

Catalyst Project Consulting

M

Indoor Stadium, Hillsborough

LGA: Lake Macquarie

Aboriginal Heritage Due Diligence Assessment

15 July 2020

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Date: 15 July 2020

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EXECUTIVE SUMMARY

McCardle Cultural Heritage Pty Ltd (MCH) was engaged by Catalyst Project Consulting on behalf of the Basketball Association of Newcastle Ltd to undertake an Archaeological Due Diligence Assessment for the proposed new indoor stadium located at 62 & 62a Hillsborough Road, Hillsborough and 109-117 Waratah Avenue (Lots 11 & 12 DP 879281 and Lots 6, 7 & 8 DP 9594), Charlestown NSW. The new indoor facility will comprise 10 full size courts, including show court seating for 4000 people and the new facility would need to be compliant with the International Basketball Federation (FIBA) player and spectator standards.

The assessment has been undertaken to meet the Heritage NSW, Department of Premier & Cabinet, Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010), the BCD Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011), the DECCW Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b) and the brief.

The project area is situated in the Lake Macquarie area on the Permian Newcastle Coal Measures geological formation consisting of conglomerate, sandstone, tuff, shale and coal with the majority of the project consisting of the Gateshead Soil Landscape and a section in the south on the Cockle Creek Soil Landscape. The geomorphology of the area is complex and consists of an upper soil Horizon A and underlying B (referred to as duplex soils). Unit A and Unit B are interpreted as being Holocene and Pleistocene in age respectively. Within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons. Within the A horizon the lowermost (in terms of vertical positioning) artefact assemblages tend to contain artefacts that are typically attributed to the mid-Holocene, as characterised by an increase in the number of backed artefacts. In terms of fresh water availability, the project area contains one 1st order drainage line in the south east that flows into Winding Creek (3rd order) that flows through the southern part of the project area. Thus, the southern portion of the project area may have provided fresh water during times of heavy rain. In relation to land uses and their impacts to the landscape and any cultural materials that may be present, European settlers extensively cleared the original native vegetation in the 1800's and since then the investigation area has been subject grazing and clearing has continued clearing through the north and centre of the project area with the southern portion appearing to remain relatively undisturbed.

A search of the AHIMS register has shown that 11 known Aboriginal sites are currently recorded within two kilometres of the project area and include five artefact sites, five grinding groove sites and one scar tree. Although site 38-2-0155 has coordinates that place the site in the project area, examination of the site card reveals that the coordinates are incorrect. Based on the site card map, plan and description, the site is located 210 metres north along an unnamed 1st order creek. There are no registered sites or Aboriginal Places within the project area. Additionally, the project area is not within a Sensitive Aboriginal Landscape as per the Lake Macquarie DCP and LEP and the project area is located over 200 metres from a known site. A review of both the regional and local archaeological assessments identified that artefact scatters and isolated finds are the most prominent site type followed by grinding grooves along reliable water sources. These assessments also identified that both landform and distance to water were important factors in past Aboriginal land use. Elevated landforms within 50 metres of reliable water appear to have been the most favoured. The higher the stream order (and more reliable water source) the higher the numbers of sites and site densities and both decrease with distance from the resource. A number of sites were also found on slopes; however, it is likely they were eroded down slope and not found in their original location. All sites were noted to have been disturbed through past landuses including but not limited to clearing, agricultural and pastoral activities, residential developments, utilities, infrastructure and

erosion. Based on the environmental and archaeological contexts it was predicted that was potential for low-density artefact scatters to occur within the project area within 50 metres of Winding Creek and represent hunting and gathering land use during times of heavy rain. There is also the potential for such sites to be impacted on through past land uses.

The project area, consisting of a disturbed northern section and a southern section of slopes and Winding Creek, the project area was divided into three survey units (SU) that were based on landform elements. SU1 included a disturbed landscape that had been previously cleared, constructed and maintained as a public reserve. Consisting a flat ground with fill/built up sections around the eastern side, fences also enclosed the reserve. Vegetation included grass cover and due to recent drought conditions and the use of the reserve, visibility was high at 45%. SU 2 included the slopes to the south and east of the public reserve. Vegetation included dense scrub with lantana which hindered visibility (5%) and resulted in an increase in exposures (erosion). SU 3 included Winding Creek and up to 10 metres both sides. Access was difficult due to the thick scrub and lantana as well as the slopes along its borders. Visibility was low (5%) and erosion moderate due to creek bank erosion.

The results of the survey did not identify any sites within the project area. As Winding Creek is a 3rd order creek and previous regional and local studies have identified that areas within 50 metres of such water sources are likely to have evidence of past Aboriginal land uses, this is identified as an area of potential archaeological potential. The PAD area included the length of Winding Creek in the project area and up to 20 meters in width that excludes moderate slopes that would not have been utilised for camping.

In view of the predictive modelling and the results obtained from the effective coverage, it is concluded that the survey provides a valid basis for determining the probable impacts of the proposal and formulating recommendations for the project. The survey results demonstrate the absence of Aboriginal objects within the project area but did identify a PAD. The results are consistent with those obtained from other studies in the local area. The results indicate a number of possible past Aboriginal land use within the project area;

- Limited Aboriginal occupation
- Limited visibility due to thick scrub
- Ground disturbances having disturbed or removed evidence

Considering general models of occupation for the locality, the results of this and local investigations, the locality may have been utilised by Aboriginal people. As the project area itself includes a 3rd order creek and associated resources, the project area is likely to have been utilised for low intensity usage such as transitory movement or hunting/gathering activities in close proximity to the creek.

As no sites were identified, there are no impacts on the known archaeological record. However, the results of the assessment indicate that the PAD may be impacted upon by the development and as the nature of the PAD remains unknown at this time, the impacts to the archaeological record remain unknown and the following recommendations are made:

- 1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974.
- 2) If the identified PAD will be impacted upon by any future development an archaeological subsurface investigation will be required in accordance with the Code of Practice for

Archaeological Investigations of Aboriginal Objects in NSW, the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010) and the OEH Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW.

GLOSSARY

Aboriginal Place: are locations that have been recognised by the Minister for Climate Change and the Environment (and gazetted under the *National Parks and Wildlife Act 1974*) as having special cultural significance to the Aboriginal community. An Aboriginal Place may or may not include archaeological materials.

Aboriginal Site: an Aboriginal site is the location of one or more Aboriginal archaeological objects, including flaked stone artefacts, midden shell, grinding grooves, archaeological deposits, scarred trees etc.

Artefact: any object that is physically modified by humans.

Artefact scatter: a collection of artefacts scattered across the surface of the ground (also referred to as open camp sites).

Assemblage: a collection of artefacts associated by a particular place or time, assumed generated by a single group of people, and can comprise different artefact types.

Backed artefact: a stone tool where the margin of a flake is retouched at a steep angle and that margin is opposite a sharp edge.

Background scatter: a term used to describe low density scatter of isolated finds that are distributed across the landscape without any obvious focal point.

Core: a chunk of stone from which flakes are removed and will have one or more negative flake scars but no positive flake scars. The core itself can be shaped into a tool or used as a source of flakes to be formed into tools.

Debitage: small pieces of stone debris that break off during the manufacturing of stone tools. These are usually considered waste and are the by-product of production (also referred to as flake piece).

Flake: any piece of stone struck off a core and has a number of characteristics including ring cracks showing where the hammer hit the core and a bulb of percussion. May be used as a tool with no further working, may be retouched or serve as a platform for further reduction.

Flaked piece/waste flake: an unmodified and unused flake, usually the by-product of tool manufacture or core preparation (also referred to asdebitage).

Harm: is defined as an act that may destroy, deface or damage an Aboriginal object or place. In relation to an object, this means the movement or removal of an object from the land in which it has been situated

In situ: archaeological items are said to be "in situ" when they are found in the location where they were last deposited.

Retouched flake: a flake that has been flaked again in a manner that modified the edge for the purpose of sharpening that edge.

Typology: the systematic organization of artefacts into types on the basis of shared attributes.

ACRONYMS

ACHA	Aboriginal Cultural Heritage Assessment
ACHMP	Aboriginal Cultural Heritage Management Plan
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit

AHIMS SITE ACRONYMS

ACD	Aboriginal ceremonial and dreaming
AFT	Artefact (stone, bone, shell, glass, ceramic and metal)
ARG	Aboriginal resource and gathering
ART	Art (pigment or engraving)
BOM	Non-human bone and organic material
BUR	Burial
CFT	Conflict site
CMR	Ceremonial ring (stone or earth)
ETM	Earth mound
FSH	Fish trap
GDG	Grinding groove
HAB	Habitation structure
HTH	Hearth
OCQ	Ochre quarry
PAD	Potential archaeological deposit.
SHL	Shell
STA	Stone arrangement
STQ	Stone quarry
TRE	Modified tree (carved or scarred)
WTR	Water hole

1 INTRODUCTION

1.1 INTRODUCTION

McCardle Cultural Heritage Pty Ltd (MCH) has been commissioned by Catalyst Project Consulting on behalf of the Basketball Association of Newcastle Ltd to undertake an Archaeological Due Diligence Assessment for the proposed new indoor stadium located at 62 & 62a Hillsborough Road, Hillsborough and 109-117 Waratah Avenue, Charlestown NSW. The assessment has been undertaken to meet the NSW Biodiversity and Conservation Division (BCD) formerly the Office of Environment and Heritage (OEH), Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010), the BCD Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011), the DECCW Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b) and the brief.

The purpose of a due diligence assessment is to assist proponents to exercise due diligence when carrying out activities that may harm Aboriginal objects or Aboriginal places and to determine whether that should apply for a consent to harm Aboriginal objects or Places through an Aboriginal Heritage Impact Assessment (AHIP). The purpose of this due diligence report is to demonstrate that all reasonable and practicable measures have been undertaken to prevent harm to any Aboriginal objects and/or place within the project area. As the project area is not within a Sensitive Aboriginal Landscape identified on the Lake Macquarie Development Control Plan (2014) and Local Environmental Plan (2014), and the project area is located over 200metres from a known site, consultation with the Aboriginal community is not required. This report has met the requirements and considered the relevant environmental and archaeological information, the project land condition, the nature of the proposed development activity and impacts, as well as preparing appropriate recommendations.

1.2 THE PROJECT AREA

The project area is located at 62 & 62a Hillsborough Road, Hillsborough and 109-117 Waratah Avenue, Charlestown. Including Lots 11 & 12 DP 879281 and Lots 6, 7 & 8 DP 9594, the location of the project area is shown in Figures 1.1 and 1.2.

Figure 1.1 Location of the project area

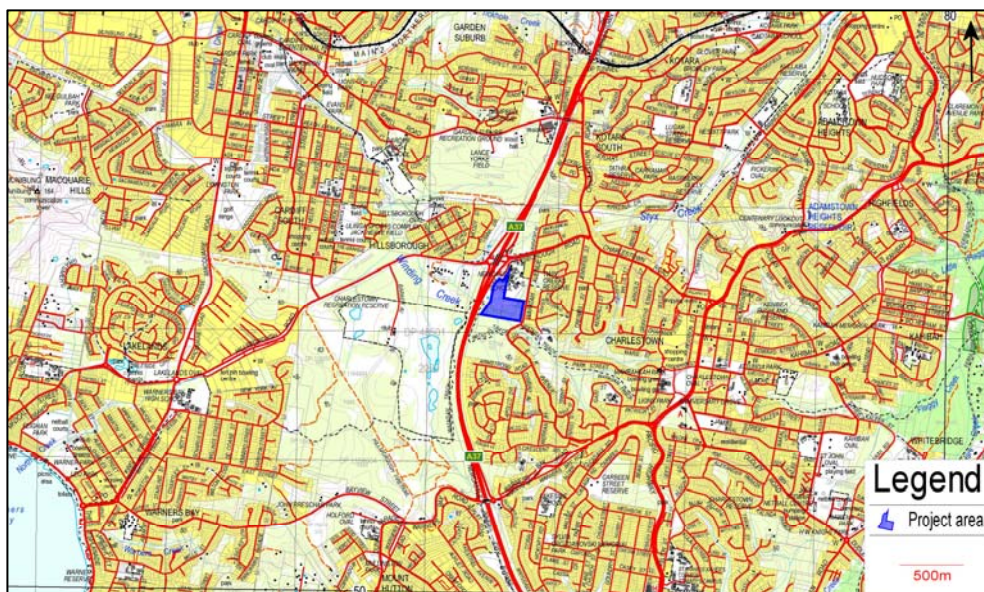


Figure 1.2 Aerial photograph of the project area (nearmap 2020)



1.3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

Basketball Association of Newcastle Ltd have recently acquired the site at 62 & 62a Hillsborough Road, Hillsborough and 109-117 Waratah Avenue, Charlestown NSW, to replace the existing facility in Broadmeadow. The new indoor facility will comprise 10 full size courts, including show court seating for 4000 people (Figure 1.3). This new facility would need to be compliant with the International Basketball Federation (FIBA) player and spectator standards. Any development or impacts occurring within the project area will have regard to and managed in accordance with the requirements and provisions of the National Parks and Wildlife Act 1974.

Figure 1.3 Proposed Plan



1.4 OBJECTIVES OF THE DUE DILIGENCE ASSESSMENT

The objectives and primary tasks of this due diligence assessment were to:

- Undertake a search of the BCD Aboriginal Heritage Management System (AHIMS) and other relative registers;
- Undertake preliminary research into the environmental and archaeological contexts of the project area;
- Develop a predictive model of site location for the project area;
- Undertake a field survey of the project area;
- Assess the potential impacts of the proposed development on any identified Aboriginal sites or potential archaeological deposits (PADs) identified within the project area;

- Assess the significance of any identified Aboriginal objects or sites identified within the project area;
- Complete and submit site cards to the BCD for any Aboriginal sites identified; and
- Provide appropriate recommendations.

1.5 LEGISLATIVE CONTEXT

The following overview of the legislative framework, is provided solely for information purposes for the client, and should not be interpreted as legal advice. MCH will not be liable for any actions taken by any person, body or group as a result of this general overview and MCH recommends that specific legal advice be obtained from a qualified legal practitioner prior to any action being taken as a result of the general summary below.

Land managers are required to consider the effects of their activities or proposed development on the environment under several pieces of legislation. Although there are a number of Acts and regulations protecting Aboriginal heritage, including places, sites and objects, within NSW, the three main ones include:

- National Parks and Wildlife Act (1974, as amended)
- National Parks and Wildlife Regulation (2009)
- Environmental Planning and Assessment Act (1979)

1.5.1 NATIONAL PARKS AND WILDLIFE ACT (1974, AS AMENDED)

The National Parks and Wildlife Act (1974), Amended 2010, is the primary legislation for the protection of Aboriginal cultural heritage in New South Wales. The NPW Act protects Aboriginal heritage (places, sites and objects) within NSW and the Protection of Aboriginal heritage is outlined in s86 of the Act, as follows:

- “A person must not harm or desecrate an object that the person knows is an Aboriginal object” s86(1)
- “A person must not harm an Aboriginal object” s86(2)
- “A person must not harm or desecrate an Aboriginal place” s86(4)

Penalties apply for harming an Aboriginal object, site or place. The penalty for knowingly harming an Aboriginal object (s86[1]) and/or an Aboriginal place (s86[4]) is up to \$550,000 for an individual and/or imprisonment for 2 years; and in the case of a corporation the penalty is up to \$1.1 million. The penalty for a strict liability offence (s86[2]) is up to \$110,000 for an individual and \$220,000 for a corporation.

Harm under the National Parks and Wildlife Act (1974, as amended) is defined as any act that; destroys defaces or damages the object, moves the object from the land on which it has been situated, causes or permits the object to be harmed. However, it is a defence from prosecution if the proponent can demonstrate that;

- 1) harm was authorised under an Aboriginal Heritage Impact Permit (AHIP) (and the permit was properly followed), or
- 2) the proponent exercised due diligence in respect to Aboriginal heritage.

The 'due diligence' defence (s87[2]), states that if a person or company has applied due diligence to determine that no Aboriginal object, site or place was likely to be harmed as a result of the activities proposed for the Project Area, then liability from prosecution under the NPW Act 1974 will be removed or mitigated if it later transpires that an Aboriginal object, site or place was harmed. If any Aboriginal objects are identified during the activity, then works should cease in that area and BCD notified (DECCW 2010:13). The due diligence defence does not allow for continuing harm.

The archaeological due diligence assessment and report has been carried out in compliance with the NSW DECCW 2010 Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW.

1.5.2 NATIONAL PARKS AND WILDLIFE REGULATION (2009)

The National Parks and Wildlife Regulation 2009 provides a framework for undertaking activities and exercising due diligence in respect to Aboriginal heritage. The Regulation (2009) recognises various due diligence codes of practice, including the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW which is pertinent to this report, but it also outlines procedures for Aboriginal Heritage Impact Permit (AHIP) applications and Aboriginal Cultural Heritage Consultation Requirements (ACHCRs); amongst other regulatory processes.

1.5.3 ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979 (EP&A ACT)

EP&A Act establishes the statutory framework for planning and environmental assessment in NSW and the implementation of the EP&A Act is the responsibility of the Minister for Planning, statutory authorities and local councils. The EP&A Act contains three parts which impose requirements for planning approval:

- Part 3 of the EP&A Act relates to the preparation and making of Environmental Planning Instruments (EPIs), State Environmental Planning Policies (SEPPs) and Local Environmental Plans (LEPs).
- Part 4 of the EP&A Act establishes the framework for assessing development under an EPI. The consent authority for Part 4 development is generally the local council, however the consent authority may be the Minister, the Planning Assessment Commission or a joint regional planning panel depending upon the nature of the development.
- Part 4, Division 4.1 of the EP&A Act establishes the assessment pathway for State significant development (SSD) declared by the State Environmental Planning Policy (State and Regional Development) 2011 (NSW). Once a development is declared as SSD, the Secretary's Environmental Assessment Requirements (SEARs) will be issued outlining what issues must be considered in the EIS.
- Part 5 of the EP&A Act provides for the control of 'activities' that do not require development consent and are undertaken or approved by a determining authority. Development under Part 5 that are likely to significantly affect the environment is required to have an EIS prepared for the proposed activity.
- Part 5.1 of the EP&A Act establishes the assessment pathways for State significant infrastructure (SSI). Development applications made for SSI can only be approved by the Minister. Once a development is declared as SSI, the SEARs will be issued outlining what issues must be addressed in the EIS.

The applicable approval process is determined by reference to the relevant environmental planning instruments and other controls, LEPs and State Environmental Planning Policies (SEPPs). This project falls under Part 4.

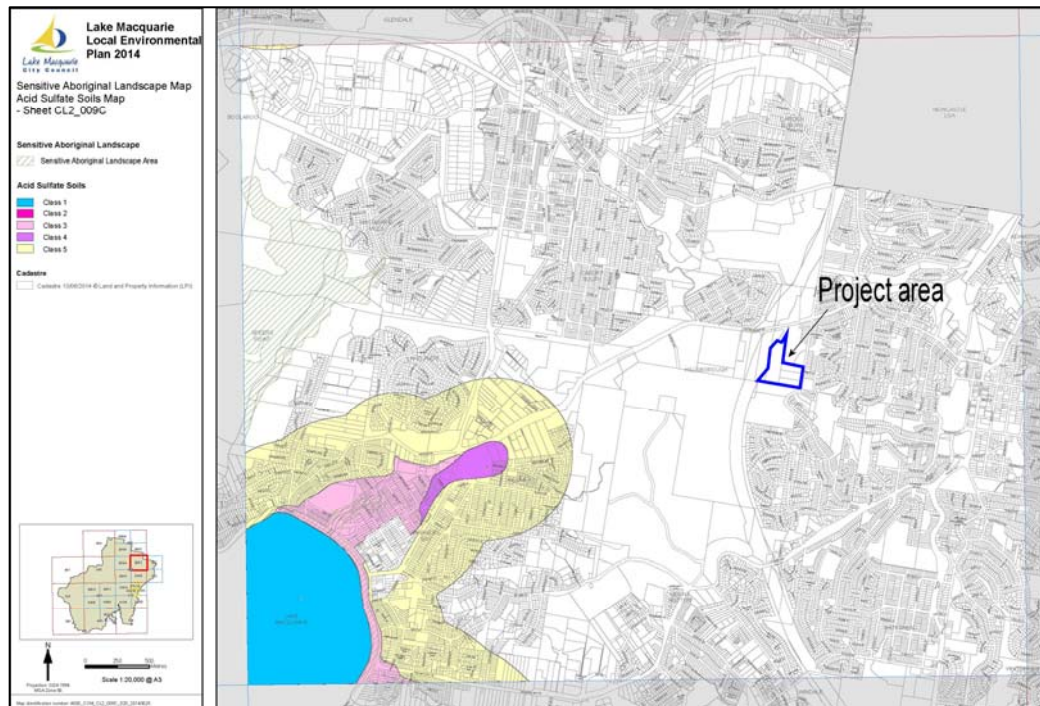
1.6 ABORIGINAL COMMUNITY CONSULTATION

A due diligence assessment relates to the physical identification of Aboriginal objects, sites and places. Community consultation is only required once Aboriginal objects, sites or places have been identified and an Aboriginal Heritage Impact Permit (AHIP) is deemed necessary. Section 5.2 of the 2010 Due Diligence Code of Practice for the protection of Aboriginal Objects in NSW specifically states that;

'consultation with the Aboriginal community is not a formal requirement of the due diligence process' (2010:8).

However, Lake Macquarie Councils' DCP (2014) and LEP (2014) require consultation with at least one of the local Aboriginal group nominated by LMCC if the project area is located within a Sensitive Aboriginal Landscape identified on the Lake Macquarie Development Control Plan (2014) and Local Environmental Plan (2014), and the project area is located within 200 metres from a known site. A search of the AHIMS has identified there are no sites within 200m of the lot, and is not within an Aboriginal sensitive landscape (Figure 1.3), (Refer to Section 2.2.2).

Figure 1.4 LMCC LEP Aboriginal sensitive landscape map



However, in anticipating LMCC response to the Due Diligence Assessment, consultation with the LALC has been undertaken. Clause 5.10(8) – Heritage Conservation of the LMLEP (2014) and the Lake Macquarie Aboriginal Heritage Management Strategy requires assessments to be forwarded to the Local Aboriginal Land Council for comment for a 28-day period. Awabakal LALC response (Appendix A) has been incorporated in this assessment. ALALC have identified that the area is culturally significant and agree to further testing and would like to be kept up to date with the project.

1.7 QUALIFICATIONS OF THE INVESTIGATOR

Penny McCardle: Principal Archaeologist/Forensic Anthropologist has 19 years' experience in Indigenous archaeological assessments, excavation, research, reporting, analysis and consultation

and fifteen years Forensic Anthropology experience in skeletal identification, biological profiling and skeletal trauma reconstruction and identification.

- BA (Archaeology and Palaeoanthropology, University of New England 1999
- Hons (Archaeology and Palaeoanthropology): Physical Anthropology, University of New England 2001
- Forensic Anthropology Course, University of New England 2003
- Armed Forces Institute of Pathology Forensic Anthropology Course, Ashburn, VA 2008
- Analysis of Bone trauma and Pseudo-Trauma in Suspected Violent Death Course, Erie College, Pennsylvania, 2009
- Documenting Scenes of War and Human Rights Violations. Institute for International Criminal Investigations, 2018
- PhD, University of Newcastle, 2019

1.8 REPORT STRUCTURE

The report includes Section 1 which outlines the project, Section 2 presents the environmental and archaeological context, Section 3 provides the results and discussion and Section 4 presents the Impact Assessment, Section 5 discusses the mitigation measures and Section 6 provides the management recommendations.

2 ENVIRONMENTAL AND ARCHAEOLOGICAL CONTEXT

The archaeological due diligence process and assessment requires that the available knowledge and information in relation to the environmental and archaeological contexts is considered. The purpose of this is to assist in identifying whether Aboriginal objects, sites or places are likely to be present within the project area based on archaeological predictive modelling and in what condition they may be found in given the environmental impacts.

2.1 LOCAL ENVIRONMENT

Past site location and land use are closely linked to the environment including the landform, geology, geomorphology, soils, waterways and associated resources. The environmental context is important to identify potential factors relating to past Aboriginal land use patterns.

The project area is situated in the Lake Macquarie area on the Permian Newcastle Coal Measures geological formation consisting of conglomerate, sandstone, tuff, shale and coal (Newcastle 1:250,000 Geological Series Map Sheet 1966). The majority of the project area lies within the Gateshead Soil Landscape and a section in the south on the Cockle Creek Soil Landscape (Matthei 1995). The Gateshead soil landscape consists of undulating to rolling landforms with local relief to 100 metres. Slope gradient is typically between 5-15% and elevation is up to 130 metres. Soil type is variable, with yellow Podzolic, yellow Soloths, Lithosols and red Podzolic soils all represented. The A horizon is composed of a brownish black sandy clay loam overlying a bleached yellowish-brown sandy clay loam, with both soil types exhibiting degrees of acidity. The B horizon encompasses several different clay types. The Cockle Creek soil landscape consists of up to 30 centimetres brownish black sandy loam (A1 horizon) that overlays up to 20 centimetres of hard setting bleached sandy clay loam (A2 horizon) that then overlays >60 centimetres of dull yellowish-brown clay (B horizon) in floodplains and drainage plains. Delta deposits and alluvial fans consist of 20-65 centimetres of the A1 horizon that overlays a B horizon of >260 centimetres of earthy mottled sandy clay and the edges of channels consist of up to 35 centimetres of the A1 horizon that overlays >155 centimetres of pale loose sand. All boundaries are abrupt.

The geomorphology of the area is complex and consist of an upper soil Horizon A and underlying B (referred to as duplex soils (Galloway 1963; Hughes 1984). Unit A and Unit B are interpreted as being Holocene and Pleistocene in age respectively. Within the region, sites tend to occur on or within soil Horizon A or are often present at the interface of the A and B horizons. Within the A horizon the lowermost (in terms of vertical positioning) artefact assemblages tend to contain artefacts that are typically attributed to the mid-Holocene, as characterised by an increase in the number of backed artefacts.

In terms of fresh water availability, the project area contains one 1st order drainage line in the south east that flows into Winding Creek (3rd order) that flows through the southern part of the project area. Thus, the southern portion of the project area may have provided fresh water during times of heavy rain.

European settlers extensively cleared the original native vegetation in the 1800's and since then the investigation area has been subject grazing and clearing has continued clearing through the north and centre of the project area with the southern portion appearing to remain relatively undisturbed. Although pastoralism is a comparatively low impact activity, it does result in disturbances due to vegetation clearance and the trampling and compaction of grazed areas. These factors accelerate the natural processes of sheet and gully erosion, which in turn can cause the horizontal and lateral displacement of artefacts. Furthermore, grazing by hoofed animals can affect the archaeological record due to the displacement and breakage of artefacts resulting from trampling (Yorston et al

1990). Pastoral land uses are also closely linked to alterations in the landscape due to the construction of dams, fence lines and associated structures. As a sub-set of agricultural land use, ploughing typically disturbs the top 10-12 centimetres of topsoil (Koettig 1986) depending on the method and machinery used during the process. Ploughing increases the occurrence of erosion and can also result in the direct horizontal and vertical movement of artefacts, thus causing artificial changes in artefact densities and distributions (Roper 1976; Odell and Cowan 1987).

Additional disturbances would have derived from natural processes. The patterns of deposition and erosion within a locality can influence the formation and/or destruction of archaeological sites. Within an environment where the rate of erosion is generally high, artefacts deposited in such an environment will be eroded downslope after being abandoned. Additionally, bioturbation processes such as the redistribution and mixing of cultural deposits occurs as a result of burrowing and mounding by earthworms, ants and other species of burrowing animals. Artefacts can move downwards through root holes as well as through sorting and settling due to gravity, and translocation can also occur as a result of tree falls (Balek 2002; Peacock and Fant 2002:92).

The project area is located within an environment that provided resources, including raw materials (tuff), fauna, flora and fresh water, that would have allowed for seasonal occupation of the area, specifically along Winding Creek. In relation to modern alterations to the landscape, the use of the majority of the project area for grazing and clearing purposes can be expected to have had low to moderate impacts upon the archaeological record.

2.2 ARCHAEOLOGICAL CONTEXT

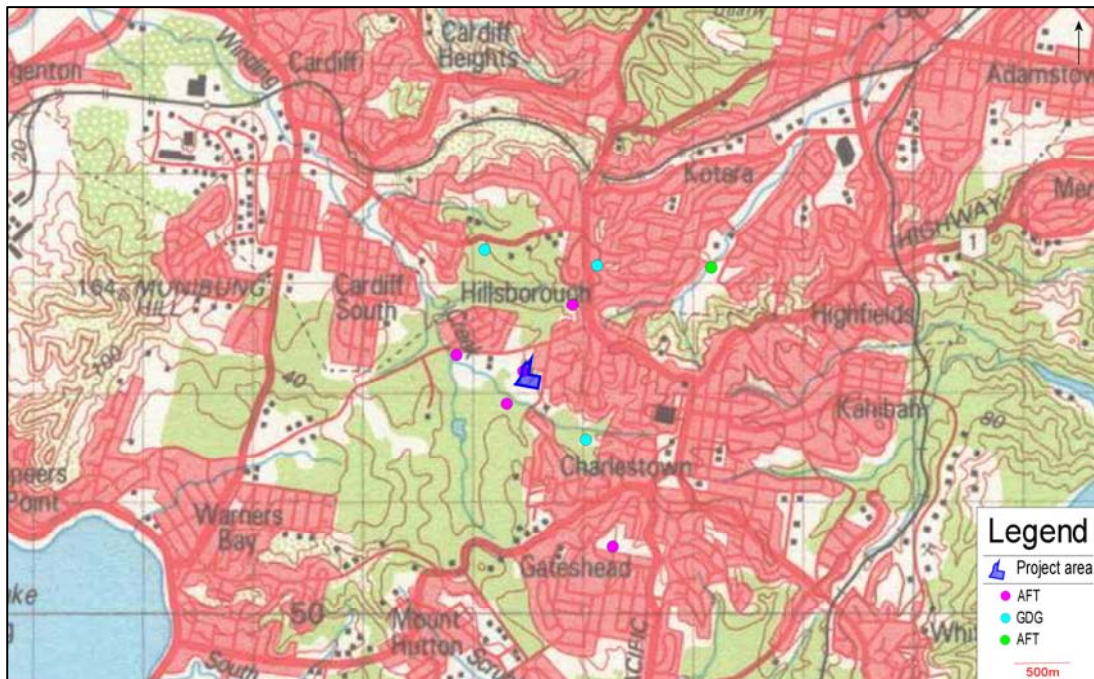
A review of the archaeological literature of the region, and more specifically the Lake Macquarie area and the results of an AHIMS search provide essential contextual information for the current assessment.

2.2.1 ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM (AHIMS)

It must be noted that there are many limitations with an AHIMS search including incorrect site coordinates due to errors and changing of computer systems at AHIMS over the years that failed to correctly translate old coordinate systems to new systems. Secondly, AHIMS will only provide up to 110 sites per search, thus limiting the search area surrounding the project area and enabling a more comprehensive analysis and finally, few sites have been updated on the AHIMS register to notify if they have been subject to a s87 or s90 and as such what sites remain in the local area and what sites have been destroyed, to assist in determining the cumulative impacts, is unknown. In addition to this, other limitations include the number of studies in the local area, high levels of erosion have proven to disturb sites, site contents, and the extent of those disturbances is unknown. Thus, the AHIMS search is limited and provides a basis only that aids in predictive modelling.

A search of the AHIMS register (Appendix B) has shown that 11 known Aboriginal sites are currently recorded within two kilometres of the project area (Figure 2.1) and include five artefact sites, five grinding groove sites and one scar tree.

Figure 2.1 Approximate location of AHIMS sites



Although site 38-2-0155 have coordinates that place the site in the project area (Figure 2.2), examination of the site card reveals that the coordinates are incorrect. Based on the site card map, plan and description, the site is located 210 metres north along an unnamed 1st order creek (Figure 2.1). There are no registered sites or Aboriginal Places within the project area.

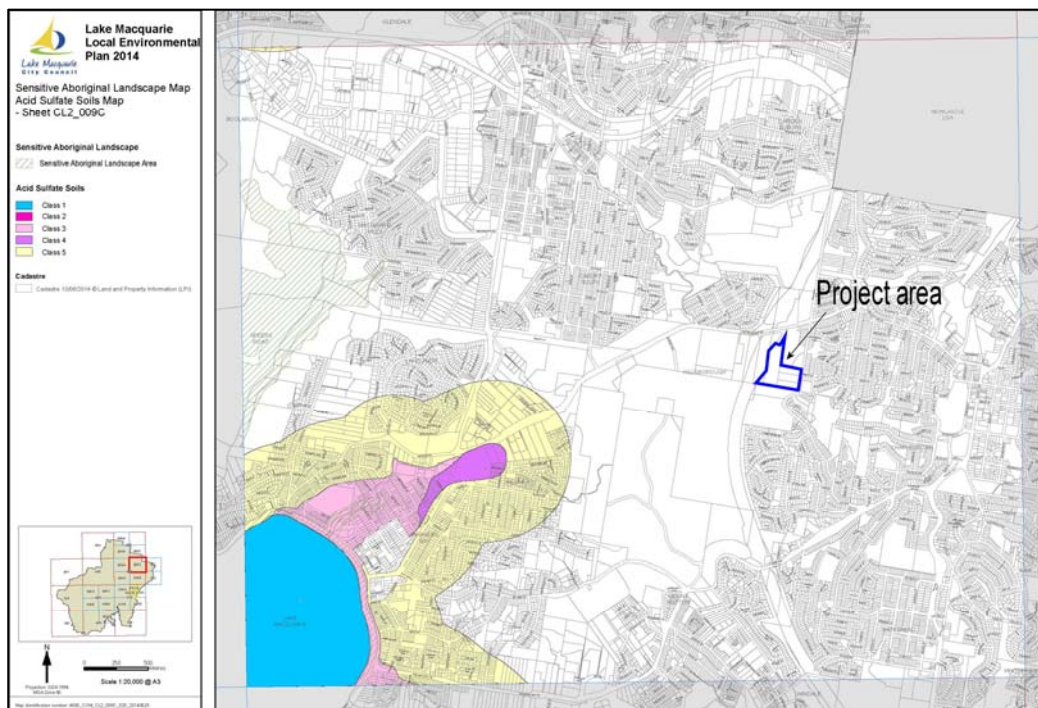
Figure 2.2 Location of 38-5-0155



2.2.2 HERITAGE REGISTER LISTINGS

The National Heritage List, the Commonwealth Heritage List, the Australian Heritage Database, Australia's National Heritage List, The National Trust Heritage Register State Heritage Inventory the and the Lake Macquarie Development Control Plan (2014) and Local Environmental Plan (2014) have no Aboriginal objects, sites or places listed within the project area. As shown in Figure 2.3, the project area is not within a Sensitive Aboriginal Landscape. Additionally, as outlined in Section 2.2.1, the project area is located over 200 metres from a known site.

Figure 2.3 Sensitive Aboriginal Landscape Map (LMLEP 2014)



2.2.3 SUMMARY OF THE REGIONAL ARCHAEOLOGICAL CONTEXT

The most relevant investigations from across the regional area indicate differing results and observations based on surface visibility and exposure, alterations to the landscape (including mining, industrial and residential development), proximity to water sources and geomorphology. The following summary is derived from a review of the most relevant investigations (Davidson et al 1993; Dean-Jones and Mitchell 1993; Koettig and Hughes 1984; McDonald 1997; Haglund 1999; Kuskie 2000; HLA-Envirosciences 2002; AMBS 2002; MCH 2004a, b) and provides a regional archaeological context in terms of site location and distribution.

Based on the available information it is possible to identify a number of trends in site location and patterning within the local area. Open campsites are by far the most common site type with isolated finds also comparatively well represented. A variety of other site types have been identified in far lower concentrations and include grinding grooves, scarred trees, rock shelters, shelters with art and burials. The high representation of sites containing stone artefacts is to be expected due to the durability of stone in comparison to other raw materials. Raw materials used for tool manufacture include mudstone (also called tuff by some) which is the most common lithic artefactual material found in the region, followed by silcrete and in lesser quantities chert, quartz, quartzite, petrified wood, porcellanite, basalt, limestone, sandstone, rhyolite, basalt, European glass and other non-

specific lithic types also occur in smaller quantities. The most common stone artefacts include flakes, flake fragments and flaked pieces. Cores, edge ground axes, millstones, grindstones, hammer stones and backed artefacts including backed blades, bondi points, geometric microliths and eloueras also occur though in lower frequencies. In general, the stone artefact assemblage in the area has been relatively dated to what was previously known as the Small Tool Tradition (10,000 years BP). On the basis of stone tool technology, the overwhelming majority of Aboriginal open sites within the region are attributed to the Holocene period. However, at Glennies Creek, north of Singleton, based on radiocarbon dated charcoal and geomorphological evidence it is suggested that artefacts found in the B-horizon may have been deposited between 10,000 and 13,000 BP (Koettig 1986a, 1986b).

Proximity to reliable water was essential for past occupation and the highest percent of sites are identified within 50 metres of a water source. Other landforms such as slopes and crest/ridge formations are also common site locations when in close proximity to reliable water, and when at a distance from water, sites are few and very low density and are typically interpreted as being indicative of travel routes and/or hunting/gathering grounds.

2.2.4 SUMMARY OF THE LOCAL ARCHAEOLOGICAL CONTEXT

All archaeological surveys throughout the local area have been undertaken in relation to environmental assessments for developments. The most relevant investigations indicate differing results and observations based on surface visibility and exposure, alterations to the landscape, proximity to water sources and geomorphology.

Previous assessments of the local area (Roberts 2001 a and b, MCH 2011) have identified that artefact scatters and isolated finds are the most prominent site type followed by grinding grooves along reliable water sources. These assessments have also identified that both landform and distance to water were important factors in past Aboriginal land use. Elevated landforms within 50 metres of reliable water appear to have been the most favoured. The higher the stream order (and more reliable water source) the higher the numbers of sites and site densities and both decrease with distance from the resource. A number of sites were also found on slopes; however, it is likely they were eroded down slope and not found in their original location. All sites were noted to have been disturbed through past landuses including but not limited to clearing, agricultural and pastoral activities, residential developments, utilities, infrastructure and erosion.

2.3 SYNTHESIS OF ENVIRONMENTAL AND ARCHAEOLOGICAL CONTEXTS

The site types identified throughout the area appear to be either low density/small occupation activities or sites that were associated with more secular activities. The broader landform assessment also suggests that larger sites indicative of larger camping groups may be located on elevated land forms in close proximity to reliable water sources and associated resources compared to locations at distance from such necessary resources where large-scale habitation is not possible, but may have been utilised as activity areas away from the main camp. Based on information gained from previous studies, both regionally and locally, within a two-kilometre radius of our project area, it can be expected that:

- The majority of sites are located within 50 metres of a water source;
- High artefact densities sites appear to be situated within 50 metres of a reliable water source;
- Artefact densities decrease with increased distance from reliable water source;
- Main site types are artefact scatters and isolated finds;

- Mudstone/tuff and silcrete are by far the most common raw material types represented at sites in the region. Quartz and chert are the next most frequently in artefact assemblages followed by volcanic materials, porphyry and petrified wood. Siltstone, rhyolite and porcellanite are relatively rare;
- flakes, broken flakes and flaked pieces are the most common artefact types recorded; and
- The vast majority of artefactual material in the region was observed on exposures with good to excellent ground surface visibility. The likelihood of finding artefacts surrounding these exposures is reduced due to poor visibility. The site area is often given as the area of exposure. Hence, it is inappropriate to attempt to draw any conclusions regarding site extent based on current information.

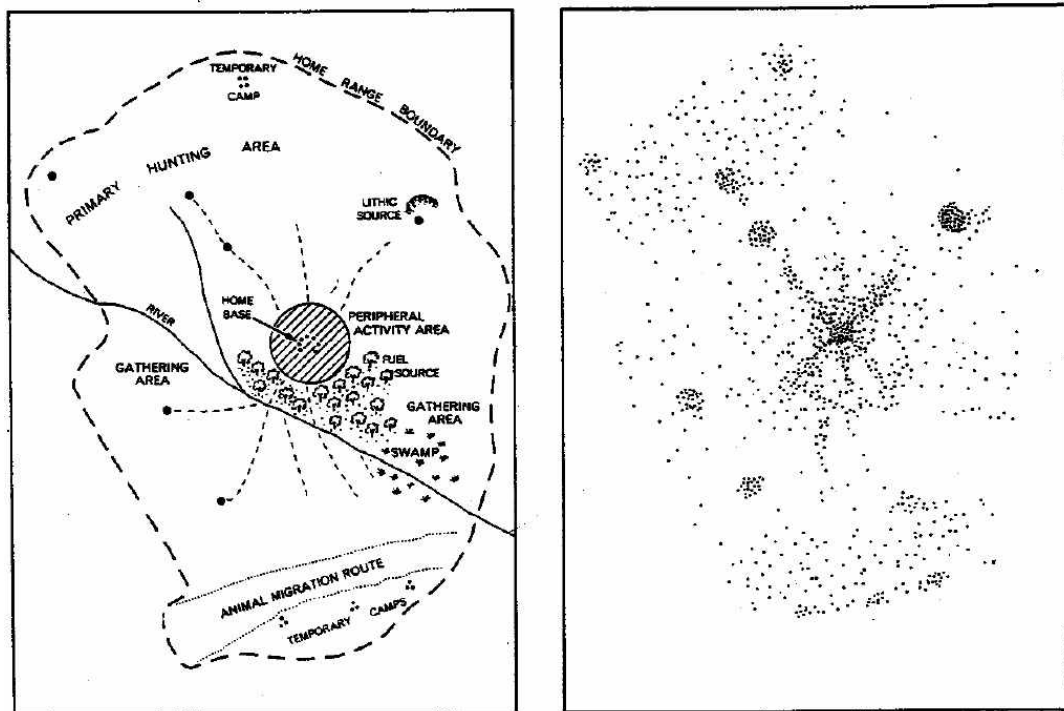
2.4 MODELS OF PAST ABORIGINAL LAND USE

The main aim of this project is to attempt to define both the nature and extent of occupation across the area. As a result, the nature of the analysis will focus on both the landform units and sites. The purpose of this strategy is to highlight any variations between sites and associated assemblages, landforms and resources across the area treating assemblages as a continuous scatter of cultural material across the landscape. In doing this, it is possible to identify variation across the landscape, landforms and assemblages that correspond with variation in the general patterns of landscape use and occupation. Thus, the nature of activities and occupation can be identified through the analysis of stone artefact distributions across a landscape.

A general model of forager settlement patterning in the archaeological record has been established by Foley (1981). This model distinguishes the residential 'home base' site with peripheral 'activity locations'. Basically, the home base is the focus of attention and many activities and the activity locations are situated away from the home base and are the focus of specific activities (such as tool manufacturing). This pattern is illustrated in Figure 2.4. Home base sites generally occur in areas with good access to a wide range of resources (reliable water, raw materials etc). The degree of environmental reliability, such as reliable water and subsistence resources, may influence the rate of return to sites and hence the complexity of evidence. Home base sites generally show a greater diversity of artefacts and raw material types (which represent a greater array of activities performed at the site and immediate area). Activity locations occur within the foraging radius of a home base camp (approximately 10 km); (Renfrew and Bahn 1991).

Based on the premise that these sites served as a focus of a specific activity, they will show a low diversity in artefacts and are not likely to contain features reflecting a base camp (such as hearths). However, it is also possible that the location of certain activities cannot be predicted or identified, adding to the increased dispersal of cultural material across the landscape. If people were opting to carry stone tools during hunting and gathering journeys throughout the area rather than manufacturing tools at task locations, an increased number of used tools should be recovered from low density and dispersed assemblages.

Figure 2.4 Foley's model (L) and its manifestation in the archaeological record (R), (Foley 1981).



2.4.1 MODEL OF OCCUPATION FOR THE LOCAL AREA

Occupation models often aim to identify and explain archaeological patterning in site type, content and distribution. General theories have been developed outlining the relationship between land use patterns and the resulting archaeological evidence. A number of models developed and reviewed (Koettig 1994; Dean-Jones and Mitchell 1993; Rich 1995; Kuskie and Kamminga 2000; White and McDonald 2010) and the most commonly accepted model is summarised and adapted to for the present project area. Kuskie and Kamminga (2000) established a general model of occupation strategies based primarily upon ethnographic research. Used as a starting point, it makes a general set of factors that are consistent with other studies (e.g. White and McDonald 2010, Nelson 1991). The model distinguishes between short-term or extended long-term occupation and makes some predictions about the likely location of different foraging and settlement activities. Combining this information with a general review of assemblage contents from a sample of excavated sites within the Hunter Valley, a baseline of settlement activities may be determined (Barton 2001).

The model provides a number of archaeological expectations that may be tested. For example, the presence of features requiring a considerable labour investment such as stone-lined ovens or heat-treatment pits are likely to occur at places where occupation occurred for extended periods of time. The presence of grindstones is also a reliable indicator of low mobility and extended occupation. Seed grinding requires a large investment of time and effort (Cane 1989). In most ethnographic examples, seed grinding is an activity that takes place over an entire day to provide adequate energetic returns (Cane 1989; Edwards and O'Connell 1995).

Where group mobility was high and campsites frequently shifted throughout the landscape, artefact assemblages are not expected to contain elements such as grindstones, heat-treatment pits, ovens and the diversity of implements frequently discarded at places of extended residential occupation. It may also have been the case that the location of particular activities could not be predicted by tool users, adding to the increased low-density scattering of artefacts over the landscape. Also, if individuals were opting to carry a number of stone tools during hunting and gathering activities and

maintaining these tools rather than manufacturing new tools at each task location, the ratio of used tools to unworn flakes in these assemblages should be high. Table 2.1 has been adapted from Kuskie and Kamminga (2000). To identify the specific activity areas through analysis of the composition of patterning of lithic assemblages, is utilised. However, this is applied to excavated materials as they provide more realistic data due to the lesser degree of disturbances, removal and breakages.

Table 2.1 Site descriptions (Kuskie & Kamminga 2000).

Occupation Pattern	Activity Location	Proximity to water	Proximity to food	Archaeological expectations
Transitory movement	all landscape zones	not important	not important	<ul style="list-style-type: none"> assemblages of low density & diversity evidence of tool maintenance & repair evidence for stone knapping
Hunting &/or gathering without camping	all landscape zones	not important	near food resources	<ul style="list-style-type: none"> assemblages of low density & diversity evidence of tool maintenance & repair evidence for stone knapping high frequency of used tools
Camping by small groups	associated with permanent & temporary water	near (within 100m)	near food resources	<ul style="list-style-type: none"> assemblages of moderate density & diversity evidence of tool maintenance & repair evidence for stone knapping & hearths
Nuclear family base camp	level or gently undulating ground	near reliable source (within 50m)	near food resources	<ul style="list-style-type: none"> assemblages of high density & diversity evidence of tool maintenance & repair & casual knapping evidence for stone knapping heat treatment pits, stone lined ovens grindstones
Community base camp	level or gently undulating ground	near reliable source (within 50m)	near food resources	<ul style="list-style-type: none"> assemblages of high density & diversity evidence of tool maintenance & repair & casual knapping evidence for stone knapping heat treatment pits, stone lined ovens grindstones & ochre large area >100sqm with isolated camp sites

2.5 PREDICTIVE MODEL FOR THE PROJECT AREA

An archaeological predictive model is established to identify areas of archaeological sensitivity so it can be used as a basis for the planning and management of Aboriginal heritage. It involves reviewing existing literature to identify basic site distribution patterns. These patterns are then modified according to the specific environment of the project area to form a predictive model for site location within the specific project area. A sampling strategy is then used to test the model and the results of the survey used to confirm, refute or modify the model.

Land-systems and environmental factors are commonly used factors in predictive modelling based on the assumption that they provide distinctive sets of constraints and opportunities that influenced past Aboriginal land use patterns. As land use patterns may differ between zones (due to different environmental conditions), this may result in the physical manifestation of different spatial distributions and forms of archaeological evidence. The predictive model presented here is based on the following information;

- Landform units;
- Previous archaeological assessments conducted within the region;
- Distribution of known sites and site densities; and
- Traditional Aboriginal land use patterns.

Also taken into consideration are land use impacts (both natural and anthropomorphic) that may have resulted in a disturbed landscape and associated archaeological record. However, these assumptions may only be clarified during survey and the model updated accordingly if needed. Brief descriptions of the site types that may occur in the project area are presented below.

- **Artefact scatters**

Also described as open campsites, artefact scatters and open sites, these deposits have been defined at two or more stone artefacts within 50 metres of each other and will include archaeological remains such as stone artefacts and may be found in association with camping where other evidence may be present such as shell, hearths, stone lined fire places and/or heat treatment pits. These sites are usually identified as surface scatters of artefacts in areas where ground surface visibility is increased due to lack of vegetation. Erosion, agricultural activities (such as ploughing, grazing) and access ways can also expose surface campsites. Artefact scatters may represent evidence of;

- Large camp sites, where everyday activities such as habitation, maintenance of stone or wooden tools, manufacturing of such tools, management of raw materials, preparation and consumption of food and storage of tools has occurred;
- Medium/small camp sites, where activities such as minimal tool manufacturing occurred;
- Hunting and/or gathering events;
- Other events spatially separated from a camp site, or
- Transitory movement through the landscape.

Artefact scatters are a common site type in the locality and the broader region. There is potential for low-density artefact scatters to occur within the project area within 50 metres of Winding Creek and represent hunting and gathering land use during times of heavy rain. There is also the potential for such sites to be impacted on through past land uses.

- **Isolated finds**

Isolated artefacts are usually identified in areas where ground surface visibility is increased due to lack of vegetation. Erosion, agricultural activities (such as ploughing) and access ways can also expose surface artefacts. Isolated finds may represent evidence of;

- Hunting and/or gathering events; or
- Transitory movement through the landscape.

Isolated finds are a common site type in the locality and the broader region. There is potential for isolated artefacts to occur across the project area and across all landforms. There is also the potential for such sites to be impacted on through past land uses.

3 RESULTS AND DISCUSSION

To comply with the due diligence requirement that a visual inspection of the project area be undertaken, an archaeological pedestrian survey across the project area was undertaken by MCH archaeologist Penny McCardle on 6th May 2020. The survey focused on areas of high ground surface visibility and exposures (erosional features, creek banks, tracks, cleared areas).

3.1 SURVEY UNITS

The project area, consisting of a disturbed northern section and a southern section of slopes and Winding Creek, the project area was divided into three survey units (SU) that were based on landform elements (following McDonald *et al* 1984). The locations of the SUs are marked on Figure 3.1 and are summarised below.

Figure 3.1 Survey Units



Survey Unit 1

Consisting of a disturbed landscape, this section had been previously cleared, constructed and maintained as a public reserve. Consisting of a flat ground with fill/built up sections around the eastern side, fences also enclosed the reserve. Vegetation included grass cover and due to recent drought conditions and the use of the reserve, visibility was high at 45%. Examples of the unit are provided in Figures 3.2 and 3.3.

Figure 3.2 Northern part of the reserve facing south



Figure 3.3 Southern part of the reserve facing east



Survey Unit 2

Consisting of bushland, this unit included the slopes to the south and east of the public reserve. Vegetation included dense scrub with lantana which hindered visibility (5%) and resulted in an increase in exposures (erosion). Examples of this unit are provided in figures 3.4 and 3.5.

Figure 3.4 Southern part of the project area facing south



Figure 3.5 Eastern part of the project area facing east



Survey Unit 3

This survey unit included Winding Creek and up to 10 metres both sides. Access was difficult due to the thick scrub and lantana as well as the slopes along its borders. Visibility was low (5%) and erosion moderate due to creek bank erosion. An example of this unit is provided in figure 3.6.

Figure 3.6 SU 3 facing south



As shown in Table 3.1 the total effective coverage for the project area was 14,320m², or 20.17% reflecting the low surface visibility through the southern and eastern portion of the project area.

Table 3.1 Effective coverage for the investigation area

SU	Landform	Area (m2)	Vis. %	Exp. %	Exposure type	Previous disturbances	Present disturbances	Limiting visibility factors	Effective coverage (m2)
1	disturbed	28,000	45%	100%	erosion, tracks	clearing, excavation, reserve	reserve	grass	12,600
2	slope	40,000	5%	80%	erosion	clearing, tracks, motorbikes	erosion	grass, leaf litter	1,600
3	creek	3,000	5%	80%	erosion	clearing, tracks, motorbikes	erosion	grass, leaf litter	120
Totals		71,000							14,320
Effective coverage %									20.17%

The level and nature of the effective survey coverage is considered satisfactory to provide an effective assessment of the investigation area. The coverage was comprehensive for obtrusive site types (e.g. grinding grooves and scarred trees) and for the less obtrusive surface stone artefact sites within the reserve area but somewhat limited in the bushland by surface visibility constraints that included vegetation cover and minimal exposures.

3.2 ARCHAEOLOGICAL SITES

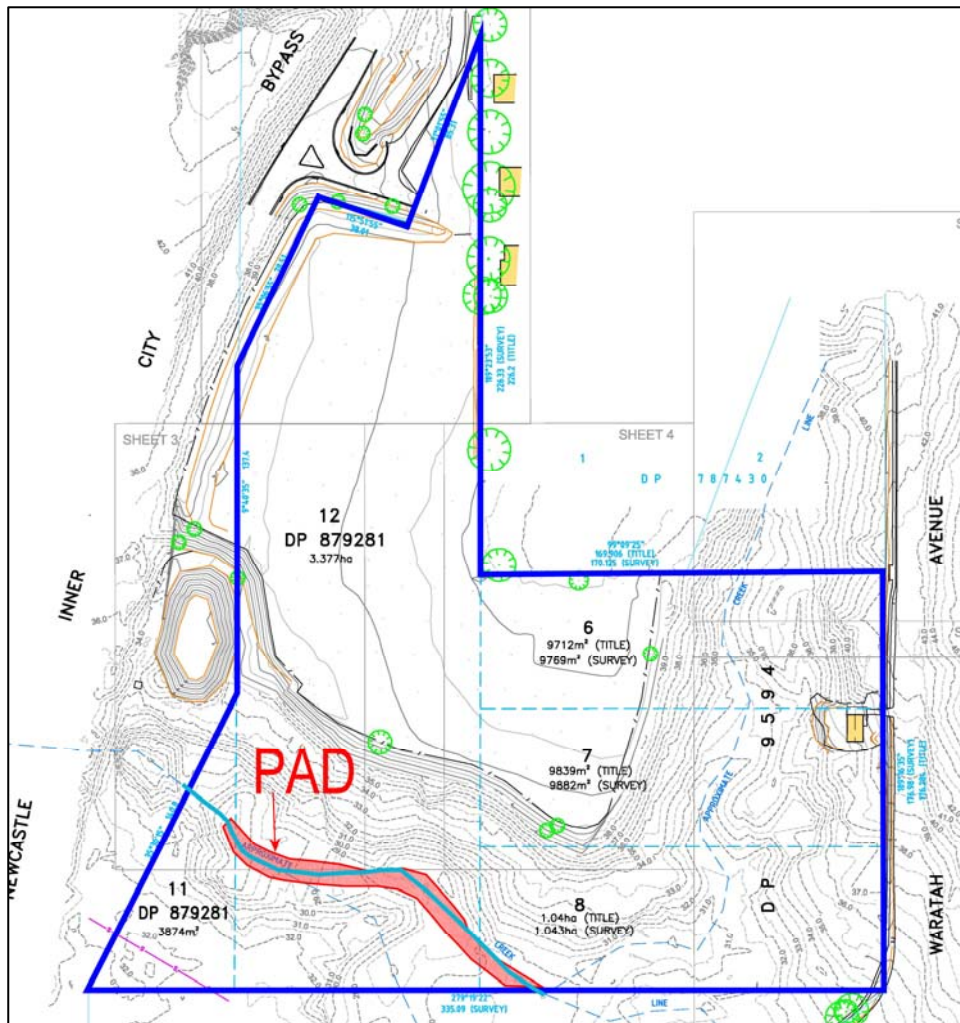
The results of the survey did not identify any sites within the project area.

3.3 POTENTIAL ARCHAEOLOGICAL DEPOSIT (PAD)

The terms 'Potential Archaeological Deposit (PAD)' and 'area(s) of archaeological sensitivity' are used to describe areas that are likely to contain sub-surface cultural deposits. These sensitive landforms or areas are identified based upon the results of fieldwork, the knowledge gained from previous studies in or around the subject area and the resultant predictive models. Any or all of these attributes may be used in combination to define a PAD. The likelihood of a landscape having been used by past Aboriginal societies and hence containing archaeologically sensitive areas is primarily based on the availability of local natural resources for subsistence, artefact manufacture and ceremonial purposes. The likelihood of surface and subsurface cultural materials surviving in the landscape is primarily based on past land uses and preservation factors.

As Winding Creek is a 3rd order creek and previous regional and local studies have identified that areas within 50 metres of such water sources are likely to have evidence of past Aboriginal land uses, this is identified as an area of potential archaeological sensitivity. The PAD area included the length of Winding Creek in the project area and up to 20 meters in width that excludes moderate slopes that would not have been utilised for camping. The location and extent of the PAD is shown in Figure 3.7.

Figure 3.7 Location of PAD



3.4 SUMMARY

In view of the predictive modelling and the results obtained from the effective coverage, it is concluded that the survey provides a valid basis for determining the probable impacts of the proposal and formulating recommendations for the project. The survey results demonstrate the absence of Aboriginal objects within the project area but did identify a PAD. The results are consistent with those obtained from other studies in the local area. The results indicate a number of possible past Aboriginal land use within the project area;

- Limited Aboriginal occupation
- Limited visibility due to thick scrub
- Ground disturbances having disturbed or removed evidence

Considering general models of occupation for the locality, the results of this and local investigations, the locality may have been utilised by Aboriginal people. As the project area itself includes a 3rd order creek and associated resources, the project area is likely to have been utilised for low intensity usage such as transitory movement or hunting/gathering activities in close proximity to the creek.

3.5 CONCLUSION

Proximity to water was an important factor in past occupation of the area, with sites reducing in number significantly away from water with most sites located within 50 metres of the tributaries. The access to water close by (Winding Creek) during times of heavy rain, would have provided the necessary resources for past Aboriginal land uses of the area, including hunting and gathering activities.

In relation to modern alterations to the landscape, the use of the northern section for a public reserve can be expected to have had moderate to high impacts upon the archaeological record, whilst the southern section, consisting of bushland and appears to have been subject too minimal land uses and impacts, may contain evidence of past Aboriginal land uses within close proximity to Winding Creek.

4 ASSESSMENT OF IMPACTS

The archaeological record is a non-renewable resource that is affected by many processes and activities. As outlined in Section 2 and Section 3, the various natural processes and human activities have impacted on archaeological deposits through both site formation and taphonomic processes.

4.1 IMPACTS

The BCD Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (2010:21) describes impacts to be rated as follows:

- 1) Type of harm: is either direct, indirect or none
- 2) Degree of harm is defined as either total, partial or none
- 3) Consequence of harm is defined as either total loss, partial loss, or no loss of value

Table 4.1 Impact summary

Site	Site type	Type of harm	Degree of harm	Consequence of harm
	PAD	unknown	unknown	unknown

As no sites were identified, there are no impacts on the known archaeological record.

The results of the assessment indicate that the PAD may be impacted upon by the development. As the nature of the PAD remains unknown at this time, the impacts to the archaeological record remain unknown.

4.2 CUMULATIVE IMPACTS

As the nature of the PAD remains unknown at this time, the cumulative impacts to the archaeological record remain unknown. Mitigation measures to minimise any potential impacts are outlined in the following chapter.

5 MITIGATION AND MANAGEMENT STRATEGIES

Specific strategies, as outlined through the Heritage NSW, Department of Premier & Cabinet Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b), the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011), and the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW 2010c), are considered below for the management of the identified site within the project area.

5.1 CONSERVATION/PROTECTION

Conservation is the first avenue and is suitable for all sites, especially those considered high archaeological significance and/or cultural significance. Conservation includes the processes of looking after an indigenous site or place so as to retain its significance and are managed in a way that is consistent with the nature of peoples' attachment to them.

As the nature of the identified PAD remains unknown (i.e. unknown if there is a subsurface site or not), conservation/protection is not required. However, this may change following any further investigations of the PAD.

5.2 FURTHER INVESTIGATION

An Aboriginal Heritage Impact Permit (AHIP) is no longer required to undertake test excavations (providing the excavations are in accordance with the Code of Practice for Archaeological Investigations in NSW). Subsurface testing is appropriate when a PAD has been identified, and it can be demonstrated that sub-surface Aboriginal objects with potential conservation value have a high probability of being present, and that the area cannot be substantially avoided by the proposed activity.

If the identified PAD will be impacted upon, test excavations will be required prior to any works within the PAD area.

5.3 AHIP

If harm will occur to an Aboriginal object or Place, then an AHIP is required from Heritage NSW, Department of Premier & Cabinet. If a systematic excavation of the known site could provide benefits and information for the Aboriginal community and/or archaeological study of past Aboriginal occupation, a salvage program may be an appropriate strategy to enable the salvage of cultural objects. The AHIP may also include surface collection of artefacts.

As no sites were identified an AHIP is not required. However, this may change following further investigations of the PAD.

6 RECOMMENDATIONS

6.1 GENERAL

- 1) The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974.

6.2 PAD

- 2) If the identified PAD will be impacted upon by any future development an archaeological subsurface investigation will be required in accordance with the Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW, the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010) and the OEH Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW.

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APPENDIX A

ALALC response

Awabakal LALC's (ALALC) **Response**

Indoor Stadium, Hillsborough Aboriginal Heritage Due Diligence Assessment

"McCardle Heritage" EXECUTIVE SUMMARY

- The project area is situated the in the Central Coast area on the Permian Newcastle Coal Measures geological formation

ALALC noticed that there are a few spelling mistakes throughout this report. "The project area is situated the in the Central Coast area".

Also, the project area is located in Lake Macquarie area not on the Central Coast.

1.6 ABORIGINAL COMMUNITY CONSULTATION

A due diligence assessment relates to the physical identification of Aboriginal objects, sites and places. Community consultation is only required once Aboriginal objects, sites or places have been identified and an Aboriginal Heritage Impact Permit (AHIP) is deemed necessary. Section 5.2 of the 2010 Due Diligence Code of Practice for the protection of Aboriginal Objects in NSW specifically states that; 'consultation with the Aboriginal community is not a formal requirement of the due diligence process' (2010:8).

Aboriginal people are the primary determinants of their own Culture & Heritage. Due Diligence assessments without Aboriginal community representation or involvement cannot determine if there are cultural sites and or stories associated with a project area. In ALALC's experiences, all other Archaeology companies ALALC have been involved with, do engage the Aboriginal community to undertake due diligence surveys, as should be the case with this project.

With regard to the above, ALALC would like the opportunity to undertake our own assessment of the area.

3. RESULTS AND DISCUSSION

To comply with the due diligence requirement that a visual inspection of the project area be undertaken, an archaeological pedestrian survey across the project area was undertaken by MCH archaeologist Penny McCardle on 6th May 2020. The survey focused on areas of high ground surface visibility and exposures (erosional features, creek banks, tracks, cleared areas).

Aboriginal people are the primary determinants of their own Culture & Heritage. McCardle Heritage or any other archaeologist, cannot determine what is or is not significant to the local Aboriginal Community. McCardle Heritage can only speak on behalf of the Archaeological component of a project, not the Cultural Heritage component.

3.5 CONCLUSION

Proximity to water was an important factor in past occupation of the area, with sites reducing in number significantly away from water with most sites located within 50 metres of the tributaries. The access to water close by (Winding Creek) during times of heavy rain, would have provided the necessary resources for past Aboriginal land uses of the area, including hunting and gathering activities. In relation to modern alterations to the landscape, the use of the northern section for a public reserve can be expected to have had moderate to high impacts upon the archaeological record, whilst the southern section, consisting of bushland and appears to have been subject too minimal land uses and impacts, may contain evidence of past Aboriginal land uses within close proximity to Winding Creek.

A few more spelling mistakes; "past Aboriginal land uses within close proximity to Winding Creek"

With there being minimal disturbances in the southern section, there should be further Cultural & Archaeological investigations on this project, no questions asked. This should be a recommendation by the consulting Archaeologist.

5.2 FURTHER INVESTIGATION

An Aboriginal Heritage Impact Permit (AHIP) is no longer required to undertake test excavations (providing the excavations are in accordance with the Code of Practice for Archaeological Investigations in NSW). **Subsurface testing is appropriate when a PAD has been identified, and it can be demonstrated that sub-surface Aboriginal objects with potential conservation value have a high probability of being present, and that the area cannot be substantially avoided by the proposed activity. If the identified PAD will be impacted upon, test excavations will be required prior to any works within the PAD area.**

*There's seems to be contradiction in this report. **As the nature of the identified PAD remain unknown, conservation/protection is not required. However, this may change following any further investigations of the PAD).** With the nature of the PAD unknown, there needs to be 100% conservation and protection allocated to that area. With the identified PAD being located within the project area, at a minimum, there needs to be further investigation/s done by the Aboriginal community, as it is our heritage that is at risk.*

Fyi, I have conducted my own AHIMS search on behalf of ALALC, and I have found that there are 2 sites recorded within 50m of the project area and 5 sites located within 200m of the project area. AHIMS results attached.

ALALC would like to be kept up to date with this project, as the LALC has particular functions under the Aboriginal Land Rights act 1983, to protect the culture & heritage within its boundaries.

Kind Regards

Peter Townsend

Culture & Heritage Officer
Awabakal Local Aboriginal Land Council
9th July, 2020

APPENDIX B

AHIMS Search Results

Penny Mccardle

Date: 04 May 2020

Po Box 166
Adamstown New South Wales 2289

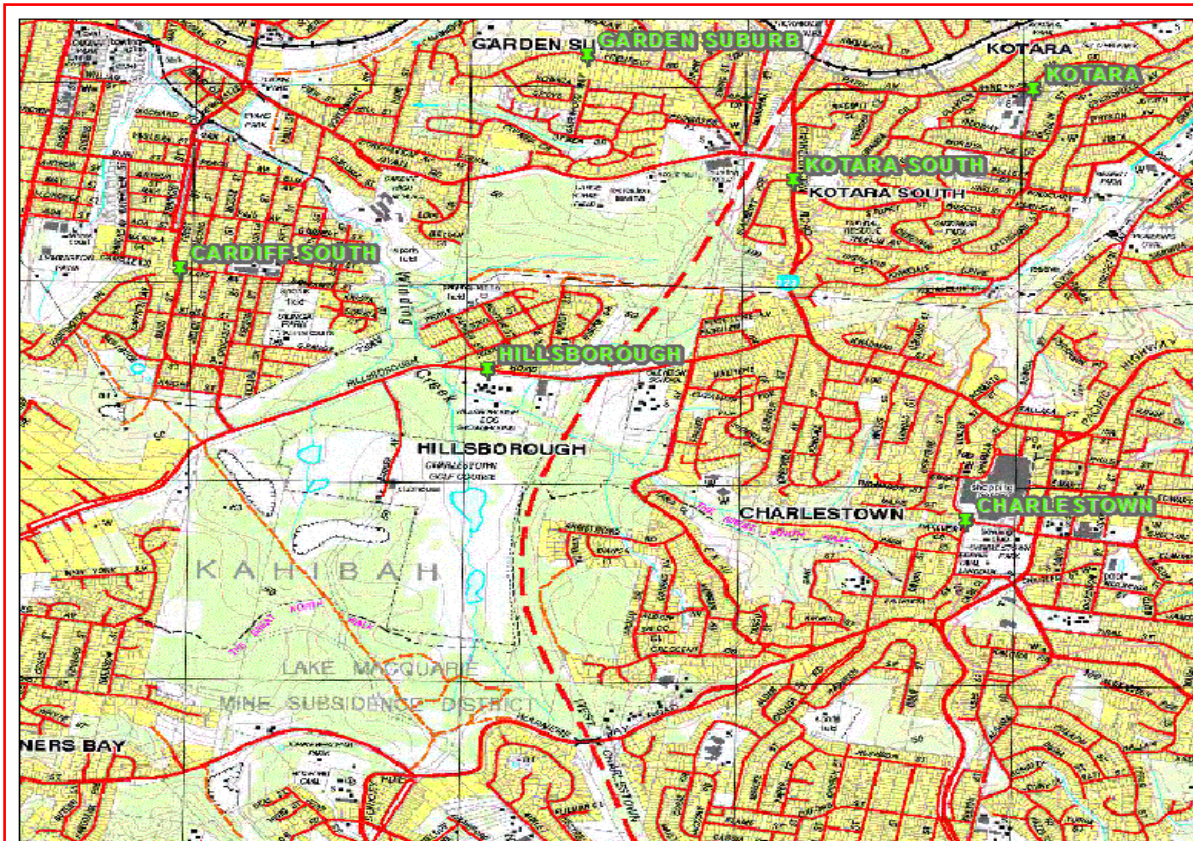
Attention: Penny Mccardle

Email: mcheritage@iprimus.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 374520 - 378520, Northings : 6350270 - 6354270 with a Buffer of 50 meters. Additional Info : Assessment, conducted by Penny Mccardle on 04 May 2020.

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:

11	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 \(http://www.nsw.gov.au/gazette\)](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.
- This search can form part of your due diligence and remains valid for 12 months.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Hillsborough

Client Service ID : 501453

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-2007	HillsboroughRd IA 01	GDA	56	375945	6352546	Open site	Valid	Artefact : -		
	Contact	Recorders	Jacobs Group (Australia) Pty Ltd - North Sydney, Miss. Clare Leever					Permits		
38-4-1300	RPS Speers Point GG1	GDA	56	377119	6351774	Open site	Valid	Grinding Groove : -		
	Contact	Recorders	RPS Australia East Pty Ltd - Hamilton, Ms. Laraine Nelson					Permits		
38-4-1549	SCAR TREE STYX CREEK	GDA	56	378257	6353341	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Mr. Peter Townsend					Permits		
38-4-0343	Garden Suburb	AGD	56	376200	6353500	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	98458,98459
	Contact	Recorders	Sue Effenberger					Permits		
38-4-0357	Garden Suburb;	AGD	56	376200	6353500	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	98458,98459
	Contact	Recorders	Sue Effenberger					Permits		
38-5-0156	Winding Ck;	AGD	56	376400	6352100	Open site	Valid	Artefact : -	Open Camp Site	98458,98459
	Contact	Recorders	Sue Effenberger					Permits	854	
38-5-0155	Hillsborough Rd;	AGD	56	376550	6352400	Open site	Valid	Artefact : -	Open Camp Site	98458,98459
	Contact	Recorders	Sue Effenberger					Permits	854	
38-5-0154	Myall Rd;	AGD	56	377000	6353000	Open site	Valid	Artefact : -	Open Camp Site	98458,98459
	Contact	Recorders	Sue Effenberger					Permits	854	
38-4-0016	Cardiff; Blackbutt Reserve;	AGD	56	377222	6353359	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	98458
	Contact	Recorders	Len Dyall					Permits		
38-4-0017	Cardiff; Blackbutt Reserve;	AGD	56	377222	6353359	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	98458
	Contact	Recorders	Len Dyall					Permits		
38-4-0019	Gateshead; Dudley-Jewells Swamp Area;	AGD	56	377362	6350802	Open site	Valid	Artefact : -	Open Camp Site	98458
	Contact	Recorders	Len Dyall					Permits		

Report generated by AHIMS Web Service on 04/05/2020 for Penny Mccardle for the following area at Datum : GDA, Zone : 56, Eastings : 374520 - 378520, Northings : 6350270 - 6354270 with a Buffer of 50 meters. Additional Info : Assessment. Number of Aboriginal sites and Aboriginal objects found is 11

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.