colony in 1791, and the eastern area was within a 1799 land grant to John Kennedy. It is likely that part of the land was cleared in the early nineteenth century, but most impacts are likely to have been sustained in the late nineteenth and early twentieth centuries through the establishment and use of the Hick's Dairy and other agricultural uses.
- By the 1940s, aerial photography shows that the majority of the land had been cleared and
 was either under cultivation or used for grazing, and the internal roadways were both in use.
 Impacts to the natural soil horizons above Girraween Creek are already visible by this time
 (Figure 5).
- By the 1970s, a number of additional houses, sheds and other structures are present across
 the subject land, a trotting track has been created to the north of the dairy complex, the
 draining line has become significantly eroded, and powerlines have been installed to the
 immediate east of the subject land (Figure 6).
- By the 1990s, scraping or movement of earth on both sides of Girraween creek are evident, the M4 Motorway and associated earthworks has been completed, and the Boral quarry complex to the east has been constructed (**Figure 7**).
- Since that time, large scale levelling earthworks have been undertaken to establish the Americold facility to the south and erosion has increased along the minor drainage line (see Figure 3)



Figure 5. The subject land in relation to a 1943 aerial photograph.

[LPI Six Viewer]





Figure 6. The subject land in relation to a 1977 aerial photograph.

[Blacktown City Council]



Figure 7. The subject land in relation to a 1994 aerial photograph.

 $[WSP\ International\ 2007.\ Phase\ 1\ Environmental\ Audit,\ Reservoir\ Road,\ Prospect,\ NSW]$



The vast majority of the subject land appears to have been disturbed historically by one or more processes including tree clearance, ploughing, farm and residential building constructions, fencing, highway and embankment construction, minor and major earthworks. These historical and more recent impacts could be expected to have significantly disturbed the natural soil horizons across much if not all of the subject land.

Archaeological Context

For the current preliminary assessment, the Office of Environment and Heritage ('OEH') Aboriginal Heritage Information Management System ('the AHIMS Register') and Catalogue of Archaeological Reports was consulted. A search of the AHIMS Register of a 5km x 5km area centred on the subject land revealed that no Aboriginal sites have previously been registered within the subject land (see **Attachment 1**, see also **Figure 8**).¹⁶ A total of 39 Aboriginal sites have been previously recorded in this area, consisting mostly of surface scatters of one or more stone artefacts (79%) and areas of assessed archaeological potential (10%), several scarred trees, and Prospect Hill identified as an historically significant place (see **Table 1**).



Figure 8. Registered Aboriginal sites in proximity to the subject land.

[Red arrows show actual location of sites where registered location is incorrect].

¹⁶ Report generated by AHIMS Web Service on 12/10/2017 within MGA coordinates in Zone 56 E305000-310000 and N6254750-6259750. So as not to divulge specific site locations unnecessarily, only an overview copy of this search is provided in **Attachment 1**.



Table 1. Summary of site types in the AHIMS search area.

Site Type	No. of Sites	Percentage
Artefact Scatter/Isolated Find	31	79%
Potential Archaeological Deposit	4	10%
Scarred Tree and Artefact Scatter	2	5%
Scarred Tree	1	3%
Significant Site (Prospect Hill)	1	3%
Total	39	100%

A total of three Aboriginal sites are registered in the vicinity of the subject land, two of which appear to be immediately adjacent. However, as noted below, these are errors of recording, which have now been corrected on the AHIMS Register:

- Prospect Hill 6 (AHIMS #45-5-2549) is an area of Potential Archaeological Deposit approximately 200m x 100m in size which was identified in 1998 during an inspection along Girraween Creek. However, examination of the description and map in the original site record (Attachment 1) with reference to a contemporary aerial photograph (see Figure 7), show that this has been recorded in the incorrect position, and should in fact be located around 150m further to the south between a former dam and blackberry thicket (see Figure 8). The location has been corrected on the AHIMS Register to reflect this.
- Prospect Hill 5 (AHIMS #45-5-2548) consists of at least 10 silcrete artefacts exposed along a
 vehicular track and a further areas of assessed PAD within Sydney Water lands to the south of
 Reservoir Road to the west of Picrite Close. It does not extend further north into the subject
 land.
- Site REL1 (AHIMS #45-5-2891) consists of at least 8 flaked stone artefacts across a 200m x 40m area. The registered coordinate places the site immediately south of the subject land within the Reservoir Road corridor, however the original study which recorded the site shows it to be located around 200m southwest in the vicinity of AHIMS #45-5-2548 (and potentially part of the same site) as shown in **Figure 8.** A recent investigation documented as an addition to the site record shows that the site and any associated subsurface archaeological potential do not extend north towards the subject land.

In addition to the AHIMS Register search, updated online searches of several other repositories were undertaken on 27/9/17 to determine whether any Aboriginal sites or areas of potential have been identified within or adjacent to the subject land. The results of these searches can be summarised as follows:

 A search of the Australian Heritage Database (incorporating the Register of the National Estate) was undertaken for Aboriginal heritage items within the Blacktown Local

_

¹⁷ Ngara Consulting Pty Ltd 2003. *Archaeological Assessment of Aboriginal Heritage: Reservoir Entry Lands: Prospect* (Report to Conybeare Morrison).



Government Area. No items are listed for Aboriginal heritage values within or adjacent to the subject land.

• The NSW State Heritage Inventory (incorporating the NSW State Heritage Register) was searched for Aboriginal heritage items within the Blacktown Local Government Area. No items on either register within close proximity to the subject lands appear to be listed for their Aboriginal heritage values. However, to the south of the subject land within the former Holroyd Council, Prospect Hill is listed on the State Heritage Register (#01662) for its cultural and natural landscape significance, which includes the history of violent and conciliatory activities between Aboriginal people and the early European farmers in the area.

Local Archaeological Context

The subject land was previously investigated by MDCA as part of an initial due diligence assessment in 2007.¹⁸ That study involved a field survey which did not locate any items of Aboriginal heritage or archaeological potential, and concluded that the subject land was unlikely to retain any evidence of past Aboriginal use. In addition, a number of other studies have been undertaken over the past twenty years in and around the subject land. The most relevant of these are as follows:

- In the CSIRO lands to the east and south, two surveys in 1996 and 2002 resulted in the recording of two isolated stone artefacts (one of which was associated with an area of Potential Archaeological Deposit), a possible Aboriginal culturally modified (scarred) tree and three additional areas of Potential Archaeological Deposit.¹⁹ Test excavations of three of these areas revealed relatively to extremely low densities of stone artefacts attributable to high levels of erosion and historical disturbance.²⁰ The tree was considered unlikely to have been scarred by Aboriginal people.²¹
- Archaeological survey of the areas immediately south of the subject land (known as the "Northern Employment Lands") was undertaken in 1998. This resulted in the recording of three Aboriginal sites.²² The report on this survey is not currently available, but the pertinent sites (AHIMS #45-5-4548 & #45-5-2549) have been reviewed above.

13

¹⁸ MDCA 2007. *Due Diligence Study - Aboriginal Archaeology, Department of Planning Lands, Prospect* (Report to DBL Property Pty Ltd).

¹⁹ Jo McDonald CHM Pty Ltd 1996. *Archaeological survey for prehistoric sites at the CSIRO Sheep Laboratory, near Prospect, NSW* (Report prepared for Gunninah Environmental Consultants on behalf of Masterplan for CSIRO Australia); Jo McDonald Cultural Heritage Management Pty Ltd 2002. *Archaeological Survey for Aboriginal Heritage Sites at the Former CSIRO Animal Research Laboratory, Prospect NSW* (Report prepared for Rose Consulting Group on behalf of Stockland Constructors Pty Ltd).

²⁰ Jo McDonald CHM Pty Ltd 1997. *Archaeological test excavation of PAD1 at the CSIRO lan Clunies Ross Research Laboratory, Prospect, NSW* (Report prepared for CSIRO Australia Corporate Property Branch); ERM 2004. *Archaeological Salvage Excavation of CSIRO3 (PAD 3), Prospect* (Report to Boral Pty Ltd); ERM 2005. *Archaeological Test Excavation of CSIRO 4 (PAD 2), Prospect* (Report to Stockland Development).

²¹ Jo McDonald CHM Pty Ltd 1996:13.

²² EM Mitchell McCotter 1998. *Environment & Planning Report – Greystanes Estate*.



- In 2003 Ngara Consulting conducted an Aboriginal heritage survey and assessment in the Reservoir entry lands at Prospect (directly to the southwest of the current subject land), on behalf of Sydney Water. Four Aboriginal sites were located, one within the Sydney Water survey area (REL 1; AHIMS #45-5-2891 which has been considered above), and three to the west in the surrounding lands (REL 2, REL 3, REL 4). All four sites consisted of stone artefact scatters with the most common raw material being silcrete. Glass which had possibly been worked by Aboriginal people in the post-contact period was also noted at REL 3 as were a variety of European artefacts such as a pipe stem and coin. The northern portion of the Reservoir entry lands was found to be moderately archaeologically sensitive and it was recommended that this area should be conserved in conjunction with a stand of remnant Cumberland Plain woodland. Subsurface archaeological investigations were recommended if conservation was not possible, however as noted above, a more recent investigation has found that the northern extent of this area closest to the current subject land retains no subsurface archaeological potential.
- In 2010 MDCA assessed the site of the proposed Wet'n'Wild theme park, at the headwaters of Blacktown Creek around 500m west of the current subject land. The survey located two open campsites in disturbed contexts as well as an area of PAD, which was recommended for archaeological test excavation.²⁴ It is not clear whether these recommended excavations were subsequently undertaken prior to the construction of the theme park.
- MDCA also investigated the Huntingwood East Precinct, extending west from the Prospect Highway on the northern side of the M4 Motorway, for a proposed industrial redevelopment.²⁵ The vast majority of the subject land was found to be moderately to highly disturbed and was not considered likely to retain any extensive or intact Aboriginal cultural remains or archaeological potential. Those areas associated with the headwaters of Blacktown Creek were found to be highly disturbed and with no subsurface archaeological potential. One surface scatter of stone artefacts recorded near the creek in 1993 was not relocated in this survey and is assumed to have been destroyed or be currently overgrown.

Although a large number of archaeological surveys have been conducted in the local area, only limited subsurface excavations have occurred. The most relevant of these is the test/salvage program at the Greystanes residential lands conducted by Jo McDonald Cultural Heritage

14

²³ Ngara Consulting Pty Ltd 2003. *Archaeological Assessment of Aboriginal Heritage: Reservoir Entry Lands: Prospect* (Report to Conybeare Morrison).

²⁴ MDCA 2010. *Aboriginal Heritage Assessment Report. Wet'n'Wild Sydney Theme Park, Reservoir Road, Prospect, NSW* (Report to JBA Planning on behalf of Prospect Aquatic Investments Pty Ltd).

²⁵ MDCA 2007. *Cultural Heritage Survey and Assessment Report, Huntingwood East Precinct, Huntingwood, NSW* (Report to DBL Property Pty Ltd).



Management (2004) to the southeast of the current subject land. ²⁶ This excavation was of part of the large site complex (AHIMS #45-5-2547) that was recorded by ERM in 1998. The testing and salvage excavation of 196 1x1m pits yielded over 5,000 stone artefacts. The highest artefact densities were in a flat area between the hill slope and creek, with the highest density square yielding 240 artefacts. The assemblage was found to have a higher than average percentage of tools for the Cumberland Plain, and contain a large variety of raw material types. The excavation is interesting in considering the current subject land, as a high density of artefacts was recovered from a relatively flat area of PAD adjacent to a first order stream.

Predictive Modeling

The distribution of Aboriginal sites in the Sydney region is strongly related to bedrock geology and local topographic features, including elevation and the presence of water resources. In general, the region appears to most commonly manifest archaeological evidence as stone artefacts in open and subsurface contexts. The absence of sandstone in the immediate subject land precludes the presence of axe grinding groove or shelter sites. Modelling of site distribution in the region also suggests that the location and density/complexity of archaeological evidence is related to proximity to reliable water sources and a preference for certain types of landforms such as alluvial flats, terraces, and lower slopes.

The subject land is situated on relatively flat land above the headwaters of a minor creekline and has undergone extensive historical disturbance. Investigations in the local and broader area have shown that such locations are unlikely to contain *extensive* or *intact* archaeological evidence of past Aboriginal. On the basis of landform, geology and regional archaeological context, the following types of archaeological evidence may be anticipated:

- Open campsites are stone artefact scatters and may occur almost anywhere that Aboriginal
 people lived and travelled in the past. The cultural activity represented by these sites may be
 associated with hunting or gathering activities, domestic camps, or the manufacture and
 maintenance of stone tools. Within the subject land, these are unlikely to be in undisturbed
 contexts.
- Isolated artefacts can occur without any associated evidence for Aboriginal activity or occupation. Isolated finds can occur anywhere in the landscape and may represent the random loss, deliberate discard or abandonment of artefacts, or the remains of dispersed artefact scatters. This may also include manuports which are items consisting of raw materials of stone that do not naturally occur within the soil profiles of a given region. Transported onto a site by

-

²⁶ Jo McDonald Cultural Heritage Management Pty Ltd 2004. *Archaeological salvage excavations at Site PH2+3, Greystanes Estate, NSW* (Report to Delfin Lend Lease).



Aboriginal people from sources elsewhere, these items will have subsequently been discarded before use as flaked or ground stone tools.

- Scarred trees are the result of bark and/or wood removal for the purpose of manufacturing shelters, canoes and shields. Evidence for tree scarification is generally likely to be observed on large and mature trees endemic to the region (depending upon the species) either as isolated trees, remnant stands or continuous forest. Unless the tree is at least 150 years old and/or the scar at least 100 years old, scarring is unlikely to be of Aboriginal origin. It is unlikely that such trees remain within the subject land given the land use history of the site.
- <u>Historical Aboriginal places</u> could potentially be present within the subject land, however as
 outlined above, there is no evidence that the subject land was a major focus of ongoing
 Aboriginal occupation throughout the nineteenth century, and it is also likely to have been
 partially or completely disturbed by more recent land use.

Site Visit

An archaeological inspection of the subject land was undertaken in fine weather on Tuesday 3 October 2017 by MDCA Principal Consultant Paul Irish in conjunction with Steve Randall of the Deerubbin Local Aboriginal Land Council. The survey made similar observations to those previously in the 2007 site inspection, as discussed below. The entirety of the accessible portions of the subject land were inspected and it was adequately characterised despite general low surface exposure. This was possible due to both the evident disturbance throughout the subject land as well as regular small exposures in grass cover and eroded drainage lines, most of which showed shallow eroded topsoils, exposed subsoils or fill and further evidence of disturbance.

The area to the west of Thornley Road has been impacted by the construction of the M4 Motorway and Prospect Highway offramp, which has changed drainage flow across this area, leading to the proliferation of blackberry at the northern end. The majority of the area is grassed paddock completely cleared of all original timber, and is currently not in use (**Figure 9**). There is little surface visibility but the area was formerly used for crops or market gardening.

Between Thornley Road and Reservoir Road is a largely disturbed area of ground that currently contains a heavy vehicle and container storage business at its northern end (**Figure 10**). South of this is the heavily overgrown channelised course of a minor drainage line which drains east across the subject land (**Figure 11**). The remainder of this area contains disturbed ground and the remains of former hard stand areas and structures, as well as a stand of regrowth timber at its southern end. These areas were intensively used from at least the 1940s as reviewed above. Some areas showed good surface exposure which demonstrated both the lack of original topsoil and Aboriginal artefacts in this area (**Figure 12**).



East of Reservoir Road at the southern end is the site of the former Hicks Dairy, now visible only as the heritage listed Bridestowe House and some adjacent mid-twentieth century sheds. This area is now in used as a storage and washing area for refrigerated trucks (**Figure 13**) and is completely disturbed. North and east of this area is an overgrown paddock which was formerly market garden and later a trotting track and horse dressage area with sand base (**Figure 14**). Small exposures show a lack of original topsoil in this area, most clearly visible in the scoured sections of a highly eroded minor east flowing drainage line which bisects this area (**Figure 15**). Exposures here and further east and outside of the subject land, demonstrate that this area is devoid of original topsoil horizons, with regular exposures of clay subsoil. Cobble gabions have been placed at regular intervals along the drainage line to control flow, and several of these cobbles are strewn across the paddock downslope and into the Girraween Creek corridor (**Figure 16**). These are recently introduced cobbles and do not indicate a potential stone artefact raw material present on the site.

North of the drainage line is a hillslope, one of the only sections of original topography within the subject land, which has been largely cleared, and retains several living and dead ironbarks and grey gums (**Figure 17**). None of these contained scars of possible Aboriginal cultural origin. The north-eastern corner of the subject land has been disturbed through the installation of high voltage powerlines, a gas pipeline and the embankments of the M4 motorway (Figure 18).



Figure 9. View northwest from Thornley Road over former croplands.





Figure 10. Truck and container storage area west of Reservoir Road adjacent to the M4 corridor. View south-west.



Figure 11. Channelised and overgrown drainage line between Thornley Road and Reservoir Road. View east.



Figure 12. Area of surface exposure in the central portion between Thornley Road and Reservoir Road. View west.





Figure 13. Truck parking and container storage area. View south-west.



Figure 14. Former dressage area and market garden east of Reservoir Road. View south.



Figure 15. Section through eroded drainage line east of Reservoir Road, showing grass on clay subsoil.





Figure 16. Cobble gabion in eroded drainage line east of Reservoir Road. View west.



Figure 17. Mature trees among eroded and disturbed ground in the central northern portion of the subject land. View south-east.



Figure 18. Power line and gas pipeline easements in the north-eastern corner of the subject land. View east.



Discussion and Conclusions

The current assessment has involved a consideration of the environmental, historical and archaeological context of the subject land, and the results of field inspections in 2007 and 2017, to determine whether any further Aboriginal heritage investigations are warranted in relation to the current proposed rezoning. The subject land has been historically impacted by a number of activities and does not retain any areas of subsurface archaeological potential. No Aboriginal archaeological sites or areas of Aboriginal archaeological sensitivity or potential were located within the subject land.

In conclusion, the subject land has been found to contain no evidence of past Aboriginal use, and very low likelihood for surviving deposits of Aboriginal stone artefacts. Based on information provided in this report addressing BCC requirements for Aboriginal heritage, we therefore conclude that the subject site is suitable for new urban development, and we understand that this will be in the form of new industrial development. In developing plans for the site, no further Aboriginal archaeological investigations are considered warranted within the subject land, and no further actions are required except those recommended below.



Recommendations

The following recommendations are based upon:

- the legal requirements and automatic statutory protection provided to items of Aboriginal heritage under the terms of the *National Parks and Wildlife Act 1974* (as amended), where it is an offence to knowingly or unknowingly harm an Aboriginal object;
- the results of the current study which are documented in this report and;
- the views and concerns expressed by the Deerubbin Local Aboriginal Land Council as outlined in this report and in the appended correspondence.

It is recommended that:

- 1. This report is considered sufficient for the purpose of the current rezoning proposal and any future development proposals within the subject land.
- 2. There are no further Aboriginal archaeological management requirements in relation to the current planning proposal for the subject land.
- 3. One copy of this report should be forwarded to the Deerubbin Local Aboriginal Land Council.
- 4. One copy of this report should be forwarded to:

The Manager Aboriginal Heritage Information Management System NSW Office of Environment and Heritage P.O. Box 1967 Hurstville NSW 2770



Attachment 1

AHIMS Online Search Records and Site Cards



AHIMS Web Services (AWS) Search Result

Purchase Order/Reference : South Prospect

Client Service ID: 306550

Date: 12 October 2017

Mary Dallas Consulting Archaeologists

PO Box A281

Arncliffe New South Wales 2205

Attention: Paul Irish

Email: paulirish@optusnet.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 305000 - 310000, Northings : 6254750 - 6259750 with a Buffer of 0 meters, conducted by Paul Irish on 12 October 2017.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

39 Aboriginal sites are recorded in or near the above location.

0 Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it.
 Aboriginal places gazetted after 2001 are available on the NSW Government Gazette
 (http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are
 recorded as grid references and it is important to note that there may be errors or omissions in these
 recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.

ABN 30 841 387 271

Email: ahims@environment.nsw.gov.au

Web: www.environment.nsw.gov.au

• This search can form part of your due diligence and remains valid for 12 months.





45-5-2

New Recording [

information								
		SITI	E ID	ENTIFIC.	ATION			
Site name	Site REL1						VS Site nber	45-5-2891
Owner/manager	Sydney Water Corporation							
Owner Address	115 - 123 E	Bathurst Stree	et, S	ydney NS\	N 2000			
a distribution of the constant				OCATION	J			
Location	Reservoir I	Entry Lands,						
How to get to the site	The Site al	outts the east	ern s	side of The	Avenue -	off Rese	ervoir Road.	
1:250,000 map name						NPWS I	map code	
AMG Zone		AMG Eastin	g	307200		AMG N	orthing	6256850
Method for grid reference	Topograph	ic map		p scale (if thod = p)	1:25,00	0	Map name	Prospect 9030-2N Third Edition
NPWS District	Western S	ydney	<u> </u>			NPWS	Zone	Sydney Zone
Portion no.						Parish		
CAN TO PERSONAL PARENT		SI	ΤĒΙ	DESCRIP	TION			
Site type(s)	Open site					Site typ (NPWS	e code use only)	
Description of site and contents	Site Size -	200 m x 40 r	n					
CHECKLIST: eg. length, width, depth, height of site,	SITE CON	TENTS						
shelter, deposit, structure, element eg. tree scar, grooves in rock.	Stone raw	materials - T	wo c	hert artefac	ts and siz	x silcrete	artefacts.	
DEPOSIT: colour, texture, estimated depth, stratigraphy,	Observed debitage.	artefact types	s - Fl	akes, utilise	d flakes,	retouche	ed flake, flaked	d piece and micro
contents-shell, bone, stone, charcoal, density &	Aretfact size - The maximum length of artefacts ranged from 7 mm to 37 mm in length.							
distribution of these, stone types, artefact types. ART: area of decorated	Density of visible artefactual material - Low							
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								
	!							

Version: June 1998 Data entered by: Date entered:





Aboriginal Sites Register of NSW NPWS, PO Box 1967, Hurstville NSW 2220 Standard Site Recording Form

Site RELI

SITE ENVIRONMENT								
Land form	Lower	slopes		Aspect	Southe		Slope	Gently stoping
					(for mo	St		
Mark position of the site					, p.u,		1	
	ŀ							
					*			
					_			
Local rock type	Bringel	ly shale		Land use/effe	ect	<u></u>	nt allotment	
Distance from drinking water	Site sp drainag	ans both sides o ge line	f	Source			Minor tributary of Girraween Creek	
Resource zone (eg. estuarine, river, forest)	Open f	orest		Vegetation		Cumi	perland Plair	n Woodland
Edible plants	N/A				nunal resources N/A			
Other exploitable	-							
resources (eg. ochre) Are there other sites in	Yes	Are they in the	Yes	Other site typ	es	Open	sites / artef	fact scatters including
the locality	100	Sites Register		include			contact Site	•
			ITT BAAR	AGEMENT	and the second			
Site condition	Disturb					erosion	and heavy	vehicular traffic.
	Distarb	eu .	Alcasa	nected by sin	oct wasn	Ciosioi	rand neavy	vernedial traine.
Management								s does not afford Site
recommendations								conservation of Site the folloiwng was
		mended:	aleu aleas	assesseu as i	laving in	ouerate	Sensitivity,	the following was
	* Detailed secondary investigations involving sub-surface testing or probing.							
Have artefacts been	No			When		·····		
removed from site	110							
By whom				Deposite				
Consent applied for				Consent				Warner 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Date of issue				Consent	number			
		SITE INSF	ECTION	AND REC	ORDIN	G		
Reason for investigation		•	survey of I	Reservoir Ent	ry Lands,	Prospe	ect on behal	f of Sydney Water
	Corpor	ation.						
Wass land About-in-	<u> </u>	1	Nomes	14	0-1-			
Were local Aborigines contacted or present for	$\cdot =$	Contacted [Names and addresses	Mr. Colin		11 Blac	ktown NSV	V 2148
the recording	Dres	tacted and						,
	Con	tacted but		Miss Lea			villa NG\A/	2153
	not p	present	DCAG, PO Box 36 Kellyville NSW 2153					
ł								
le the cite important to	Voc					•		
Is the site important to local Aborigines	Yes							
Verbal/written reference	Archae	ological Assessi	ment of Abo	original Herita	ge:	ASR	report C	C-

Version: June 1998

Data entered by:

Date entered:





Aboriginal Sites Register of NSW NPWS, PO Box 1967, Hurstville NSW 2220 Standard Site Recording Form

sources	Reservoir Entry Lands, Prospect (Sept 2003). Prepared by AD Knight and JL Kohen	number(s)	C-
Photographs taken	Yes	No of Photos attached	Included in Report
Site recorded by	Andrew Knight	Date of recording	7 May, 2003
Address/institution	Ngara Consulting Pty Ltd 101 Brooklyn Road, BROOKLYN NSW 2083		

Version: June 1998

Data entered by:

Date entered:





Aboriginal Site Impact Recording Form

AHIMS Registrar

April 2012 OEH 2012/0558

PO Box 1967, Hurstville 2220 NSW

1 This form must be completed following impacts to AHIMS sites that are:

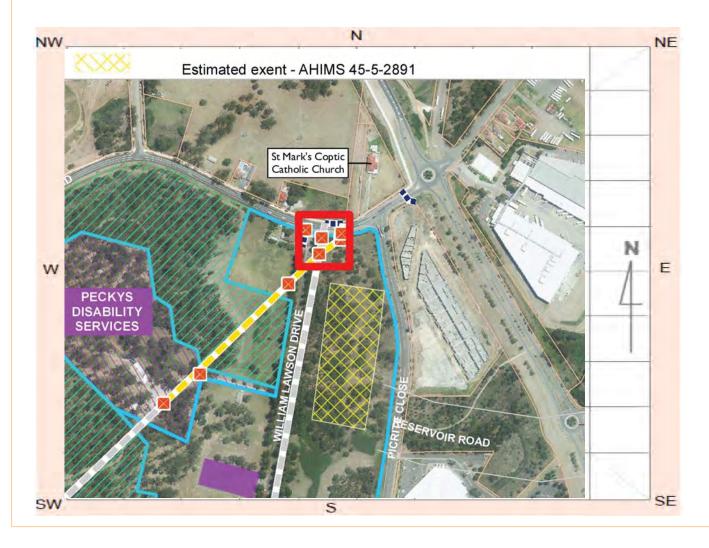
- a) a result of test excavation carried out in accordance with the Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW
- b) authorised by an Aboriginal Heritage Impact Permit (AHIP) issued by the Office of Environment and Heritage (OEH)
- c) undertaken for the purpose 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).
- 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.
- 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: 45-5-2891					
Site impact authorisation (select one)	Reference numbers, dates				
Archaeological Code (The impacts to this site were the result of test excavation carried out in accordance with the Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW.)	Date OEH was notified (under requirement 15c of the Code): OEH Regional office notified:				
AHIP (The impacts to this site were authorised by an AHIP.)	AHIP number: Date issued/signed: AHIMS permit ID/number:				
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: Date Director General's Requirements issued:				
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.)	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.)					
Geographic location					
Site name: Site REL 1					
Easting: 307206 Northing: 625	Coordinates must be in GDA (MGA)				
Map sheet:					
Zone: 56 Location method:	Differential GPS				

Primary reco		
(The person responsib	ble for the completion and submission of this form)	
Title	Surname	First name
Mr Cost	tello	Andrew
Organisation:	Jacobs	
Address:	100 Christie Street, St Leonards	
,		
Phone: 9928	82269 E-mail: andrew.costello	@jacobs.com
Date recorded:	06/02/2015 Fax:	
Site informat	i a a	
Site informat	ion	
Open/closed sit	te: Open	
Features:		
1. Abo	original ceremony and dreaming	11. Habitation structure
2. Abo	original resource and gathering	12. Hearth
3. Art	\vdash	13. Non-human bone and organic material
—	efact	14. Ochre quarry
5. Buris	· H	15. Potential archaeological deposit
\vdash	remonial ring	16. Stone quarry17. Shell
\vdash	nflict	18. Stone arrangement
\vdash	th mound	19. Modified tree
	n trap	20. Water hole
10. Grin	nding groove	ZO. Water Hole
Site condition	n	
Written description of the	the condition of the AHIMS site (including relevant feature	es) following the authorised impact of the site
An area (see fig	ure) was inspected and surveyed to determin	ne whether the site extended into this area; no artefacts
, , ,	•	orded site was inspected. On this basis, and as the area
surveyed was no	ot on the same landform and has been subject	ct to some ground disturbance, it is considered unlikely that
	into the surveyed area.	form with the site card to inform any future investigation of
the site.	is recommended that OETT include this ASIN	form with the site card to inform any future investigation of

Site 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.



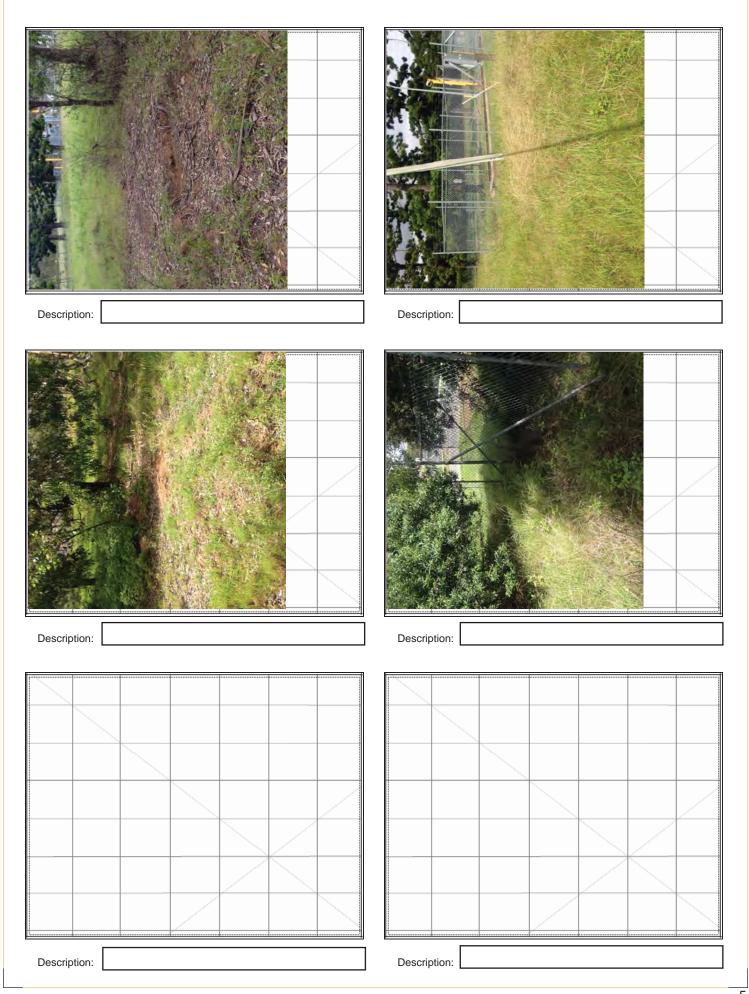
Methodology and resultsSummary of the methodology and results of the activity or works undertaken through the authorised impacts, as relevant to the AHIMS site

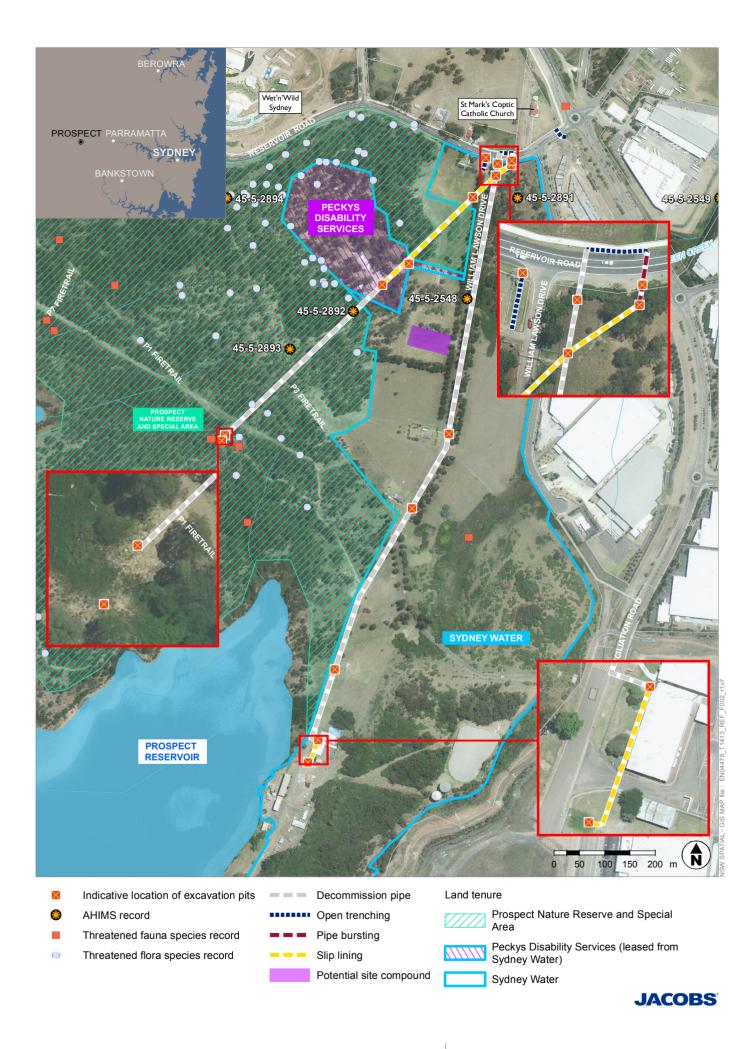
The area was subject to pedestrian survey by a qualified and experienced archaeologist, covering the entire area, and giving particular attention to areas of higher ground surface visibility and/or exposure.

Management recommendations Summary of any management recommendations for the AHIMS site
It is recommended that this ASIR form be appended to the AHIMS site card to inform future investigation of the site, and to confirm that the inspected area is not part of this site.
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.
No change to significance.
Additional comments
No geographical information (eg coordinates) has been provided with this ASIR form, as no change to the site coordinates has occurred, and the site location was not verified beyond the inspected area.

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.







National Parks and Wildlife Service
Box 1967, Hurstville NSW 2220. Tel: (02) 9585 6444
Standard Site Recording Form Revised 5/88

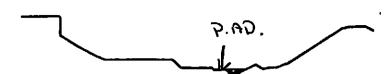


NPWS Code				
1:250,000 map sheet:	HEAD OFFICE USE ONLY:			
250K 250K	NPWS Site no: 45-5-2849			
AMG Grid reference 307600 mE 6256850 mi	Site types:			
,	Accessioned by: Date:			
Scale of map used for grid reference [V] 25K, 50K [] 100K [] 250K Please use largest scale available (preferred)	Data entered by: Date: 241760			
(25K) 50K, 100K map name: Prospect	Owner/Manager: Borol Andress: Greystance Rd Greystances			
Site name: Prospect Hill 6. Locality/property name. Adjacent	Address: Greystanes Rd Greystanes to Boral Prospect Quary			
NPWS District: Sydney Region: Sydney				
Reason for investigation Boral are confusing out on asset at Greystanes & one seeking to identify an their land.	review of their property chaeological resources on			
Portion no: Parish:				
F	Photos taken?			
<u> </u>	low many attached?			
entry from Reservoir Rd. first quarry entry beside Prospect Leservoir entry. Other sites in locality? Yes Site Types include: Offen Camp Site				
Are sites in NPWS Register? autofact scatter	Scarred trees.			
Have artefacts been removed from site? • When? By whom? Deposited where?				
is site important to local Aborigines? He Give contact(s) name(s) + address(es) Kebin Cavanggah. Decrubbin LALC Colin Gale Daning Tribal Confortion. Contacted for this recording? 40. (Attach additional information separately) If not, why not?				
Verball/written reference sources (including full title of accompanying report) ERM Mitchell McCoffer (1998) Environment & florning Report - Greystanes Estate Catalogue # ERM Mitchell McCoffer (1998) Archaeological Survey - Supplementary Report				
Checklist: Condition of site: P.A.D. potential surface visibility, damage/disturbance/ threat to site	good condition.			
Recommendations for management & protection (attach separate sheet if necessary	y).			
sub surface testing prior to any excavation.				
Site recorded by: A Besant . A Nightingale Date: Address institution: ERM Mitchell Mccotter				

SITE POSITION & ENVIRONMENT

OFFICE USE ONLY: NPWS site no:

- 1. Land form a. beach/hill slope/ridge top, etc: drainage line
- d. mark on diagram provided or on your own sketch the position of the site:



- b. site aspect: NHL . c. slope: less than
- e. Describe briefly:

an area of potential buried surface within a very highly disturbed area.

- 1. Local rock type: sandstone /shale g. Land use/effect: quarry /industrial
- 2. Distance from drinking water: \......

Source: check unnamed.

- 3. Resource Zone associated with site (estuarine, riverine, forest etc): Local
- 4. Vegetation: Capuatina.
- 5. Edible plants noted: none
- 6. Faunal resources (include shellfish): -
- 7. Other exploitable resources (river pebbles, othre, etc): basalt from Prospect Hill.

Site type:

GAG

CHECKLIST TO HELP: length, width, depth, height of site, shalter, 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

OUARRIES, rock type, debris, recognisable artelacts, 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

DESCRIPTION OF SITE & CONTENTS.

Note state of preservation of site & contents. Do NOT dig, disturb, damage site or contents.

roads and Prospect Huy.

Fracts. - Le Boral gote
on Repervoir rd.

PAD

PAD

PAD

Jeon long × 100 munde.

dense grass cover

Boral

Bricks

Bricks

Pad

Ackberry.

An area of potential deposit, buried surface within an environment which is highly disturbed. The site is located on the north side of Prospect Hill a source of Bacalt and potentially unique plants (see report)

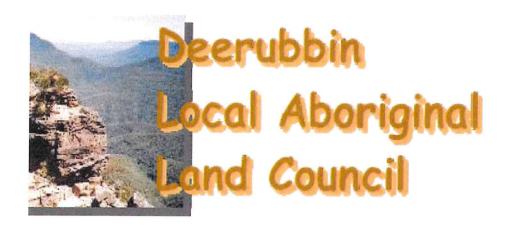
Attach sketches etc. eg. plan & section of shelter, show relation between site contents, indicate north, show scale.

Attach annotated photos (stereo where useful) showing scale, particularly for art sites.



Attachment 2

Aboriginal Community Correspondence



Level 1, Suite3
291-295 High Street
PENRITH NSW 2750
PO Box 40
PENRITH BC
NSW 2751 AUSTRALIA

ABN: 41 303 129 586 T: (02) 4724 5600 F: (02) 4722 9713

E: reception@deerubbin.org.au W: http://www.deerubbin.org.au

NSW Department of Planning & Environment

Level 27, 320 Pitt Street

SYDNEY NSW 2000

Our Ref: 2873

26 October 2017

PROTECTION OF ABORIGINAL CULTURAL HERITAGE

Prospect South Rezoning

Prospect

Attention: Philip Clifford, Project Manager Divestments, Office of Strategic Lands

A representative of Deerubbin Local Aboriginal Land Council inspected the South Prospect rezoning lands Tuesday, 3rd October 2017. An Aboriginal cultural heritage assessment was undertaken to evaluate the likely impact future developments has on the cultural heritage of the land.

The ground surface of these lands has been highly disturbed from past land use. No Aboriginal cultural materials (in the form of stone artefacts, for example) were found during the assessment.

Deerubbin Local Aboriginal Land Council therefore, has no objection to the future developments of the Prospect South rezoning, Prospect on the grounds of Aboriginal cultural heritage.

Yours Faithfully,

Steven Randall

& Roundall

(Aboriginal Cultural Heritage Officer)

C.c. Miranda Firman - Office of Environment & Heritage

C.c. Paul Irish - Mary Dallas Consulting Archaeologists