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# Aboriginal Heritage Due Diligence Assessment MacArthur Grange Planning Proposal

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**Toscuz Investments Pty Ltd**

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Template 2.8.1

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# 1. Introduction

## 1.1 Project background

Toscu Investments Pty Ltd are currently in the process of preparing a Planning Proposal for a mixed-use, low-density residential precinct within the MacArthur Grange Club site in the Campbelltown LGA (Lot 3900 DP1170905). The property is approximately 129.5 ha in size, with half of this land area currently being used as a golf course. The proposal would see the rezoning of the property and the creation of approximately 52 low-density environmental living lots ranging in size from 0.5ha to 3.2ha on the current golf course in the northern part of the property.

FPD Planning, on behalf of Toscu Investments, engaged Eco Logical Australia Pty Ltd (ELA) to undertake an Aboriginal Heritage Due Diligence Assessment of the MacArthur Grange Club site (hereafter referred to as 'the study area'; Figure 1) to identify if Aboriginal objects are likely to be located within the area of the proposed works and, if so, whether the proposed works have the potential to harm those objects.

An indicative masterplan has been provided by Architectus (Figure 2).

This assessment outlines the findings of the Aboriginal Heritage Due Diligence Assessment of the study area, in accordance with the *Due Diligence Code of Practice for the protection of Aboriginal Objects in New South Wales* (DECCW 2010a).

## 1.2 Subject site

The subject site is referred to as MacArthur Grange, Varroville being Lot 3900, DP 1170905 and has an area of 129.5 ha. The land is located approximately eight kilometres west of the Campbelltown CBD and is bounded by Raby Road to the north and Gregory Hills Drive to the South. The land borders the Camden-Campbelltown Local Government Area boundary to the west and is situated within the Scenic Hills Protection Area.

The site is occupied by an operational golf course known as MacArthur Grange Golf Club which utilises approximately 71.9 ha of the northern most land. The balance of the land comprises largely degraded Cumberland Plain vegetation and cleared low density grazing patches.

## 1.3 Planning proposal

The site is subject to a Planning Proposal which seeks to rezone the site from C3 Environmental Management to a range of zones including C2 Environmental Conservation, C4 Environmental Living and RE1 Public Recreation and to allow additional permitted uses on part of the site fronting Raby Road to support a future function centre, restaurant and café use.

The Planning Proposal would facilitate development of the site for:

- 52 rural residential / environmental living lots with lots sizes ranging from 0.5ha to 3.2ha
- A large lot fronting Raby Road of around 6ha to support a function centre / restaurant / cafe use in the location of the existing club house

- A conservation reserve and open space to be dedicated to Council comprising around 50% of the site.

The Planning Proposal seeks to deliver a long-term sustainable land use strategy for an important component of Campbelltown local government area's long established and highly valued Scenic Hills landscape unit.

On 12 July 2022 Campbelltown Council determined to support and forward the Planning Proposal to the Department of Planning, Housing and Infrastructure for Gateway Determination. A Gateway Determination was subsequently issued by Department of Planning, Housing and Infrastructure on the 6 December 2023 endorsing the Planning Proposal to proceed to public exhibition subject to conditions.

## 1.4 Assessment process

The methodology of this archaeological due diligence assessment is to:

- Undertake a search of the Aboriginal Heritage Information Management System (AHIMS) register maintained by Heritage NSW to establish if there are any previously recorded Aboriginal objects or places within the study area;
- Undertake a search of the NSW State Heritage Inventory, the Australian Heritage Database, and the Campbelltown Local Environmental Plan (LEP) 2015 Schedule 5 (Environmental Heritage) in order to determine if there are any sites of archaeological significance or sensitivity located within the study area;
- Undertake a desktop review of relevant previous archaeological assessments to understand the local archaeological context and assist in predicting the likely occurrence of unrecorded archaeological sites or objects, and
- Undertake a site inspection to identify any Aboriginal sites and areas of sensitive landforms.

The aim of this report is to establish whether known or additional unrecorded Aboriginal objects are present within the study area and determine whether further assessment and/or an Aboriginal Heritage Impact Permit is required. The due diligence process involves *"taking reasonable and practical measures to determine whether your actions will harm an Aboriginal object and, if so, what measures can be taken to avoid that harm"* (DECCW 2010a:4). If harm cannot be avoided, further technical studies and approvals will be required (see Section 4).

## 1.5 Due diligence assessment summary

ELA has undertaken an extensive search of the AHIMS database maintained by Heritage NSW and a review of available background reports including the residential subdivision of Camden Lakeside, a multi-stage Aboriginal heritage assessment and approvals process undertaken by ELA whose proposed development and landscape was similar in scope to the current proposal for Macarthur Grange.

A site inspection undertaken by ELA Archaeologist Daniel Claggett on the 09<sup>th</sup> of March 2020 identified several areas of archaeological potential within the study area, with most of the areas of archaeological potential identified located in the southern half of the study area. Based on the indicative masterplan, all areas identified as presenting a high archaeological potential are located within the proposed E2 zone (Figure 36).

Although the Macarthur Grange project is currently in the Planning Proposal stage and no development is currently proposed to take place, recommendations are provided in Section 5.1 on the assumption that development will be eventually taking place in the area, in order for the proponent to be aware of the heritage constraints identified by this due diligence assessment.





Figure 1: The study area



# Macarthur Grange

## Indicative Master Plan



Figure 2: Indicative masterplan of the Macarthur Grange mixed-use residential precinct (Source: Architectus 2024)

## 2. Basis for cultural heritage management

*Places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past, and to lived experiences ... they are irreplaceable and precious (Australia ICOMOS Burra Charter 2013:1).*

Traditionally, heritage and archaeological assessments have focused on the significance of the tangible elements of cultural heritage (Brown 2008). Items such as structures and archaeological artefacts have been considered predominantly in terms of their scientific/research potential and representativeness (New South Wales Heritage Office 2015:20-24). By focusing on the scientific qualities of heritage, many of the intangible qualities of heritage were not considered. This is especially crucial when participating in the management and protection of Aboriginal cultural heritage. By nature, Aboriginal cultural heritage is multi-faceted: it consists not only of tangible structures and objects of value for scientific investigations, but also of a deeply complex array of intangible expressions, such as stories, memories, and traditions. Many of the rights and interests of Aboriginal communities in their own heritage is formed on the basis of this intangibility. It stems from their spirituality, customary law, original ownership, and continuing custodianship (Australian Heritage Commission 2002:5). These intangible expressions often share a strong link with the landscape. Byrne *et al.* (2003:3) describe this connection in the form of a map, where individuals:

*Carry around in [their] heads a map of the landscape which has all these places and their meanings detailed on it. When we walk through our landscapes the sight of a place will often trigger the memories and the feelings [that] go with them ... it is the landscape talking to us.*

Crucially, those who are not connected to the landscape in question will not be able to discern these intangible meanings embedded in the landscape; they can only come to recognise the significance by consulting with local knowledge holders (Byrne *et al.* 2003:3). And, even so, they may vary between individuals, reflecting unique experiences.

By recognising the rights and interests of Aboriginal knowledge holders and community members in their cultural heritage, all parties involved in the identification, conservation, and management of this cultural heritage must acknowledge that Aboriginal people (Australian Heritage Commission 2002:6):

- Are the primary source of information on the value of their heritage and how this is best conserved;
- Must have an active role in any heritage planning processes;
- Must have input into primary decision-making in relation to their heritage so that they can continue to fulfil their obligations towards this heritage; and
- Must control the intellectual property and other information relating specifically to their heritage, as this may be an integral aspect of its heritage value.

As such, cultural heritage sites and objects are fundamental elements of Aboriginal peoples' identities, connections, and belonging to their communities. The careful protection and management of this heritage is essential for the preservation of connection between past, present, and future.

### 3. Assessment process

#### 3.1 Identify if the proposed activity will disturb the ground surface

Although no impacts or development of the area will be undertaken in the Planning Proposal stage of this project, this due diligence assessment will assess the entirety of the study area under the assumption that future impacts from the construction of residential dwellings and infrastructure will occur. Therefore, the due diligence process moves to the next stage.

#### 3.2 Database searches and known information sources

##### 3.2.1 AHIMS search

The Aboriginal Heritage Information Management System (AHIMS) is a database maintained by Heritage NSW and regulated under Section 90Q of the *National Parks and Wildlife Act 1974*. AHIMS holds information and records regarding the registered Aboriginal archaeological sites (Aboriginal objects, as defined under the Act) and declared Aboriginal places that exist in NSW.

An extensive search of the AHIMS database was conducted the 28<sup>th</sup> of February 2024 to identify if any registered Aboriginal sites were present within, or adjacent to, the study area (Appendix A).

The AHIMS database search represents 2km around the study area and was conducted within the following coordinates:

**Table 1: Search parameters for the AHIMS database search**

Search Parameters	
GDA Zone	56
Eastings	294236 - 298236
Northings	6231440 - 6235440

The AHIMS search result showed:

**Table 2: Search results for the AHIMS database search**

Search Results	
Aboriginal sites recorded	53
Aboriginal places declared	0

No Aboriginal sites have previously been recorded within the study area. Several AHIMS sites have been recorded less than 100m from the study area, including AHIMS ID 52-2-4904, AHIMS ID 52-2-4901, AHIMS ID 52-2-4900 and AHIMS ID 52-2-4899 (Figure 4).

The distribution of recorded Aboriginal sites adjacent to the study area is shown in Figure 3 and Figure 4. The frequencies of site types recorded within the AHIMS database search area are listed in Table 3 below.

**Table 3: Frequencies of site types**

Site Features	Number	%
Artefact	44	83.02
Artefact; Potential Archaeological Deposit (PAD)	5	9.43
Modified Tree (Carved or Scarred)	4	7.55
<b>Total</b>	<b>53</b>	<b>100</b>

### 3.2.2 Local, state and national heritage registers

Searches of the Australian Heritage Database, the State Heritage Register (SHR) and the Campbelltown LEP 2015 were conducted on the 29<sup>th</sup> of February 2024 in order to determine if any places of archaeological significance are located within the study area.

No Aboriginal archaeological sites were recorded on these databases within the study area.



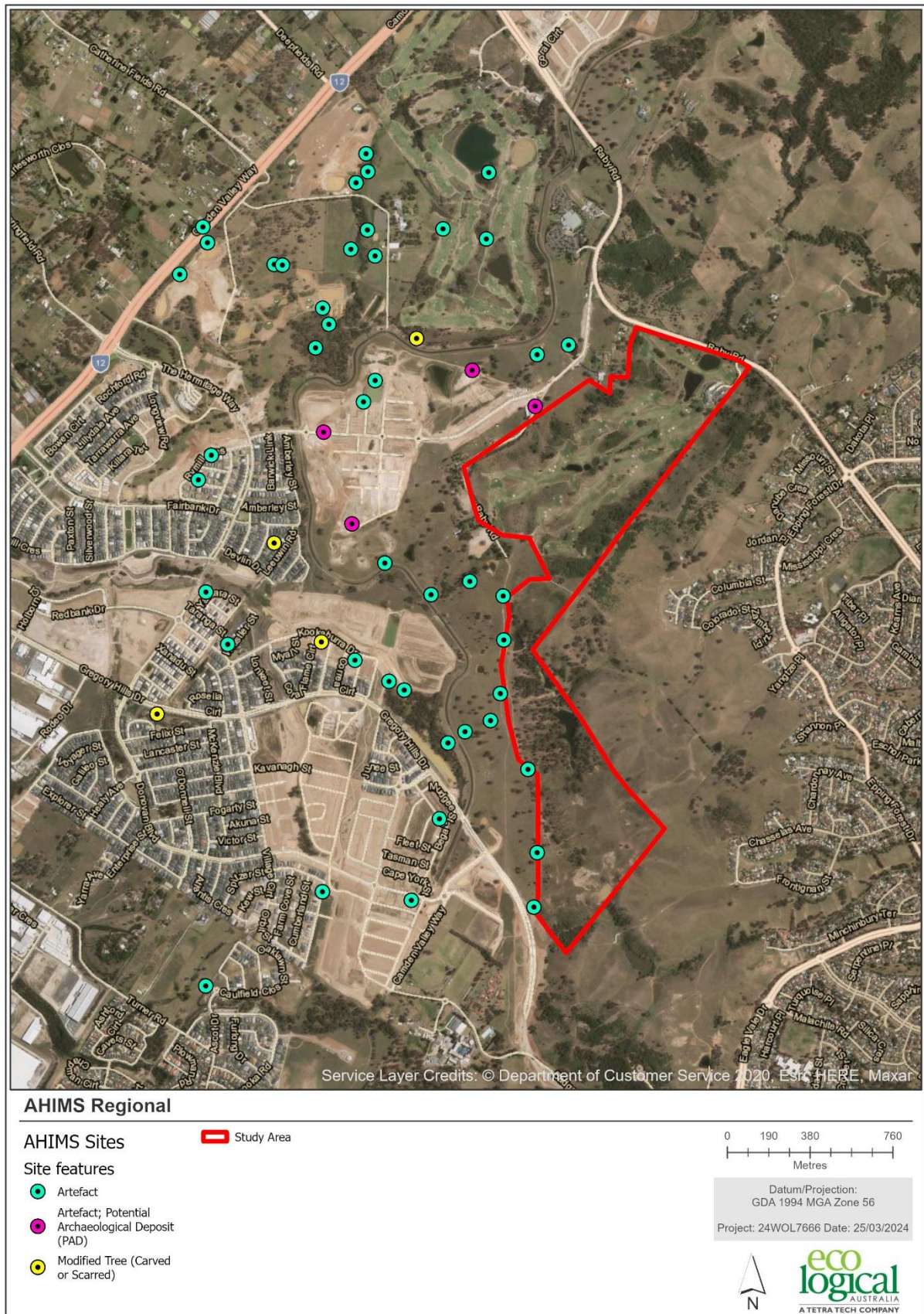


Figure 3: AHIMS sites within the region



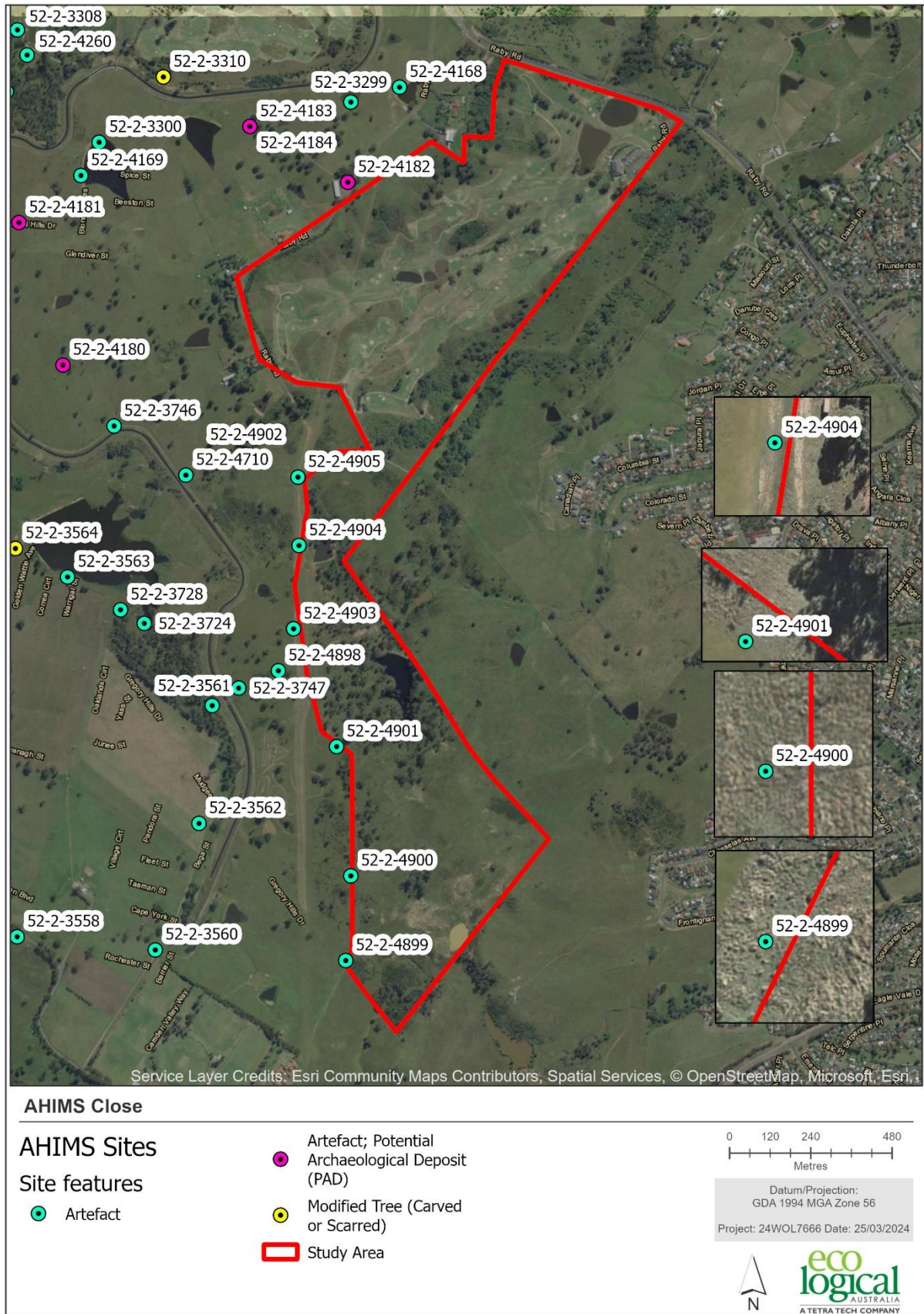


Figure 4: AHIMS sites within proximity to the study area

### 3.2.3 Previous archaeological investigations

There have been multiple Aboriginal heritage assessments, surveys and excavations undertaken in the areas surrounding the study area and ELA have undertaken several Aboriginal heritage assessments as part of the residential development of Gledswood Hills and Camden Lakeside, located approximately 375m northwest of the current study area. The following section summarises some key Aboriginal archaeological assessments undertaken within the local area:

GML, 2012. *East Leppington – Aboriginal Cultural Heritage Assessment Report*. Prepared for Stockland Development.

Godden Mackay Logan (GML) were previously engaged by Stockland Development to prepare an Aboriginal Cultural Heritage Assessment (ACHA) and Archaeological Technical Report (ATR) for a large residential development in the East Leppington Precinct, located approximately 5km to the northwest of the current study area in a similar landform. Site survey of the East Leppington Precinct resulted in the identification of 60 Aboriginal sites. A test excavation program followed which identified a distinct archaeological patterning and helped to establish a predictive model for archaeological sensitivity across the precinct.

A total of 519 lithic items, from 533 test pits, were recovered during the test excavation program. This assemblage comprised 471 artefacts and an additional 47 heat shattered and indeterminate pieces of artefact stone. Artefact density for the entirety of the study area was low, with an average of one artefact per test pit. Lithics were not spread evenly across the study area and artefacts were found to be distributed in 'clusters' across the precinct. The extensive heritage assessment and test excavation conducted by GML (2012) in the East Leppington Precinct allowed the following archaeological patterns to be established for artefact distribution in the area:

- Most stone-based sites are positioned on landforms within 100 m of water sources;
- The few archaeological excavations which have occurred have presented mixed outcomes, in that few have yielded high density deposits, whilst the majority have resulted in the recovery of low-density stone assemblages; and
- Except for Aboriginal stone objects, little other physical evidence from Aboriginal occupation of the region has survived.

These results corroborate the nearby AMBS (2012) study in the Austral and Leppington North Precincts as well as the predictive model put forward by White and McDonald (2010) for the Cumberland Plain, which considers the role water sources and landforms play in artefact distribution and density.

Biosis, 2015. *Gledswood Hills Residential Development – Aboriginal Cultural Heritage Assessment Report*. Prepared for Mirvac Homes NSW Pty Ltd.

Biosis were previously engaged by Mirvac Homes to undertake an Aboriginal Cultural Heritage Assessment for the proposed residential development at 182, 184 and 188 Raby Road, Gledswood Hills NSW. This assessment was undertaken approximately 1km to the west of the current study area.

The initial desktop assessment identified two previously recorded Aboriginal sites within the study area, AHIMS ID 52-2-3299 and AHIMS ID 52-2-3300, and noted that the study area was situated within 250m of a permanent water source and on a landform comprising steep slopes and crests.



An archaeological survey was undertaken which identified five areas of PAD, an artefact scatter, one isolated find and two areas of high archaeological sensitivity.

A program of test excavation subsequently undertaken within the study area recovered a total of 23 artefacts from 110 test pits across the five areas of identified PAD. The test excavation identified that all Aboriginal sites within the study area were of low scientific significance due to their low density and levels of disturbance, however, were assessed as being high in cultural value after discussions with local Aboriginal people.

As a result of this assessment and test excavation, community collection of surface artefacts was recommended. Reburial of the artefacts within the study area would be implemented once redevelopment had occurred, with the nominated area being a riparian corridor within the recreation zoned land, where no impacts were anticipated to occur. Other recommendations included consultation with registered Aboriginal parties should continue and an AHIP was sought for unavoidable impacts to the identified Aboriginal sites within the study area.

Eco Logical Australia, 2017. *Camden Lakeside Country Club, El Caballo Blanco and Gledswood North (Lot 1201) – Aboriginal Cultural Heritage Assessment Report*. Prepared for Sekisui House Australia Pty Ltd.

ELA were previously engaged by Sekisui House (now SH Camden Lakeside Pty Ltd) to prepare an ACHA for a new residential development at Camden Lakeside, located approximately 375m northwest of the current study area. The Camden Lakeside development measures approximately 176 hectares in size and is bordered by Camden Valley Way, Raby Road and the Sydney Water Supply Upper Canal. The study area itself was divided into three sections, consisting of 101 hectares of land within the Camden Lakeside Country Club (DP 1206855), 57 hectares of land within the former El Caballo Blanco (ECB) property (DP 1175424) and an 18-hectare property between Camden Lakeside and ECB (DP 1187381).

Previous assessment and site survey of the Camden Lakeside study area had identified a total of 12 Aboriginal sites, comprising two scarred trees and 10 artefact scatters as well as three PADs. A test excavation program was undertaken from November 2015 to January 2016. Excavation took place in two stages over nine transects (Transects A – I) and resulted in the recovery of 284 lithics / culturally modified stone artefacts. Aboriginal sites identified through survey and excavation within the Camden Lakeside / ECB / Gledswood North study area were typically located within close proximity to drainage lines and within areas consisting of flat land, including the modified golf course.

The majority of artefacts were recovered from two transects in close proximity to Riley's Creek (<50 m), and lower densities recovered further from the creek. The test excavation found that artefacts were not evenly distributed across the landform, with 75% of the test pits containing no artefacts.

Of the test pits excavated, two possessed a high enough concentration of Aboriginal objects that salvage excavation was recommended to be undertaken under an AHIP prior to development. The development was also designed to conserve a number of the sites, including the two scarred trees, one artefact scatter and part of one PAD site as a parkland area.

Extent Heritage, 2018. *Aboriginal Cultural Heritage Assessment: 121 Raby Road, Gledswood Hills*. Prepared for T. Simonetta & Co.

Extent Heritage were previously engaged by T. Simonetta & Co. (C/- TN Consulting Pty Ltd) to prepare an ACHA for a proposed residential subdivision and subsequent development of 121 Raby Road, Gledswood Hills, located approximately 1.9km to the northwest of the current study area. A previous Aboriginal heritage assessment, undertaken by Dominic Steele Consulting Archaeology (2014), identified one area of PAD on an elevated area near Raby Road. As a result, Extent Heritage undertook further investigation of the study area, including test excavation.

A field survey was undertaken prior to, and throughout, the test excavation program. Due to the size of the study area, survey focused on areas with high ground visibility and transects lines between test pits.

The test excavation program consisted of 43 test pits and was undertaken between 12 and 15 March 2018, targeting areas determined through desktop research and site survey to possess at least moderate archaeological potential. The test excavation resulted in the identification of one new Aboriginal archaeological site, consisting of a single pink silcrete flake. No further cultural material was identified. No further assessment was recommended for the study area, however an AHIP application and reburial of the isolated artefact site would be required before development could proceed.

### 3.3 Landscape assessment

The project area is located within the Cumberland Plain and comprises a gently undulating landscape. The underlying geology of the project area comprises the Wianamatta Group, made up of the following units: Bringelly Shale; Minchinbury Sandstone and Ashfield Shale. The local topography of the study area is varied, due to the size of the property, but is made up largely of the undulating landscape typical of the Cumberland Plain. Steep, sloping landforms are present within the central and southern portions of the study area, while the northern portion consists of gentler slopes, which have likely been modified as part of the construction of the golf course within this area.

Soil landscapes are largely determined by the underlying geology. Each of the soil landscapes relevant to the project area has distinct morphological and topographical characteristics, and they provide terrain units to summarise archaeological potential and surface detectability of archaeological sites. In general, Wianamatta Group-derived soils are characterised by low fertility and high soil acidity (Benson 1992; Tozer 2003). The study area consists predominantly of the Blacktown Soil Landscape and Luddenham Soil Landscape, with a small portion of the Picton Soil landscape occurring in the northeast of the study area.

The Blacktown Soil landscape and associated landforms have undulating rises with slopes usually less than 5%. This landscape consists of up to four soil horizons with shallow to moderately deep red to brown sandy clay soils on crests, upper slopes and well drained areas, and deep yellow sand and clay soils on lower slopes and localised areas of poor drainage (Hazelton & Tille 1990).

The Luddenham Soil landscape comprises moderately inclined modal terrain slopes of 5-20%, with narrow ridges and hillcrests, located on Wianamatta Group shales and often associated with Minchinbury Sandstone. The soils are characterized on crests and upper slopes by brown to red sandy clay soils and massive earthy clays. This landscape has a high soil erosion hazard (Hazelton & Tille 1990). The soil generally comprises dark podzolic soils or earthy clays on the crest, and yellow podzolic soils on the lower slopes (Bannerman and Hazelton 1990).

The Picton Soil landscape occurs in areas of steep to very steep side slopes characterised by mass movement and terracettes on Wianamatta Group and derived colluvial materials. Dominant soil types within the Picton Soil landscape include a dark brown, hard setting sandy loam (A1 Horizon), a reddish-brown sandy clay (B Horizon) and a brown stony light clay (B Horizon). Picton soils are highly acidic and are prone to erosion due to the steep, sloping nature of this soil landscape (Bannerman and Hazelton 1990).

## HYDROLOGY

Several first-order drainage lines flow through the study area, and within the southern portion of the property, first-order drainage lines connect to Bunbury Curran Creek, a third-order stream and established drainage line in the wider area (Figure 5). In the northern portion of the study area, first-order drainage lines connect to a second-order stream that runs southwest to northeast and eventually connects to a fourth-order creek line 700 m north of the study area (Figure 5). The second-order stream and adjoining first-order streams within the northern portion of the study area have been highly modified due to the construction of the golf course.

### 3.4 Predictive model

Based on the material evidence and range of archaeological sites across the region, it is clear that Aboriginal people have been utilising the land and resources within the Cumberland Plain for thousands of years. The predictive model outlined in Table 4 below has been developed for the study area based on the AHIMS search results, landscape assessment and regional and local Aboriginal archaeological context outlined above.

**Table 4: Predictive model**

Site Type	Description	Likelihood to occur
Open camp sites/stone artefact scatters/isolated finds	Open camp sites represent past Aboriginal subsistence and stone knapping activities, and include archaeological remains such as stone artefacts and hearths. This site type usually appears as surface scatters of stone artefacts in areas where vegetation is limited and ground surface visibility increases.  Isolated finds may represent a single item discard event or be the result of limited stone knapping activity. The presence of such isolated artefacts may indicate the presence of a more extensive, in situ buried archaeological deposit, or a larger deposit obscured by low ground visibility.	Moderate-High: Based on the large area of the property, the pockets of the study area that are relatively undisturbed and the number of drainage lines that flow through the area, there is the potential for this site type to occur.
Potential Archaeological Deposit	Potential Archaeological Deposits (or PADs) are areas where there is no surface expression of stone artefacts, but due to a landscape feature there is a strong likelihood that the area will contain buried deposits of stone artefacts.	Moderate-High: Based on the large area of the property, the pockets of the study area that are relatively undisturbed and the number of drainage lines that flow through the area, there is the potential for this site type to occur.
Scarred or carved trees	Tree bark was utilised by Aboriginal people for various purposes, including the construction of shelters (huts), canoes, paddles, shields, baskets and bowls, fishing lines, cloaks, torches and bedding, as well as being beaten into fibre for string bags or ornaments (sources cited in Attenbrow 2002: 113). Trees may also	Moderate: In portions of the study area that have retained native, mature-growth vegetation, there is the potential for this site type to

Site Type	Description	Likelihood to occur
	have been scarred in order to gain access to food resources (e.g. cutting toe-holds so as to climb the tree and catch possums or birds), or to mark locations such as tribal territories. Such scars, when they occur, are typically described as scarred trees.	occur.



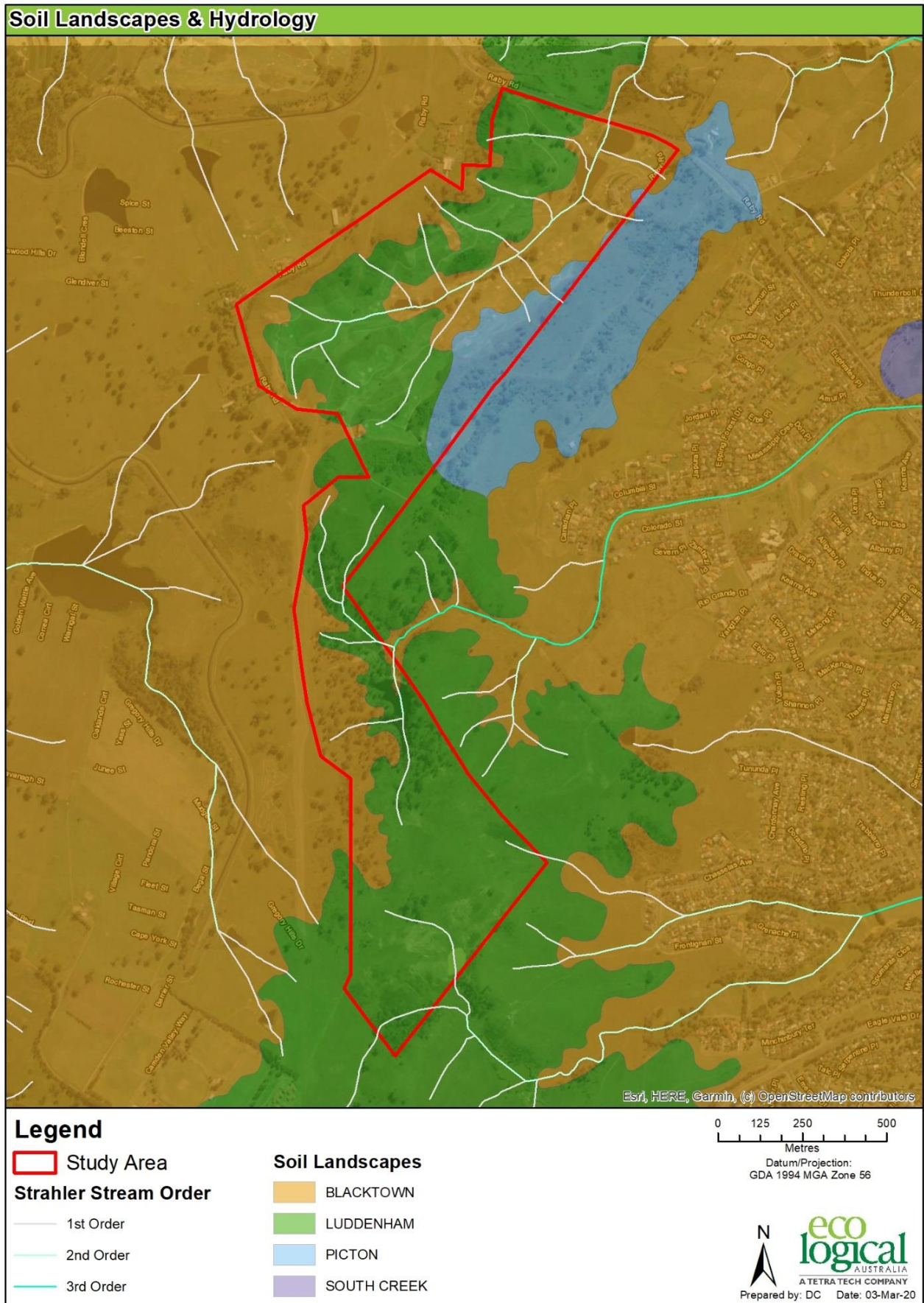


Figure 5: Soil landscapes and hydrology of the study area



### 3.5 Visual inspection

A visual inspection of the study area was undertaken by ELA Archaeologist Daniel Claggett on 09 March 2020. Visual inspection aimed to identify Aboriginal objects if present and assess the archaeological potential of the study area. Due to the size of the study area and the variance in landforms and ground disturbance levels across the property, the site survey summary covered in this section has been divided into six separate survey units (SU) for the sake of clarity. A visual representation of the SU's described in the following section is provided in Figure 33 below.

#### 3.5.1 Survey Unit 1: Northeastern Golf Course

Survey Unit 1 (SU1) consists of a small portion of land in the study areas northeast, including portions of the golf course that makes up most of the northern half of the property. SU1 consists of a flat / gently sloping landform (Figure 6) that becomes increasingly steep towards the western border of the study area (Figure 7). Most of SU1 has been cleared of vegetation and has been partially modified for use as part of the golf course (Figure 8, Figure 9). The area between the two first-order streams that run through SU1 consists of overgrown, exotic plant species atop a steeply sloping landform (Figure 10). The first-order streams that have been mapped as running through SU1 could not be identified, suggesting these streams are only visible after periods of heavy, sustained rainfall.



**Figure 6: Gently sloping landform within SU1, northwest aspect**



**Figure 7: The increasingly steep landform within SU1's western portion, west aspect**



**Figure 8: Northwest corner of SU1, currently used as a pitching green, west aspect**



**Figure 9: Land clearance and ground modification associated with the golf course in SU1, west aspect**



**Figure 10: Exotic vegetation within SU1, south aspect**

### 3.5.2 Survey Unit 2: Western Golf Course

Survey Unit 2 (SU2) consists of a large portion of land west of the golf course that has been largely undisturbed by activities associated with the golf course. Landforms within SU2 are similar to landforms in SU1, with a flat / gently sloping landform giving way to increasingly steep slopes at the study areas western border (Figure 11, Figure 12). Additionally, a narrow corridor of overgrown exotic vegetation also exists along the western border of SU2, with some portions of this vegetative corridor thicker than in other areas. Several areas of flat / terraced land located within or nearby first-order streams that run into SU2 were identified (Figure 12, Figure 14) and assessed as possessing archaeological potential. As is the case in SU1, the first-order streams that have been mapped as running through SU2 could not be identified, suggesting these streams are only visible after periods of heavy, sustained rainfall.



**Figure 11: Gently sloping landform within SU2, west aspect**



**Figure 12: Steeply sloping landform located within the western portion of SU2, south aspect**





**Figure 13: Flat / gently sloping landform in close proximity to a first-order stream in SU2, west aspect**



**Figure 14: Terraced / gently sloping landform in the northern portion of SU2, west aspect**

### 3.5.3 Survey Unit 3: Southern Golf Course

Survey Unit 3 (SU3) consists of a small portion in the south of the golf course area that has experienced slightly less impact from activities associated with the golf course but has nonetheless experienced moderate levels of ground disturbance from landscaping and the placement of a power easement in the area (Figure 15, Figure 16). SU3 is made up primarily of a sloping landform (Figure 17) except for a small portion of land in the centre of SU3 made up of a gently sloping landform (Figure 18).



**Figure 15: Exposed, disturbed soils within SU3**



**Figure 16: Disturbance from a power easement running through SU3, southwest aspect**



**Figure 17: Looking down a moderately sloping landform within SU3, northwest aspect**



**Figure 18: Gentle sloping landform within SU3 looking north towards the golf course**



### 3.5.4 Survey Unit 4: Macarthur Grange Golf Course

Survey Unit 4 (SU4) consists of the remainder of the Macarthur Grange Golf Course that was not covered in the previous survey units. SU4 constitutes the most disturbed portions of the overall study area, with significant landscape modifications having been undertaken to create the golf course and its features (Figure 19, Figure 20). This portion of the study area contains a second-order drainage line; however, it has been heavily modified and has been converted into an artificial channel / canal (Figure 21). The eastern border of SU4 has not been modified by the creation of the golf course but is located on a steep sloping landform and contains dense exotic vegetation (Figure 22), making it unlikely for Aboriginal sites to be located in this area.



**Figure 19: Dam within the northwest corner of SU4**



**Figure 20: Modified landform / golf fairway within SU4**



**Figure 21: Second-order stream in SU4 that has been converted into an artificial channel**



**Figure 22: The eastern border of SU4 is visible in the right of this image, highlighting its steep, heavily vegetated nature**

### 3.5.5 Survey Unit 5: Central Study Area

Survey Unit 5 (SU5) consists of a large portion of land immediately south of the Macarthur Grange Golf Course. This survey unit, along with Survey Unit 6, has not been impacted by the construction of the golf course, and exhibit considerably less ground disturbance in comparison to the survey units in the north of the study area. Visible disturbances within SU5 are related to the areas use for pastoral land, with land clearance (Figure 23), access tracks (Figure 24) and the construction of dams (Figure 25) the most visible disturbances in the area. The western portion of SU5 contains flat land, and several areas of Aboriginal archaeological potential were identified within these flat landforms, particularly in areas close to first and second-order streams in the area (Figure 26, Figure 27).



Additionally, a potential archaeological deposit (named MG-PAD1 in this report) was identified in an area of flat land located near the confluence of a first-order stream with the second-order stream that runs through SU5 (Figure 35). The flat landform within the western portion of SU5 transitions into a gently sloping landform as it approaches the second-order stream running through the centre of SU5 (Figure 28), becoming increasingly steep until it reaches the drainage line. Land located east of the second-order stream is significantly steeper and consists of more slopes than the western portion of SU5, lowering the potential for Aboriginal sites within this section.



**Figure 23: Land clearance within SU5, south aspect**



**Figure 24: Access track and livestock movement visible along the western border of SU5, northwest aspect**



**Figure 25: Dam located within the northern portion of SU5, east aspect**



**Figure 26: Flat landform located near to a first-order drainage line, south aspect**



**Figure 27: Flat landform in the southern portion of SU5, southeast aspect**



**Figure 28: Sloping landform approaching the second-order drainage line in SU5**



### 3.5.6 Survey Unit 6: Southern Study Area

Survey Unit 6 (SU6) consists of the southernmost portion of the study area. SU6 is made up of a landscape dominated by sloping landforms (Figure 29), with small sections of terraced, flat land located in the south (Figure 30) and northeast (Figure 31) of SU6, with the eastern portion of SU6 containing more areas of flat / gently sloping land than the western portion (in contrast to SU5). In addition to the sloping landforms making up most of SU6, the southernmost portion of SU6 is made up of what appears to be either modified land or fill material along with a large dam (Figure 32), suggesting extensive disturbance in this area.



**Figure 29: Overview of the type of sloping landforms that make up a large portion of SU6, north aspect**



**Figure 30: View from atop the terraced landform in the south of SU6**



**Figure 31: Terraced/gently sloping landform in the northeast of SU6, looking towards the second-order drainage line**



**Figure 32: Modified land /fill material in the southernmost portion of SU6. The large dam is also visible in the right of the image**

Overall, the entirety of the study area contains a large variance of landforms and ground disturbance levels, impacting on where areas of archaeological potential were and were not identified. Based on observations made during site survey, desktop research and mapping of the property, a map highlighting areas of moderate and high archaeological potential is presented in Figure 34 and Figure 35 below.

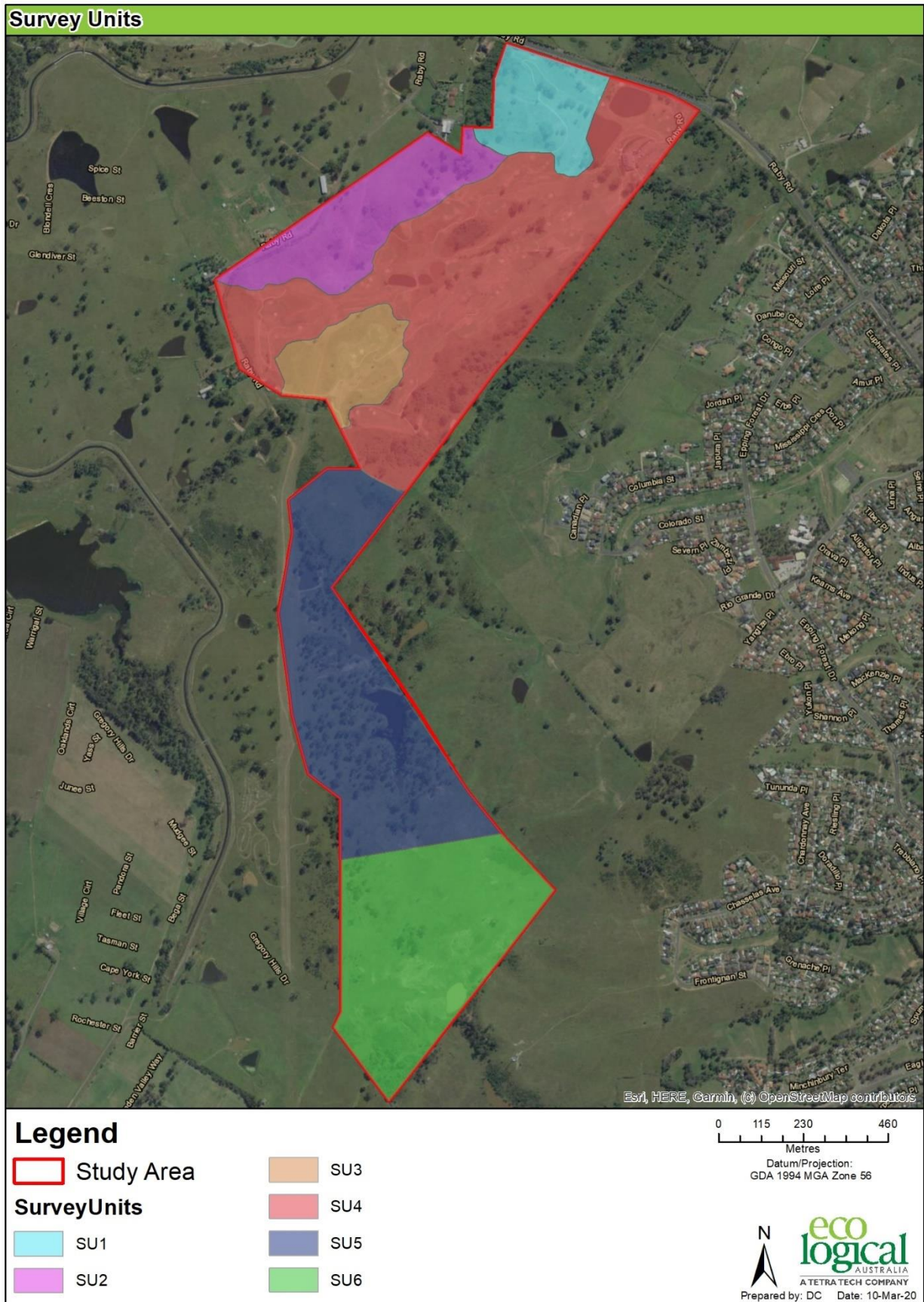


Figure 33: Survey units





Figure 34: Areas of archaeological potential in the northern portion of the study area



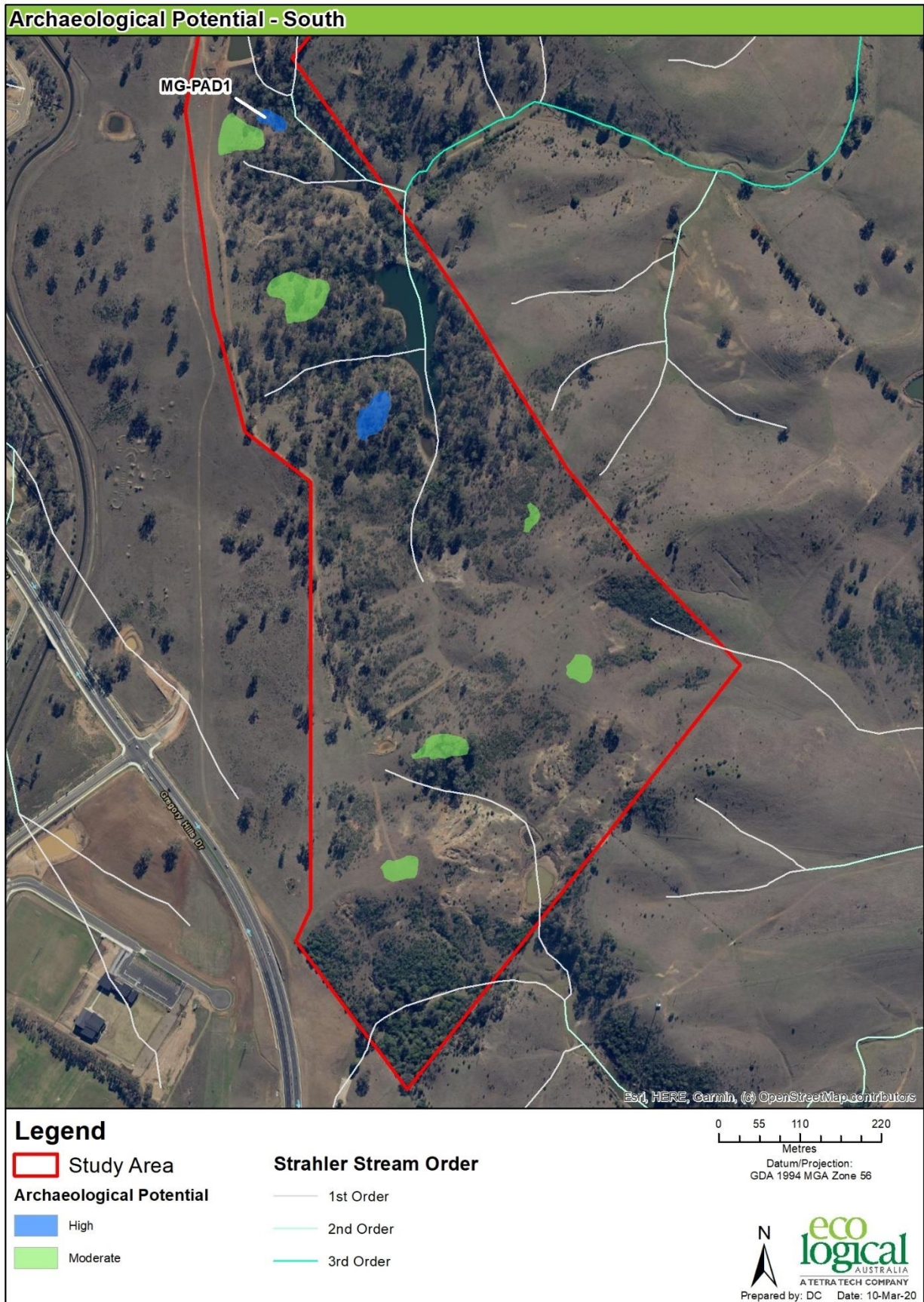


Figure 35: Areas of archaeological potential in the southern portion of the study area. The PAD area has been labelled "MG-PAD1"





Figure 36: Archaeological potential of the study area, overlaid over the proposed masterplan

## 4. Statutory requirements

Aboriginal objects and places in New South Wales are afforded protection under the *National Parks and Wildlife Act 1974* (NPW Act) irrespective of whether they are registered on AHIMS. Strict penalties apply for engaging in activities that inflict harm to an Aboriginal cultural heritage site or object without consent for activities under the NPW Act. Under Part 6 of the NPW Act, consent or authorisation for harmful activities may be given under an Aboriginal Heritage Impact Permit (AHIP). Should harm be inflicted upon an Aboriginal site or object, there are five defences:

- The harm was authorised under an AHIP;
- The proponent exercised due diligence prior to causing the harm and is able to demonstrate this;
- The harm was caused during activities that complied with a code of practice as described in Part 5 of the *National Parks and Wildlife Regulation 2019* (New South Wales). For example, undertaking archaeological test excavations in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010c);
- The harm was caused as part of a low-impact activity or omission under the regulation, and the proponent was not aware of the presence of Aboriginal cultural material; or
- The harm caused during activities that are exempted under Section 87A of the NPW Act. For example, emergency fire-fighting or bushfire hazard reduction work, as defined by the *Rural Fires Act 1997* (NSW).

To assess the requirement of an AHIP, Heritage NSW necessitates that an Aboriginal Cultural Heritage Assessment (ACHA) is prepared in accordance with the *Guide to Investigating, Assessing, and Reporting on Aboriginal Cultural Heritage in New South Wales* (OEH 2011) and the *Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010a). Consultation with Aboriginal people is a requirement of the heritage assessment process and recognises that;

- Aboriginal people should have the right to maintain culture, language, knowledge and identity
- Aboriginal people should have the right to directly participate in matters that may affect their heritage
- Aboriginal people are the primary determinants of the cultural significance of their heritage.

These two guides establish a set of guidelines to aid land users in being aware of how their activities could damage Aboriginal cultural heritage sites and advise Archaeologists of the requirements that must be followed during the investigation of Aboriginal cultural heritage sites. If an AHIP is required, Heritage NSW necessitates that it is further supported by a copy of the approval for the development or infrastructure issued under Part 4 or Part 5 of the *Environmental Planning and Assessment Act 1979* in the form of a Development Application or a Review of Environmental Factors.



## 5. Conclusions

The purpose of the Aboriginal heritage due diligence is to identify if there are registered Aboriginal sites and/or sensitive landforms which may indicate the presence of Aboriginal sites and may therefore require further assessment and approval under Part 6 of the *National Parks and Wildlife Act 1974*.

ELA has undertaken an extensive search of the AHIMS database maintained by Heritage NSW and a review of available background reports including the residential subdivision of Camden Lakeside, a multi-stage Aboriginal heritage assessment and approvals process undertaken by ELA whose proposed development and landscape was similar in scope to the current proposal for Macarthur Grange.

A site inspection undertaken by ELA Archaeologist Daniel Claggett on the 09<sup>th</sup> of March 2020 identified several areas of archaeological potential within the study area, with most of the areas of archaeological potential identified located in the southern half of the study area. Based on the indicative masterplan, all areas identified as presenting a high archaeological potential are located within the proposed E2 zone (Figure 36).

Although the Macarthur Grange project is currently in the Planning Proposal stage and no development is currently proposed to take place, recommendations are provided in Section 5.1 on the assumption that development will be eventually taking place in the area, in order for the proponent to be aware of the heritage constraints identified by this due diligence assessment.

### 5.1 Recommendations

Based on the findings of this due diligence assessment and the requirement of the NP&W Act the following is recommended.

#### ***Recommendations 1 – ACHA, Aboriginal community consultation and test excavation***

Based on the presence of multiple areas of moderate and high archaeological potential within the study area, any future development that impacts these areas should first be subject to further assessment in the form of an Aboriginal Cultural Heritage Assessment (ACHA) which would include an impact assessment of the proposed development.

If development cannot be avoided in these areas containing moderate potential, an ACHA would be required to ascertain the nature and extent of any subsurface archaeological deposits that may exist. The ACHA would entail Aboriginal community consultation following the '*Aboriginal cultural heritage consultation requirements for proponents 2010*' (DECCW 2010) to identify Aboriginal cultural heritage values through consultation with Aboriginal stakeholders.

Further archaeological assessment including detailed field survey with Aboriginal stakeholders and archaeological test excavation should also be undertaken to inform archaeological values across the developable area. The ACHA can be prepared in advance of any DA and inform areas of opportunity and constraint for development.

#### ***Recommendations 2 – AHIP application***

The ACHA can be used to support a future Aboriginal Heritage Impact Permit (AHIP) application to Heritage NSW if Aboriginal sites cannot be avoided by future development. Heritage NSW requires that AHIP applications are supported by an approval under Part 4 or Part 5 of the *Environmental Planning and Assessment Act 1979* (such as a DA) as a supporting document.

***Recommendation 3 – Areas set aside for conservation***

Areas that have been identified as possessing archaeological potential (such as the MG-PAD1 site) should be considered for conservation where possible. This includes areas of high archaeological and cultural significance, an assessment which will likely require Aboriginal consultation to fully determine. Consultation with the Aboriginal community will assist in identifying priority areas for conservation. An Aboriginal heritage management plan should be developed for the long-term management of the conservation areas.

It is noted that all areas identified as presenting high archaeological potential are located within the proposed E2 zone.

***Recommendation 4 - General measures***

Aboriginal objects are protected under the NPW Act regardless of if they are registered on AHIMS or not. If suspected Aboriginal objects, such as stone artefacts are located during future works, works must cease in the affected area and an archaeologist called in to assess the finds. If the finds are found to be Aboriginal objects, Heritage NSW must be notified under section 89A of the NPW Act. Appropriate management and avoidance or approval under a section 90 AHIP should then be sought if Aboriginal objects are to be moved or harmed.

In the extremely unlikely event that human remains are found, works should immediately cease, and the NSW Police should be contacted. If the remains are suspected to be Aboriginal, Heritage NSW should also be contacted at this time to assist in determining appropriate management.

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## Appendix A AHIMS Search Results



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 24WOL7666


Client Service ID : 868097

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
52-2-3716	CG-OCS-07	GDA	56	295351	6233493	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits	4303	
52-2-3728	TR-Transsect H	GDA	56	295370	6232950	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits		
52-2-4710	Gledswood Hills Reburial	GDA	56	295563	6233348	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits		
52-2-3309	CH7	GDA	56	295618	6235027	Open site	Valid	Artefact : 2		
	Contact	Recorders						Permits	4652	
52-2-3747	CG-OCS-08	GDA	56	295719	6232719	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits	4303	
52-2-4168	Gledswood Hills Isolated Find 1 (GI11F1)	GDA	56	296194	6234494	Open site	Destroyed	Artefact : -		
	Contact	Recorders						Permits	3866	
52-2-4260	Gledswood 8	GDA	56	295094	6234589	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits	4450	
52-2-4259	Gledswood 4	GDA	56	295195	6234933	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits	4083	
52-2-4257	Gledswood 6	GDA	56	295219	6235239	Open site	Valid	Artefact : 1		103715
	Contact	Recorders						Permits	3990	
52-2-4905	RRGH AS 5	GDA	56	295894	6233342	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits		
52-2-4901	RRGH AS 4	GDA	56	296008	6232546	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits		
52-2-3360	TR-4	AGD	56	295368	6231755	Open site	Valid	Artefact : 1		102190
	Contact	Recorders						Permits	3112	
52-2-3364	TR-8	AGD	56	294955	6232941	Open site	Valid	Modified Tree (Carved or Scarred) : 1		102190
	Contact	Recorders						Permits		
52-2-4263	Gledswood 9	GDA	56	295033	6234481	Open site	Valid	Artefact : 1		
	Contact	Recorders						Permits	4450	
52-2-4900	RRGH AS 3	GDA	56	296050	6232164	Open site	Valid	Artefact : -		
	Contact	Recorders						Permits		
52-2-3724	TR1 (Campbelltown)	GDA	56	295440	6232910	Open site	Valid	Artefact : 171		
	Contact	Recorders						Permits		
52-2-3568	TR-12	AGD	56	294450	6233798	Open site	Destroyed	Artefact : 2		
	Contact	Recorders						Permits	3111	
52-2-3562	TR-6	AGD	56	295497	6232129	Open site	Valid	Artefact : 5		102190

Report generated by AHIMS Web Service on 28/02/2024 for Kate Storan for the following area at Datum :GDA, Zone :56, Eastings : 294236.0 - 298236.0, Northings : 6231440.0 - 6235440.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 53

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 24WOL7666

Client Service ID : 868097

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	T Russell						Permits	3112	
52-2-1898	RRGH AS 1	GDA	56	295836	6232770	Open site	Valid	Artefact : -		
	Contact					Mr. Matthew Kelleher, Kelleher Nightingale Consulting Pty Ltd (Generic users)	Valid	Artefact : -	Permits	
52-2-1176	Gledswood 1	GDA	56	295273	6235290	Open site	Valid	Artefact : -		
	Contact					Mr. Julian Travaglia			Permits	
52-2-4903	RRGH IF 2	GDA	56	295881	6232894	Open site	Valid	Artefact : -		
	Contact					Mr. Matthew Kelleher, Kelleher Nightingale Consulting Pty Ltd (Generic users)			Permits	
52-2-4904	RRGH AS 6	GDA	56	295897	6233140	Open site	Valid	Artefact : -		
	Contact					Mr. Matthew Kelleher, Kelleher Nightingale Consulting Pty Ltd (Generic users)			Permits	
52-2-1899	RRGH AS 2	GDA	56	296035	6231914	Open site	Valid	Artefact : -		
	Contact					Mr. Matthew Kelleher, Kelleher Nightingale Consulting Pty Ltd (Generic users)			Permits	
52-2-4258	Gledswood 3	GDA	56	294843	6234864	Open site	Valid	Artefact : 1		
	Contact					Ecological Australia Pty Ltd - Sydney - Individual users, Mr. Lyndon Patterson			Permits	4327,4452,4436
52-2-3300	GI12 IF13	AGD	56	295202	6234141	Open site	Valid	Artefact : 1		102190
	Contact	T Russell				Australian Museum Consulting (AM Consulting)			Permits	3866
52-2-3561	TR-5	AGD	56	295336	6232477	Open site	Valid	Artefact : 3		102190
	Contact	T Russell				Jo McDonald Cultural Heritage Management see GML			Permits	2792,3112
52-2-4182	Gledswood Hills PAD 1	GDA	56	296011	6234213	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact					Miss Nicole Castle			Permits	3866
52-2-4183	Gledswood Hills PAD 2	GDA	56	295752	6234378	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact					Miss Nicole Castle			Permits	3866
52-2-4107	SH-IF1	GDA	56	295828	6235286	Open site	Valid	Artefact : -		
	Contact					Ecological Australia Pty Ltd - Sydney - Individual users, Mr. John Beattie			Permits	
52-2-3727	TR-Transsect G	GDA	56	293630	6233120	Open site	Valid	Artefact : 1		
	Contact					AECOM Australia Pty Ltd - Sydney			Permits	
52-2-3569	TR-13	GDA	56	294843	6233385	Open site	Destroyed	Modified Tree (Carved or Scarred) : 1		102190
	Contact	T Russell				Jo McDonald Cultural Heritage Management see GML			Permits	
52-2-3730	CG-TRF-03	GDA	56	294881	6234061	Open site	Valid	Artefact : 1		
	Contact					Miss Melanie (Duplicate of #6080) Thomson			Permits	
52-2-1181	Gledswood Hills PAD 4	GDA	56	295070	6230094	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact					Miss Nicole Castle			Permits	3866

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### Extensive search - Site list report

Your Ref/PO Number : 24WOL7666  
Client Service ID : 868097

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
52-2-2122	MV5 "Mannoka Valley 5"	GDA	56	294529	6231552	Open site	Valid	Artefact :-		97826,102190
	<b>Contact</b>	<b>Recorders</b>	Stephanie Garling, Doctor Jodie Benton, Eco Logical Australia Pty Ltd - Sydney - Indi							
52-2-3567	TR-11	GDA	56	294495	6233875	Open site	Destroyed	Artefact : 10		102190
	<b>Contact</b>	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML							
52-2-1169	Gledswood Hills AS1	GDA	56	295253	6234233	Open site	Destroyed	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Doctor Samantha Gibbins, Miss Nicole Castle							
52-2-3307	CH10	GDA	56	294537	6234964	Open site	Destroyed	Artefact : 1		102190
	<b>Contact</b>	<b>Recorders</b>	Australian Museum Consulting (AM Consulting), Matthew Kelleher, Kelleher Nightingale							
52-2-3559	TR-3	AGD	56	294201	6232610	Open site	Valid	Modified Tree (Carved or Scarred) : 1		102190
	<b>Contact</b>	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML							
52-2-3563	TR-7	AGD	56	295109	6232857	Open site	Valid	Artefact : 257		102190
	<b>Contact</b>	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML							
52-2-4261	Gledswood 10	GDA	56	295265	6235372	Open site	Valid	Artefact : 1		103715
	<b>Contact</b>	<b>Recorders</b>	Eco Logical Australia Pty Ltd - Sydney - Individual users, Mr. Lyndon Patterson							
52-2-3299	CH13 IF4	GDA	56	296050	6234450	Open site	Valid	Artefact : 1		102190
	<b>Contact</b>	<b>Recorders</b>	Australian Museum Consulting (AM Consulting)							
52-2-1184	Gledswood Hills PAD 3	GDA	56	295752	6234378	Open site	Destroyed	Artefact :-, Potential Archaeological Deposit (PAD) :-		
	<b>Contact</b>	<b>Recorders</b>	Miss Nicole Castle, Miss Nicole Castle							
52-2-3310	CH6	AGD	56	295392	6234334	Open site	Valid	Modified Tree (Carved or Scarred) :-		102190
	<b>Contact</b>	<b>Recorders</b>	Australian Museum Consulting (AM Consulting), Matthew Kelleher							
52-2-3726	TR Transsect 1	GDA	56	294530	6233360	Open site	Valid	Artefact : 1		
	<b>Contact</b>	<b>Recorders</b>	AHQOM Australia Pty Ltd - Sydney							
52-2-3297	ch11	AGD	56	294305	6234628	Open site	Valid	Artefact :-		102190
	<b>Contact</b>	<b>Recorders</b>	Matthew Kelleher							
52-2-3308	CH9	AGD	56	294961	6234473	Open site	Valid	Artefact : 5		102190
	<b>Contact</b>	<b>Recorders</b>	Australian Museum Consulting (AM Consulting), Matthew Kelleher							
52-2-4180	Gledswood Hills PAD 5	GDA	56	295200	6233673	Open site	Valid	Artefact :-, Potential Archaeological Deposit (PAD) :-		
	<b>Contact</b>	<b>Recorders</b>	Miss Nicole Castle							
52-2-3311	CH 5	GDA	56	295817	6234981	Open site	Valid	Artefact : 12		102190
	<b>Contact</b>	<b>Recorders</b>	Australian Museum Consulting (AM Consulting), Matthew Kelleher, Mr. Matthew Kel							

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## AHIMS Web Services (AWS)

### Extensive search - Site list report

Your Ref/PO Number : 24WOL7666  
Client Service ID : 868097

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
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	<b>Contact</b>	<b>Recorders</b>	Mr. Mark Rawson, Kelleher Nightingale Consulting Pty Ltd, Kelleher Nightingale Con							
52-2-1262	Gledswood 7	GDA	56	295306	6234903	Open site	Valid	Artefact : 1		3517
	<b>Contact</b>	<b>Recorders</b>	Eco Logical Australia Pty Ltd - Sydney - Individual users, Mr. Lyndon Patterson							
52-2-1902	RRGH IF 1	GDA	56	295741	6233409	Open site	Valid	Artefact :-		4085
	<b>Contact</b>	<b>Recorders</b>	Mr. Matthew Kelleher, Kelleher Nightingale Consulting Pty Ltd (Generic users)							
52-2-4177	Gledswood 2	GDA	56	295271	6235022	Open site	Valid	Artefact :-		
	<b>Contact</b>	<b>Recorders</b>	Mr. Julian Travaglia							
52-2-3558	TR-2	AGD	56	294960	6231794	Open site	Valid	Artefact : 17		102190
	<b>Contact</b>	<b>Recorders</b>	Jo McDonald Cultural Heritage Management see GML							

#### \*\* Site Status

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 28/02/2024 for Kate Storan for the following area at Datum :GDA, Zone : 56, Eastings : 294236.0 - 298236.0, Northings : 6231440.0 - 6235440.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 53

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

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