# Appendix 04A
# Aboriginal Archaeological Assessment

COMBER CONSULTANTS

ARCHAEOLOGY - HERITAGE - MEDIATION - ARBITRATION

# 1-4 OLD BATHURST ROAD, EMU PLAINS

## Aboriginal Archaeological Assessment


PREPARED BY JILLIAN COMBER & DAVID NUTLEY



REPORT TO URBANCO PTY LTD ON BEHALF OF BERNARD AND LINNA LE BOURISCOT

LGA PENRITH

VERSION NO B.2020

DATE JULY 2020

COMBER CONSULTANTS

ARCHAEOLOGY – HERITAGE – MEDIATION – ARBITRATION
ABORIGINAL – HISTORIC - MARITIME

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ISO 14001 CERTIFIED ENVIRONMENTAL MANAGEMENT

# EXECUTIVE SUMMARY

This Aboriginal archaeological assessment was prepared for Urbanco Pty Ltd on behalf of Bernard and Linna Le Bouriscot. The proponent is currently seeking Penrith Council approval for the Torrens Title "paper" subdivision of the subject site at 1-4 Old Bathurst Road, Emu Plains, formally described as Lots 1 and 2 in DP517958 and Lot 4 in DP574650. The proposed consolidation / subdivision incorporates the creation of two (2) lots, with one lot along the Old Bathurst Road frontage, and the balance land holding being the second allotment.

The Aboriginal archaeological assessment was commissioned to ensure that there will be no adverse impact upon Aboriginal heritage which may exist on the subject site.

An archaeological survey was undertaken on 7th July 2020 in consultation with the Deerubbin Local Aboriginal Land Council. The Land Council's letter of support for the findings of this report is at (Appendix C).

This report makes the following recommendations:

1. There is no objection to the proposed subdivision of the subject property. It will not be necessary to undertake testing or apply for an AHIP, for the "paper" subdivision.

2. Once the subdivision plans have been approved, if it is proposed to undertake building works or any ground disturbance on the property it will be necessary to undertake Aboriginal testing in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW.* Such testing is limited to determining if Aboriginal objects exist on the property and if so, their nature and extent. If Aboriginal objects are uncovered, it will then be necessary to apply for an AHIP. If no objects are uncovered redevelopment of the site can proceed without an AHIP.

3. Prior to undertaking the testing Aboriginal consultation must be undertaken in accordance with the *Aboriginal Cultural Heritage Consultation Guidelines for Proponents 2010.*

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# 1.0 INTRODUCTION

## 1.1 Background

This Aboriginal archaeological assessment was prepared for Urbanco Pty Ltd on behalf of Bernard and Linna Le Bouriscot. The proponent wishes to obtain Penrith Council approval for the Torrens Title "paper" subdivision of the subject site at 1-4 Old Bathurst Road, Emu Plains, known as Lots 1 and 2 in DP517958 and Lot 4 in DP574650.

The Aboriginal archaeological assessment was commissioned to ensure that there will be no adverse impact upon the Aboriginal objects or sites which may exist on the subject site. This report was prepared in accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW.*

A site inspection was undertaken on 7 July 2020 in consultation with the Deerubbin Local Aboriginal Land Council.

## 1.2 Location and description

The study area is located on the north eastern corner of Old Bathurst Road and Russell Street, Emu Plains and is known as Lots 1 and 2 in DP517958 and Lot 4 in DP574650 and is approximately 0.234km$^2$ in area. It is located within the Penrith LGA and is approximately 60kms west of Sydney and approximately 2kms north-west of Penrith (Figures 1 and 2).

The site is situated approximately 1.7km west of the Emu Plains Train Station (Figure 2). The main Penrith Central Business District (CBD) is situated approximately 3.4m to the east.

A portion of the land along Old Bathurst Road is currently zoned IN2 Light Industrial under Penrith Local Environmental Plan (PLEP) 2010. The balance of the land holding is listed as a "deferred matter" and remains subject to the historic Penrith Interim Development Order (IDO) No. 93.

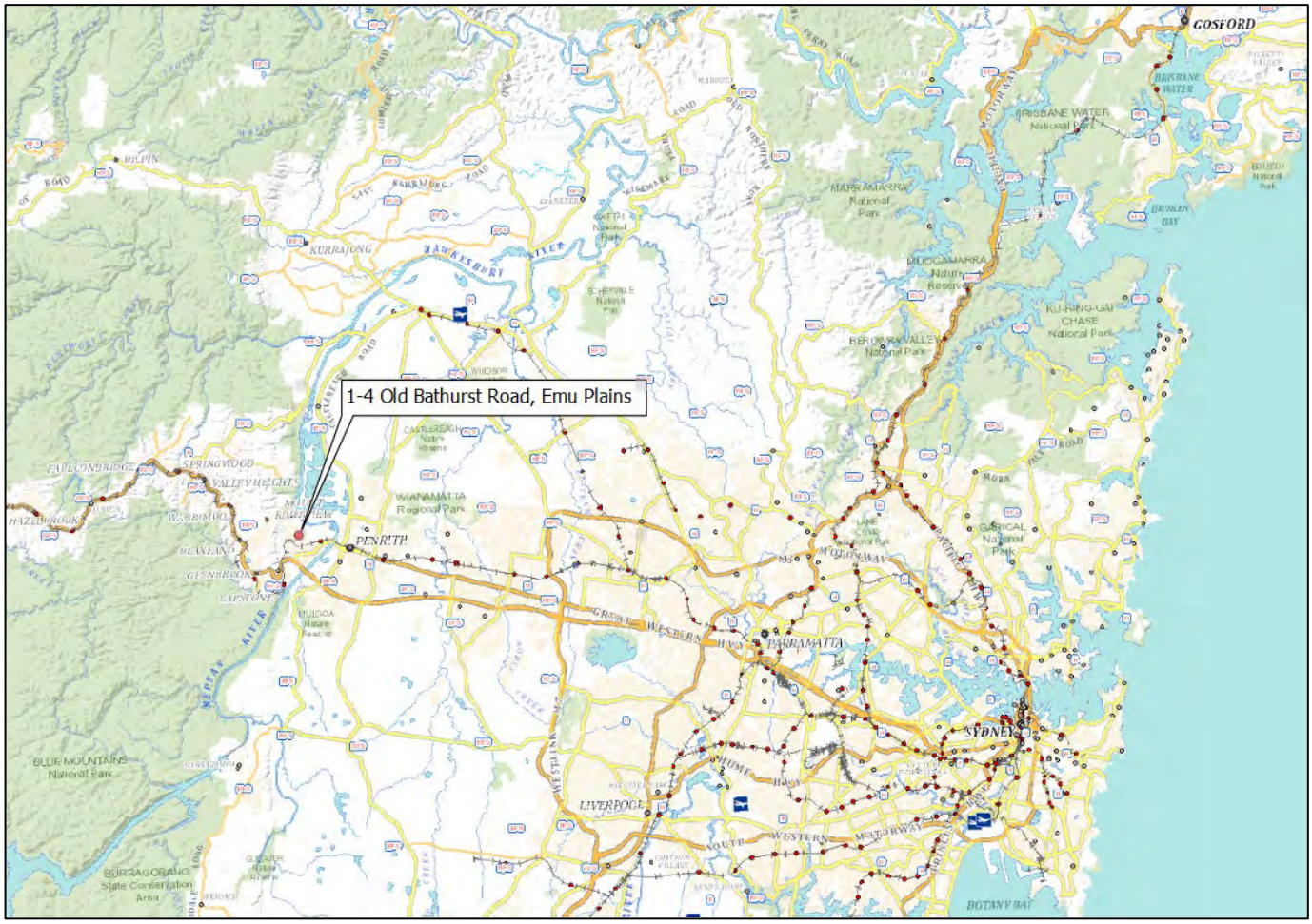


**Figure 1:** The location of study area in relation to Sydney CBD (Six Maps)

**Figure 2:** Aerial view of study area in relation to Sydney CBD (Urbanco, Statement of Environmental Effects March 2020, p1)

## 1.3 Proposal

The proponent has advised that they are seeking Penrith Council approval for the Torrens Title "paper" subdivision of the subject site at 1-4 Old Bathurst Road, Emu Plains. The proposed consolidation subdivision incorporates the creation of two (2) lots, with one lot along the Old Bathurst Road frontage, and the balance being the second allotment (Appendix B). The plans shown at Appendix B include indicative building and carparking envelopes, however, at this stage the proponent is only seeking approval for the subdivision.

**Figure 3:** Subdivision plan showing Lot 1 and Lot 2 and creek lines

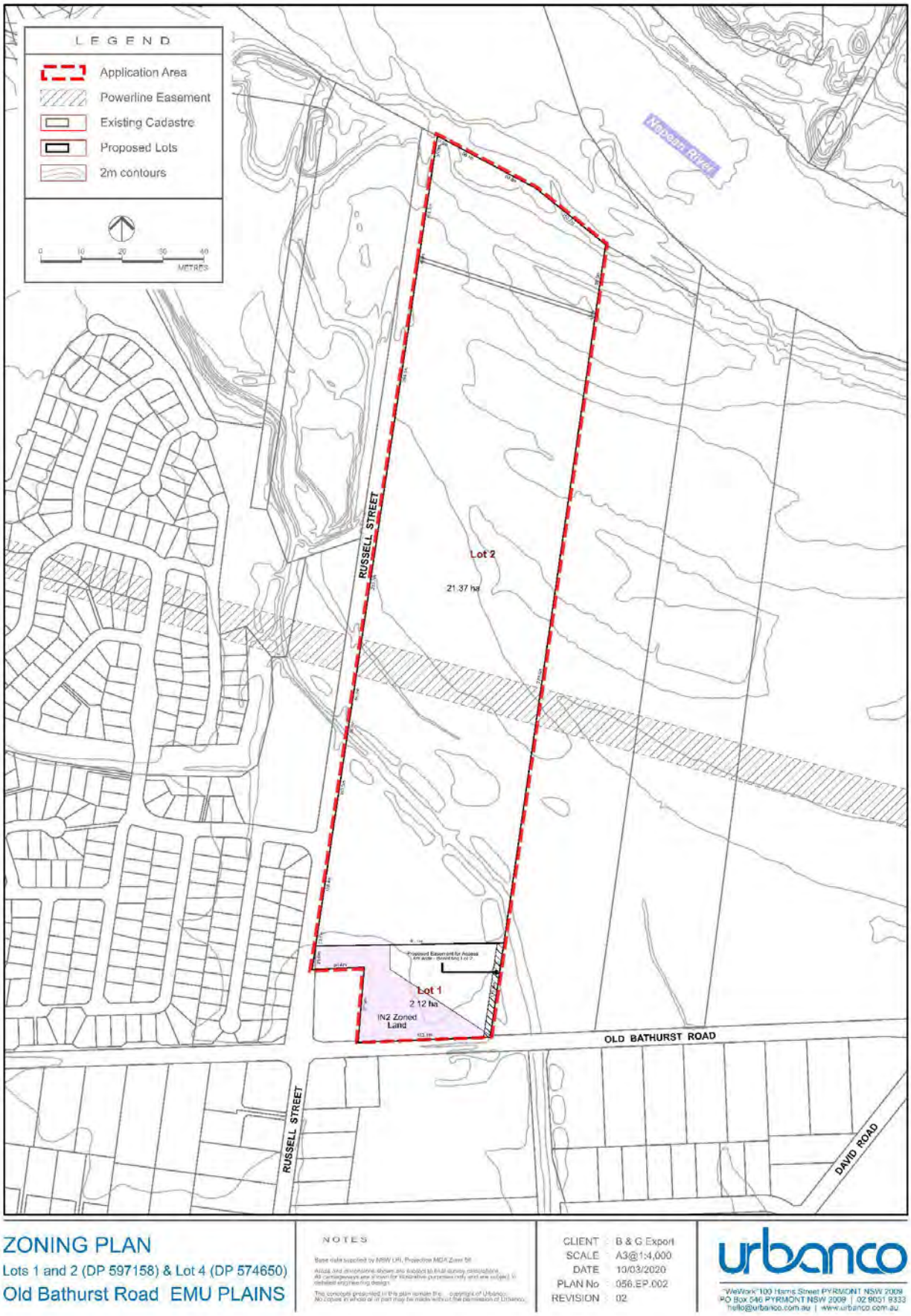


**Figure 4:** Subdivision plan showing portion of Lot 1 zoned Industrial (IN2).
(Note the ridge lines formed within the flood plain and running parallel to the Nepean River)

## 2.0 METHODOLOGY

This project was conducted in three stages, being background research, field survey and report preparation, as detailed below.

**Stage 1: Background Research**
Prior to the field component of this project, the Aboriginal Heritage Information Management System (AHIMS) was searched on 29 May 2020. A copy is attached at Appendix A. Site data, associated documents and archaeological survey reports held by AHIMS were reviewed. Environmental information relating to Aboriginal land use was also researched. Such research facilitated an understanding of the potential nature of sites and site patterning in the region, which enabled a predictive statement to be made. It also provided an archaeological and environmental context within which a significance assessment could be made, if any Aboriginal sites were located during the field survey.

**Stage 2: Site Inspection**
The archaeological site inspection was undertaken by David Nutley, Rivers McEwen and Christopher Jones of Comber Consultants and Steve Randall of the Deerubbin Local Aboriginal Land Council on Tuesday 7 July 2020. The team was accompanied by Michael Rodger of Urbanco. The inspection, undertaken on foot, excluded the footprint of the existing building on the site and areas where vegetation density precluded access.

**Stage 3: Report Preparation**
Further archaeological research was conducted, where necessary, to clarify the results of the assessment. This report was then compiled provided to Urbanco.

# 3.0 ABORIGINAL CONSULTATION

## 3.1 The Mulgoa Clan

The Mulgoa clan of the Darug were the traditional owners of the land around the Penrith area. Knowledge of the names and boundaries of language groups and bands in Sydney is incomplete due to the scarcity of reliable data. The population of the Darug was probably 500-600 people who divided into smaller communities of from 35 to 60 people, who camped, travelled, foraged, fished and hunted together (Hinkson 2001:xix-xxv; Barani 2020). In April, these communities would congregate around the swamps to catch eels whilst in summer when food was plentiful several of these communities would gather along the Nepean River. In winter, these communities split into smaller extended family groups (Kohen 1997:3).

After British settlement Aboriginal communities were dislocated. Forced movement of people occurred across NSW and caused the loss of many aspects of Aboriginal culture resulting in the emergence of new groups incorporating people from diverse areas. Reorganisation ensured the preservation of some of the core cultural practices and knowledge in Aboriginal communities (Hinkson 2001: xxiv-xxv) The organisation now representing the Penrith/Emu Plains area is the Deerubbin Local Aboriginal Land Council.

Aboriginal culture is dynamic and continuous. It includes the tangible and intangible and links people over time to their community and land. It is important to recognise that Aboriginal people have the right to protect, preserve and promote their cultural heritage.

In recognition of that right, the Deerubbin Local Aboriginal Land Council (DLALC) was invited to take part in the project and participated fully in this archaeological assessment. Steve Randall, Site Officer, DLALC, attended the site inspection and undertook a thorough inspection of the property. The project was discussed in detail with Steve and the recommendations contained in this report were formulated in association with Steve Randall onsite and during a later telephone call on 14/07/2020 when Steve confirmed he agreed with the recommendations.

This report was forwarded to Steve Randall on 14th July 2020 for review and comment. The DLALC supports the recommendations of this report (see Appendix C).

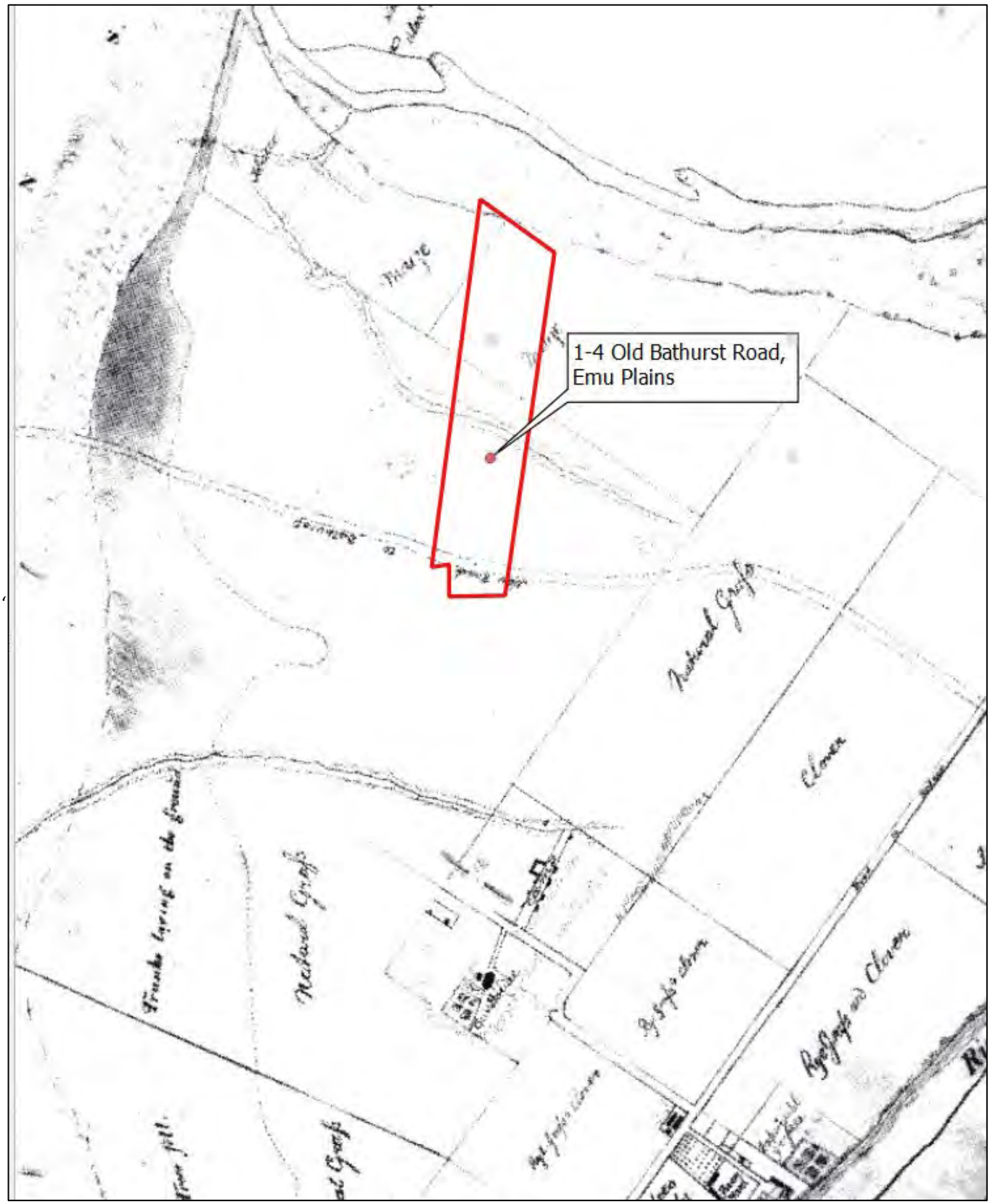


**Figure 5**: The Emu Plains Agricultural Establishment as depicted by Alexander Kinghorne in 1826 with overlay of subject property. (Source: SRNSW Item 2661)

# 4.0 ENVIRONMENTAL CONTEXT

## 4.1 Topography

The survey area is located within the Cumberland Plain which is characterised by low gently undulating slopes. The Cumberland Plain covers approximately 600 square kilometres. It is bordered on the west by the Blue Mountains and on the east by the Georges River and headwaters of the Parramatta Rivers. To the north is the Hornsby Plateau and to the south is the Woronora Plateau (Smith 1989a:8).

The study area is located to the south and west of the Nepean River and south of Cranebrook Creek and the Upper Castlereagh area. It is approximately 20ha and contains a series of very low ridgelines. It slopes gently down to an unnamed creek in the northern portion of the study area. A canal runs in an east-west direction through the southern portion of the study area. The canal contains sloping concrete walls. The top of the wall is built up and contains an area wide enough for vehicles to drive along. The southern wall is planted with native vegetation whilst the northern wall is grassed. An underground pipeline also runs east west across the study area to the north of the canal. Its location is indicated by a depression in the landscape plus the stop valve can be observed. The southern portion of the study area to the south of the canal is flat land.

Figure 4 provides detail of the contours of the landscape and the location of the canal and pipeline, whilst photographs 1-10 show the landscape and photographs 11-13 show the canal

The study area is located within a semi-urban landscape. Directly to the west and south is residential development whilst to the north is the Penrith Lakes Scheme and to the east is the Emu Plains Correctional Centre for women (see Figures 1-2).

## 4.2 Geology and soils

The Cumberland Plain, generally overlies the Wianamatta Group of Shales. The survey area consists of the Ashfield Shale sub-group of Wianamatta Shales. This sub-group is comprised of shales, carbonaceous claystones, claystones laminate, fine to medium grained lithic sandstone, tuff and some coal. The Cranebrook Formation disconformably overlies the Ashfield Shales. The Cranebrook Formation contains pebbles and cobbles of quartz, quartzite, chert, porphyry, granite, hornfells, sandstone and silcrete. (Penrith 1:100,000 geological map; Jones & Clark 1991:43-49). The tuff from the Ashfield shales and the cobbles from the Cranebrook Formation would have provided suitable material for small tool production for the Darug whilst the sandstone would have been suitable for the manufacture of ground edge axes.

Other locations on the Cumberland Plain which contain suitable material for stone tool manufacture, such as silcrete are located nearby. Silcrete outcrops are located at Luddenham approximately 20kms to the south, Plumpton approximately 15kms to the west, St Clair approximately 15km to the south-east and Erskine Park approximately 20km to the south-east. Other material used in the manufacture of stone tools on the Cumberland Plain, such as chert, tuff, quartz, basalt and quartzite, are located within the Rickabys Creek Formation, which is located between Cranebrook and Windsor, to the north of the survey area with some outcrops just to the west of the survey area (Jones & Clark 1991:32-33; Smith 1989a:9-11 & 1989b:6-7).

## 4.3 Vegetation

The vegetation of the study area was mapped by Benson (1989, 1981 & 2002) and the NSW National Parks & Wildlife Service (2002). Historically, the undulating slopes of Western Sydney would have supported a tall open-forest of Cumberland Plain Woodland. The area immediately around the Nepean River would have supported an Alluvial Woodland characterised by Eucalyptus moluccana (Grey Box) in association with Eucalyptus tereticornis (Forest Red Gum). The understorey would have consisted of Acacia parramattensis, Acacia floribunda and other acacia sp., Casuarina cunninghamiana (River Oak) and Bursaria spinosa (Sweet Bursaria, Blackthorn) with grasses of Themeda australis (Kangaroo Grass) and Lomandra longifolia.

Such a vegetation community would have provided a variety of edible plant species and plants suitable for artefact manufacture. For example, the tall Grey Box and Red Gum's would have provided bark to make coolamons, shields or canoes, whilst the long Lomandra leaves would have been used for basket weaving (Baker et al 1986:136). Acacia gum was a sweet nutritious food source and the acacia seeds were a valuable source of protein. The dried seeds were ground between stones and baked as a bread/damper and the green seeds eaten like peas (Low 1992:86). In addition, Cumberland Plain vegetation provided habitat for a variety of marsupials and birds whilst the Nepean River and associated creeks would have provided fish, yabbies and other crustaceans.

## 4.4 Stream order modelling

Stream order can be used to predict Aboriginal land use patterns. First and Second Ponds Creeks would be classified as second order streams whilst Caddies Creek would be a third order stream.

A first order stream is the smallest and is a small tributary that flows into and feeds larger streams but does not normally have any water flowing into it. The joining of two first order streams creates a second order stream and when two second order streams join they form a third order stream. In addition, first and second order streams generally form on steep slopes and flow quickly until they slow down and meet the next order waterway. First order streams are intermittent (Horton 1945; Strahler 1952).

Modelling undertaken by McDonald and Mitchell (1994) on the Cumberland Plain indicates that stream order can be used to predict areas of archaeological potential. The model hypothesis is that in any climate and landscape, a threshold catchment area is necessary to allow permanent stream flow or the establishment of waterholes with extended longevity (i.e. months to years). The critical point where these conditions are met appears to be at the junction of two second or third order streams. Such a location is likely to contain more complex sites with a high density of artefacts, whilst second and third order streams are also likely to contain large sites within 100 metres of the watercourse.

The northern extent of the study area is just 50m from the Nepean River, a third order stream. In addition, the ephemeral creek that once flowed through the property, now largely contained in a concrete lined canal, joins the Nepean River less than half a kilometre to the north-west. The property is also within the flood plain of the Nepean. The study area is near the junction of second and third order streams and as detailed above such a location is likely to contain more complex sites with a high density of artefacts.

## 4.5 Current land use and disturbance

As noted in section 3.4, the present nature and composition of the study area has been altered by past clearance and European land management activities. The study area has been used for grazing for many years and has been cleared of all native vegetation. It has been planted with introduced pasture and other grasses including, couch, kikuyu and clover and invaded by weeds such as dandelions, thistle, African love grass and paspalum. At the time of the inspection most of the site was covered with very long grass at least waist height and other vegetation. The vegetation had been slashed in the southern section of the property and the thick mat of slashed grass obscured ground visibility.

In the northern section of the study area lantana has invaded the sloping gully. Stands of Camphor Laurel (*Cinnamomum camphora*) and a disused domestic garden and orchard were also observed in the northern section of the study area.

Various Eucalypts and other native species have recently been planted along the northern border and along the southern side of the canal which runs east west through the study area.

There is one house within the study area, and associated sheds as well as chicken and other bird enclosures.

# 5.0 ARCHAEOLOGICAL BACKGROUND

## 5.1 Sydney Basin and Cumberland Plain

Many surveys have been undertaken in the Sydney region which indicate the richness of the archaeological resources and which provide information about Aboriginal occupation within the region. In particular, Attenbrow (2003) has excavated a range of sites within the Sydney Basin. The aim of her study was to identify local geographic variation and temporal changes in the subsistence patterns and material culture of the people of this area. She excavated sites at Balmoral Beach, Cammeray, Castle Cove, Sugarloaf Point (Lane Cove River), Darling Mills State Forest, Winston Hills, Vaucluse and Cumberland Street in the Rocks. Dates for initial occupation range from approximately 10,000 years BP at Darling Mills to approximately 450 years BP at Cumberland Street, the Rocks.

One of the oldest dated occupations for the Sydney region is 15,000 years BP from the Shaws Creek K2 rockshelter on the Nepean River (Kohen 1984; Nanson et al. 1987). The dates obtained by Kohen (1984) and Attenbrow (2003) must be considered in association with environmental data related to sea level rises. The Sydney region that we know today was vastly different to the landscape of 15,000 years ago.

The period of maximum glaciation was 15,000 – 18,000 years BP. Therefore, the date of the K2 rockshelter and Attenbrow's Darling Mills site indicate that Aboriginal people lived throughout a period of extreme environmental change. During this period, sea levels were up to 130m below current sea levels (Nutley 2006: 1). About 10,000 years ago, as temperatures began rising at the end of the last ice age, the polar ice started melting and sea levels rose. The rising sea levels forced people to abandon coastal sites and move inland, with the result that the oldest coastal sites were inundated.

By about 6,000 years ago, rising water levels had flooded the coastal plain forming the Sydney landscape that we know today. The vast majority of sites in the Sydney region date to around 5,000 years BP, after sea levels had stabilised. Whilst research into submerged indigenous sites is now being undertaken (Nutley 2006), there are few sites in the Sydney area that are known to date beyond 10,000 years BP. Therefore, research undertaken to date has focused on subsistence patterns and cultural change, e.g. Attenbrow (2003).

Many archaeological surveys have been conducted within the Sydney region, particularly on the Cumberland Plain, in relation to Environmental Impact Statements. As a result of those studies, which were occasioned by the burgeoning urban expansion extending into the Cumberland Plain, the NPWS recognised the need for a coherent study of the area to fully assess the impact of urbanisation on the natural and cultural heritage of the Cumberland Plain. Smith (1989a) was commissioned by the NPWS to undertake an Aboriginal Site Planning Study to be utilised in the management of Aboriginal sites on the Cumberland Plain. Prior to her study, 307 sites had been recorded on the Cumberland Plain, mainly open artefact scatters (297) with four scarred trees, one carved tree, four axe-grinding grooves and a Mission site (the Blacktown Institute). Smith (1989a:2) added 79 open sites and 29 isolated finds from field surveys related to her study.

Smith's (1989a:3) analysis indicated that site location and site densities were influenced by the availability of water and raw materials. She concluded that other factors such as topography, natural vegetation and soil types did not influence site location.

She also identified that the majority of sites recorded have been in the northern sector of the Cumberland Plain, during site surveys of areas threatened by development (Smith 1989a:21). Her field studies (1989a & 1989b:10) confirmed that site densities in the southern Cumberland Plain appear to be lower overall to site densities on the northern Plain.

Since Smith's study, there has been a dramatic increase in development in Western Sydney, resulting in a great deal more archaeological survey and excavation (Comber 1990a&b, 1991, 2006a&b, 2007; 2008; 2010; McDonald 1997, 2002 & 2005a). This further work has indicated the complexity in the archaeological record of the area that was not previously recognised. For example, sites on permanent water are more complex than sites on ephemeral drainage lines with major confluences being prime site locations. However, McDonald (2005a) reports that archaeological sites are found in a range of landscapes and that their condition is dependent on the amount of impact from European land practices.

McDonald's 2005a report demonstrates the dynamic nature of stone tool technologies on the Cumberland Plain. She reviewed previous work within a theoretical framework to identify intra and inter-regional variation. She not only identified change over time in the stone tool technology, but the manner in which "stone technologies were organised in relation to landscape" (McDonald 2005a: np). Her report provides a framework to tentatively date sites through technological analyses and to identify cultural changes.

Her study also indicated that the surface representation of a site on the Cumberland Plain does not necessarily reflect the actuality of that site. Of the excavations conducted by her, sub-surface deposits were present even when there was no surface indication of a site. According to McDonald (2005a:5), "despite artefacts being rare or completely absent on the surface at each of the sites investigated, all six sites were found to contain intact archaeological deposit. Almost 500 square metres were excavated during this Project and almost 35,000 artefacts retrieved." McDonald (2005) also considers that Aboriginal occupation was focussed on the major river systems and characterised by mobility between a small number of sites. As a result of her various studies and applying stream order modelling she (2005) further predicts that the density and complexity of archaeological sites will vary according to stream order, as follows:

- Fourth-Fifth order creeks (or rivers): Archaeological evidence will be more complex and possibly stratified, reflecting more permanent and repeated occupation on major creeks.
- Third order creeks: Evidence of more frequent occupation such as knapping floors or higher artefact densities will be found in the lower reaches of tributary creeks.
- Second order creeks: Sparse archaeological evidence will be found which indicates occasional use and/or occupation.
- First order creeks: Due to the intermittent nature of water flow only very sparse evidence would be found in the headwaters of upper tributaries such as background artefact scatter.

Kohen's studies at Penrith confirmed the importance of fifth order creeks and rivers. He recorded over 50 sites in the Penrith area which included open artefact scatters, axe grinding grooves and rock shelters. Kohen (1997:7) indicates that sites occurring throughout the Penrith area "are particularly likely to occur adjacent to the rivers and creeks. The distribution of raw materials associated with the manufacture of stone tools suggests that chert and basalt were carried or traded east from the river gravels and that silcrete was traded or carried from sources near South Creek and Eastern Creek, west towards the Nepean flood plain".

Comber (2010d&e) also recorded open artefact scatters and scarred trees within the Cumberland Plain. She undertook excavation at two sites at Penrith Lakes known as Camenzulis (2010e) and PL9 (2010d). At PL9 she retrieved more than 1,500 artefacts, including backed blades and an edge ground axe. Her work confirms McDonald's (2005) and Kohen's predictive model that sites are more likely to occur adjacent to the rivers and high order creeks. These excavations (Comber 2010d&e) at Penrith Lakes further indicates the possibility that sub-surface archaeological deposits will remain despite disturbance by non-Aboriginal activities and the complexity of such sites. Surveys (2006c & d) undertaken prior to the excavations recorded the areas as being disturbed by agricultural activities. They had been grazed, ploughed, planted with crops and a dam constructed. Only a small number of artefacts were recorded on the surface but over 2,500 artefacts retrieved during excavation.

A survey undertaken by Comber (2008) and subsequent excavations undertaken by Stening (2011) at Doonside demonstrated that although no surface artefacts were recorded (Comber 2008) substantial subsurface deposits did exist on the site with over 1,000 artefacts being recovered from a highly disturbed context (Stening 2011). This site was located beside Eastern Creek an important 4$^{th}$ or 5$^{th}$ order creek. It is an important watershed with extensive evidence of Aboriginal occupation.

## 5.2 Emu Plains/Penrith

A large number of sites have been recorded by Kohen (1997; 1981; 1984a and 1984b) and Comber (2006a and b; 2007; 2008; 2010) within the Penrith area.

Kohen recorded over 50 sites which included open artefact scatters, axe grinding grooves and rock shelters. Kohen (1997:7) indicates that sites occurring throughout the Penrith area "are particularly likely to occur adjacent to the rivers and creeks. The distribution of raw materials associated with the manufacture of stone tools suggests that chert and basalt were carried or traded east from the river gravels and that silcrete was traded or carried from sources near South Creek and Eastern Creek, west towards the Nepean flood plain".

Comber (2006a; 2010) also recorded open artefact scatters and scarred trees. She undertook excavation at two sites at Penrith Lakes known as Camenzulis (2006a) and PL9 (2010). At PL49 she retrieved more than 1,500 artefacts including backed blades and an edge ground axe. Her work confirms the predictive model developed by Kohen that sites are more likely to occur adjacent to the rivers and creeks. She also undertook an assessment (2006b) at Emu Plains on the banks of the Nepean River, but did not record any sites, although she did recommend sub-surface testing.

In 1986 Rich (1986) undertook a survey for Aboriginal sites for the proposed transmission line between Regentville and Penrith. She identified five open artefact scatters, none of which were recorded within the present study area. A Section 90 Consent to Destroy was issued for all of these sites in August 1987.

Dallas recorded an open artefact scatter (AHIMS 45-5-2414) comprising a hammerstone and a "mudstone" flake which was located approximately 700m to the south west of the present study area along a fence line of a trotting track.

Dallas also recorded an open campsite and potential archaeological deposit (AHIMS 45-5-2416) in close proximity to 45-5-2414. However, the AHIMS site card for AHIMS 45-5-2416 is a replication of the site card for 45-5-2414. Therefore, it is not clear whether these are two separate sites.

An isolated find (AHIMS 45-5-3317), comprising a chert flaked piece and an artefact scatter (AHIMS 45-5-3318) comprising two "mudstone" flakes and three "mudstone" flaked pieces were recorded in a sports field located 3km to the north east of the study area in a moderately disturbed context. During a survey by Stening (2013) these sites could not be relocated in the field (Stening 2013).

An isolated find and potential archaeological deposit (AHIMS 45-5-3319) was recorded approximately 2km to the north east of the present study area. The site comprised a red silcrete flake which was located on a dirt walking track (Figure 5).

Within 1.2 km of the study area 4 sites have been recorded: AHIMS 45-5-0539, 45-5-0540, 45-5-0541 and 45-5-4361 all open artefact scatters. Figure 5 shows the location of these sites.

The evidence from the above brief review of previous work within Penrith area indicates that sites are located throughout the area with larger more complex sites occurring near the confluence of the Nepean River and along creeks and rivers. The archaeological evidence also indicates that subsurface deposits can exist even if there is no evidence on the surface and despite subsequent disturbance.

## 5.3 Study Area

A search of AHIMS Register on the 29th May 2020 indicated that there are no objects or registered sites on the subject property or within 1km of the site. The study area is not a registered Aboriginal Place.

In 2006 Comber (2006b) undertook an assessment of the current property, but did not record any sites, although she did recommend sub-surface testing.

## 5.4 Site prediction

The above information indicates that it is highly likely that sites will be located on the subject site. It is located close to water and lithic resources for the manufacture of stone tools are located nearby. Historically the area provided an abundance of resources to enable the Darug to live comfortably off the land. Such resources included stone material for stone tool manufacture and rock outcrops to sharpen axes, a variety of plant and animal material for food plus fresh water for drinking and the provision of fish and other seafood. Many sites have been located in the area indicating that large groups of people lived in the area and the study area would have been an ideal camping and foraging location given its proximity to fresh water. In addition, as detailed above, stream order modelling indicates that it is possible that a large complex site could exist on the property. As indicated by previous work on the Cumberland Plain such a site would most likely be subsurface.

It is possible that artefacts made from chert and silcrete could be located on the site. Such artefacts would be characterised by the residue from stone tool making and could include tools such as small blades and points. It is also possible that ground edge axes could be located on the site.

As no sandstone outcrops or platforms were observed on the subject site it is not expected that art sites, shelters or rock engravings would be located.

In addition, as the area has been denuded of original vegetation and utilised for grazing for many years, it is not expected that scarred or carved trees would be located on the site. The only trees remaining within the study area have been planted in more recent years.

# 6.0 SIGNIFIANCE ASSESSMENT

## 6.1 Preamble

Significance assessment is the process whereby sites or landscapes are assessed to determine their value or importance to the community.

A range of criteria have been developed for assessing the significance which embody the values contained in the Burra Charter. The Burra Charter provides principles and guidelines for the conservation and management of cultural heritage places within Australia.

Following are the criteria which will be used to assess the study area:

**Social Value** (sometimes termed "Aboriginal" value) which refers to the spiritual, traditional, historical or contemporary associations and attachments which the place or area has for the present day Aboriginal community.

**Historic Value** refers to the associations of a place with a person, event, phase or activity of importance to the history of an Aboriginal community.

**Scientific Value** refers to the importance of a landscape, area, place or object because of its archaeological and/or other technical aspects.

**Aesthetic Value** refers to the sensory, scenic, architectural and creative aspects of the place.

**Representativeness** refers to whether the site demonstrates the principal characteristics of that site and is a good representative example of that site type.

**Rarity** refers to the degree to which such a site is known elsewhere and whether the site is uncommon, rare or endangered.

## 6.2 Assessment

**Social Values**
Consultation with representatives of the Aboriginal community indicates that the study area is important to the local and broader Aboriginal community. The artefacts predicted to be located on the site will provide evidence of Aboriginal occupation representing their past providing a direct link to their ancestors.

**Historic Values**
The study area could contain evidence of Aboriginal occupation providing information about the history of occupation of the Mulgoa Clan.

**Scientific Values**
The study area has the potential to yield further information through detailed scientific and archaeological research into the nature of Aboriginal occupation and techniques utilised in subsistence activities. It has the potential to contain sub-surface archaeological deposits.

**Aesthetic Values**
The current site does not contain Aboriginal aesthetic values, however, after excavation the objects uncovered might meet this criteria.

**Representative Values**
At this stage it is not known if the site contains representative values.

**Rarity Values**
At this stage it is not known if the site contains rarity values.

## 6.3 Statement of Significance

Consultation with representatives of the Aboriginal community indicates that the study area is important to the local and

broader Aboriginal community. The artefacts predicted to be located on the site will provide evidence of Aboriginal occupation representing their past providing a direct link to their ancestors. The study area has the potential to yield further information through detailed scientific and archaeological research into the nature of Aboriginal occupation and techniques utilised in subsistence activities. It has the potential to contain sub-surface archaeological deposits.

# 7.0 LEGISLATION

## 7.1 *National Parks & Wildlife Act 1974*

The *National Parks & Wildlife Act 1974* (NPW Act) provides statutory protection to all Aboriginal sites within New South Wales. Heritage NSW is the State Government agency responsible for the implementation and management of this Act.

Part 6 of the *National Parks & Wildlife Act* states that it is an offence to harm or desecrate an Aboriginal object or Aboriginal place, without an Aboriginal Heritage Impact Permit (AHIP). An Aboriginal object is defined as:

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

An Aboriginal Place is defined as:

> *A place that, in the opinion of the Minister, is or was of special significance with respect to Aboriginal culture, to be an Aboriginal place for the purposes of this Act.*

However, as the current proposal is only for a "paper" subdivision, no Aboriginal objects will be harmed. Therefore, there is no need to apply for an AHIP for the subdivision application.

However, if at a later stage redevelopment of the site is proposed, it will be necessary to undertake subsurface archaeological testing prior to any redevelopment or ground disturbance. The *National Parks & Wildlife Regulations* detail the provisions for undertaking archaeological testing, if an area is predicted to contain Aboriginal objects, which are further outlined in *The Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* and *The Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*. If there is the possibility that Aboriginal objects exist within the study area, then limited subsurface archaeological testing must be undertaken in consultation with the Registered Aboriginal Parties. The aim of the testing is to determine the nature and extent of the Aboriginal objects. This testing can be undertaken without an AHIP. Prior to undertaking such testing Aboriginal consultation must be undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW.*

Therefore, as the subject property is within an area of archaeological sensitivity with the potential to contain Aboriginal objects if, at a later stage, redevelopment of the study area is proposed, the following must be undertaken:

- Aboriginal consultation must be undertaken in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* prior to archaeological testing. This has already commenced and should be finished by early April.
- Once the consultation has been undertaken, archaeological testing must be undertaken to determine the nature and extent Aboriginal objects within the study area and their nature and extent. This testing must be undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW.* The testing will take approximately 2-4 weeks).
- If, during the testing, no Aboriginal objects are uncovered, redevelopment can proceed without the need to undertake any further assessment, monitoring, testing or archaeological excavation.
- If Aboriginal objects are uncovered during the testing, an application for an AHIP, with salvage must be submitted to Heritage NSW.
- Once the permit has been received Aboriginal archaeological salvage can be undertaken. Once that has been completed the redevelopment can proceed.

However, as previously noted, for the current subdivision plans, no testing or further Aboriginal consultation is required. In addition, as the proposal will not harm Aboriginal objects an AHIP is not required.

# 8.0 RESULTS, IMPACT & MITIGATION

## 8.1 Results

Except for an approximately 50-60m section along the frontage with Old Bathurst Road, the remaining vegetation in Lot 1 had been recently slashed (Photograph 1). Ground visibility was nil due to vegetation cover. Therefore, the table recommended in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* has not been used. Despite an intensive site inspection, no Aboriginal objects were observed. Please see the photographs below.

Photograph 1: Un-slashed vegetation along Old Bathurst Road frontage. View to east.

Photograph 2: Slashed portions of Lot 1 and Lot 2. View to NNE.

A portion of Lot 2 had been slashed. This was limited to the area immediately to the north of Lot 1 (Photograph 3) and skirted around the yard of the c1960s house (Photograph 4). No slashing or clearance of vegetation had taken place within the house yard, along the canal banks or in the remaining area to the north of the canal. Dense ground cover, including African 'Love Grass' (*Eragrostis Curvula*) and Blackberry, obscured any ground visibility in Lot two (Photographs 6-8), with the exception of a small area of the northern side of the canal bank which revealed exposed clay where the topsoil had been removed through construction of the canal (Photograph 5).

Photograph 3: View to NW across Lot 2 from Lot 1. The line of the concrete canal is indicated by the trees and thick vegetation in the background.

Photograph 4: Slashed portion of Lot 2 between canal banks to left and house yard to right.

Photograph 5: Rivers McEwen examining an area of exposed clay on the bank above the concreted canal. View to west.

Photograph 6: African 'Love Grass' (*Eragrostis Curvula*) on northern side of canal (RHS). View to east.

Photograph 7: View to west north of the canal with blackberry bushes in mid-field.

Photograph 8: View to NNW along Lot 2 showing ridgelines running parallel to the Nepean River to the north.

Photograph 9: View from near northern boundary showing series of ridges running east to west across the property. View to south

Photograph 10: Raised levee on southern side of canal. View to NE

There are constructed levees on the southern side of the concrete lined canal (Photograph 12). Unlike flood plain levees to the north of the canal, these are likely to be formed from soil excavated from the creek during excavation of the canal. The banks of the canal are heavily vegetated with bushes, Camphor laurels and, along the southern bank, several regrowth Eucalypts (Photographs 4, 12 & 10). Due to the density of vegetation, access to most of this area was not possible.

Photograph 11: Steve Randall approaching stand of Camphor laurel on northern side of canal. View to north

Photograph 12: The concrete canal which follows the original creekline showing regrowth Eucalypts and other vegetation. View to east from Russel Street

Photograph 13: Drainage line running east west to north of canal. View to west.

Photograph 14: The Nepean River runs approximately 80m north of the boundary of Lot 2. View to west.

No Aboriginal objects, artefacts or sites were located during the survey. The lack of visible sites could not be considered a true indication of the Aboriginal cultural landscape within the study area. The dense ground cover precluded the possibility of locating any artefacts or artefact scatters and affected the detectability of artefacts. Previous work in the Cumberland Plain has indicated that despite later disturbance, extensive subsurface archaeological deposits can exist. Also the predictive modelling detailed in section 5.4 of this report indicates that it is highly likely that subsurface Aboriginal objects will exist within the study area.

The ephemeral creeks that ran through the property, (including the formalisation of one of these into a concrete lined canal), the proximity of the Nepean River adjacent to the northern boundary, (Photograph 14) and the presence of river levees formed through flooding events in north of the canal indicate that the study held valuable resources for the Mulgoa Clan prior to annexation by the colonists in the nineteenth century.

## 8.2 Impacts & Mitigation

The current application is for a “paper” subdivision. No building works or ground disturbance is to occur. Therefore, it will not be necessary to undertake testing or apply for an AHIP to undertake the “paper” subdivision. Unless there is to be ground disturbance, the guidelines do not permit testing and Heritage NSW will not issue an AHIP.

However, once redevelopment or any ground disturbance to the site is to occur it will be necessary to undertake subsurface testing. Such testing can be undertaken without an AHIP but is limited to determining the nature and extent of the deposit. Once the testing has been completed and if Aboriginal objects have been identified on the site, it will be necessary to apply for

an AHIP with salvage. If no objects are uncovered redevelopment of the site can proceed without an AHIP. Prior to undertaking the testing, it will be necessary to undertake Aboriginal consultation in accordance with the *Aboriginal Cultural Heritage Consultation Guidelines for Proponents 2010.*

## 9.0 RECOMMENDATIONS

The following recommendations are based on:

- Legal requirements under the terms of the *National Parks & Wildlife Act 1974* (as amended), which states that it is an offence to harm or desecrate an Aboriginal object without first gaining a permit under Part 6 of the *National Parks & Wildlife Act 1974*.
- Research into the archaeological record for the Cumberland Plain and the study area in particular.
- Results of the assessment as outlined in this report.

### IT IS THEREFORE RECOMMENDED THAT:

1. There is no objection to the proposed subdivision of the subject property. It will not be necessary to undertake testing or apply for an AHIP, just for the "paper" subdivision.
2. Once the subdivision plans have been approved, if it is proposed to undertake building works or any ground disturbance on the property it will be necessary to undertake Aboriginal testing in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*. Such testing is limited to determining if Aboriginal objects exist on the property and if so, their nature and extent. If Aboriginal objects are uncovered, it will then be necessary to apply for an AHIP. If no objects are uncovered redevelopment of the site can proceed without an AHIP.
3. Prior to undertaking the testing Aboriginal consultation must be undertaken in accordance with the *Aboriginal Cultural Heritage Consultation Guidelines for Proponents 2010.*

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## APPENDIX A: AHIMS SEARCH

Office of Environment & Heritage
NSW GOVERNMENT

# AHIMS Web Services (AWS)
## Search Result

Purchase Order/Reference : Emu Plains

Client Service ID : 509278

Comber Consultants Pty Limited
76 Edwin Street North
Croydon New South Wales 2132
Attention: Jillian Comber

Email: jillian.comber@comber.net.au

Date: 29 May 2020

Dear Sir or Madam:

**AHIMS Web Service search for the following area at Lot : 1, DP:DP517958 with a Buffer of 1000 meters, conducted by Jillian Comber on 29 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:

| | |
|---|---|
| 0 | **Aboriginal sites are recorded in or near the above location.** |
| 0 | **Aboriginal places have been declared in or near the above location. *** |

## APPENDIX B: BUILDING ENVELOPE PLANS

BUILDING ENVELOPE PLAN
PROPOSED LOT 1
1-4 OLD BATHURST ROAD, EMU PLAINS

NOTES

CLIENT : Le Boursicot
SCALE : A2@1:1,000
DATE : 16/06/2020
PLAN No : 056.EP.006
REVISION : 01

urbanco

## APPENDIX C: DEERUBBIN LOCAL ABORIOGINAL LAND COUNCIL REPORT

Deerubbin Local Aboriginal Land Council

Level 1, Suite 3
291-295 High Street
PENRITH NSW 2750
PO Box 40
Penrith BC
NSW 2751 AUSTRALIA

ABN: 41 303 129 586
T: (02) 4724 5600
F: (02) 4722 9713
E: Staff@deerubbin.org.au
W: http://www.deerubbin.org.au

Comber Consultants Pty Ltd
76 Edwin Street
**CROYDON NSW 2132**

Our Ref: 3184

22 July 2020

**SUBJECT: PROTECTION OF ABORIGINAL CULTURAL HERITAGE**

1-4 Old Bathurst Road
Emu Plains

Attention: David Nutley

A representative of the Deerubbin Local Aboriginal Land Council inspected the 1-4 Old Bathurst Road, Emu Plains on 7th July 2020. An Aboriginal cultural heritage assessment was undertaken to evaluate the likely impact that development has on the cultural heritage of the land.

No Aboriginal cultural materials (in the form of stone artefacts, for example) were found during the Aboriginal cultural heritage assessment, because of the long grass

Deerubbin Local Aboriginal Land Council therefore, has no objections to the subdividing of the lots and if there is any impact of the landscape, further investigations will be required before development of 1-4 Old Bathurst Road, Emu Plains.

Yours Faithfully,

S Randall

(Steven Randall
Senior Aboriginal Cultural Heritage Officer)

C.c. Barry Gunther – Department of Planning Industry & Environment