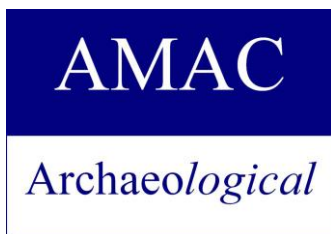
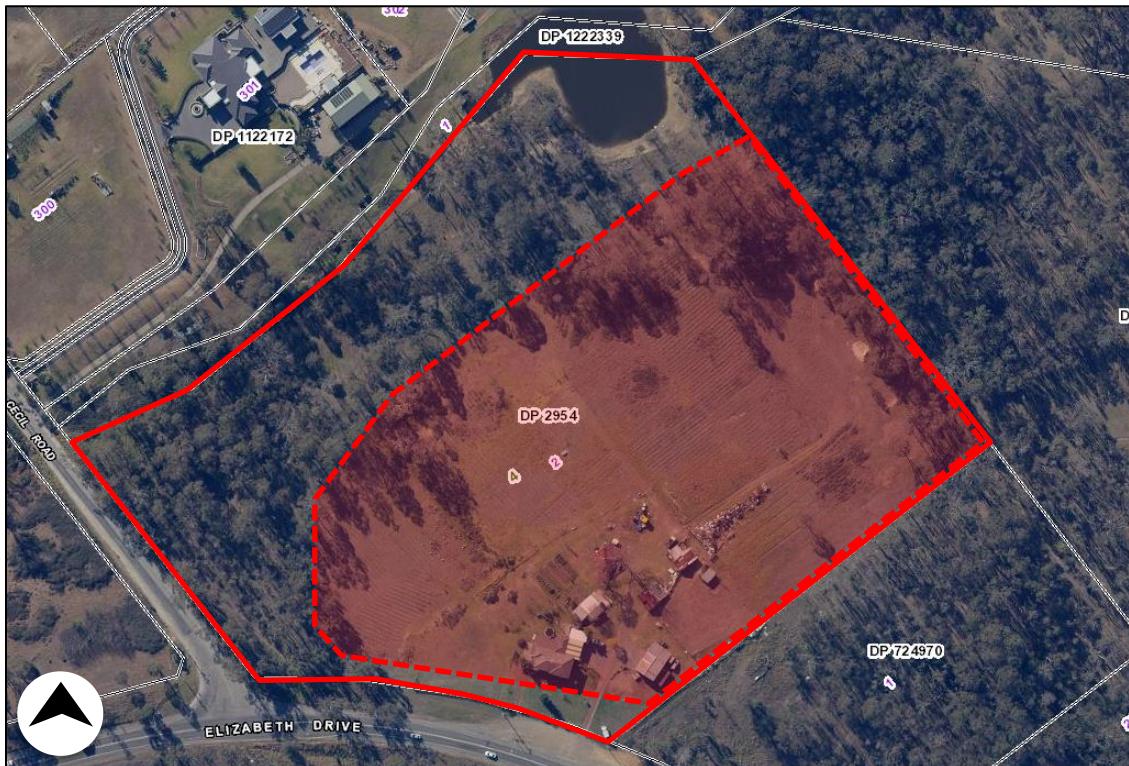


ABORIGINAL CULTURAL HERITAGE ASSESSMENT

**Lot 2 Section 4 DP 2954
1111-1141 Elizabeth Drive
Cecil Park NSW
(Fairfield LGA)**



Benjamin Streat & Yolanda Pavincich

Archaeological Management & Consulting Group
& Streat Archaeological Services

For



1111 Elizabeth Drive Pty Ltd

**Version 3
September 2020**

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The veracity of this report is not guaranteed unless it is a complete and original copy.

This report may be inaccurate, incomplete, not original, or modified, if it appears in monochrome form and the signature below is a copy.



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Cover Image

Aerial of study site with new subdivision area indicated in red fill.
Six Maps (Accessed 11/09/20)

ACKNOWLEDGEMENT OF COUNTRY

1111 Elizabeth Drive Pty Ltd would like to acknowledge the Traditional Custodians of the western Sydney Area– the Darug peoples– and pay respect to their cultural heritage, beliefs and continuing relationship with the land.

1111 Elizabeth Drive Pty Ltd would also like to acknowledge the post contact experiences of Aboriginal peoples who have attachment to the Sydney area.

“We pay our respect to the Elders – past, present and future – for they hold the memories, traditions, culture and hopes of Aboriginal Peoples in the area”.

1111 Elizabeth Drive Pty Ltd recognises the role of the registered Aboriginal parties in the management of the Aboriginal cultural heritage sites, landscape features and values of this project.

1111 Elizabeth Drive Pty Ltd would like to thank the Registered Aboriginal Parties for their participation in this project and for their valuable contribution to this Aboriginal Cultural Heritage Assessment which has been enriched by their willingness to share valuable aspects of their cultural knowledge especially in respect of Caring for Country

INTERNAL REVIEW

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EXECUTIVE SUMMARY

Study Area

Archaeological Management and Consulting Group (AMAC) in conjunction with Streat Archaeological Services Pty Ltd (SAS) was commissioned by 1111 Elizabeth Drive, Cecil Park in January 2018, to prepare an Aboriginal Cultural Heritage Assessment for the proposed subdivision at Lot 2 Section 4 DP 2954 – 1111-1141 Elizabeth Drive, Cecil Park.

Since 2018 this report has been amended in response to the proposed acquisition of part of the Site which will reduce the site area by 26,617SQM. The acquisition of the area of the site proposed by TfNSW has required amendments to be made to the proposed development and development footprint which require a re-assessment of the impacts and design which responds to the new development site.

The study site is that piece of land described as Lot 2 Section 4 of the Land and Property Information Deposited Plan 2954, forming the following street address 1111-1141 Elizabeth Drive, Cecil Park, in the Parish of Cabramatta, County of Cumberland.

Aboriginal Consultation

Consultation for this report has been undertaken in accordance with the National Parks and Wildlife Act 1974: Part 6; *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010).

Registered stakeholders will be given a copy of this report outlining the amendments to the original document.

Physical Evidence

Test excavation was undertaken over four days 26/03/18 – 29/03/18. The programme was conducted under the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales and consisted of the excavation of 30 test trenches (50cm x 50cm).

The proposed subdivision and associated infrastructure will impact the study area. In review of the test excavation results, of which intact soils were found to be present, however, the study area was found to be absent of any Aboriginal objects and/or deposits or features of cultural and archaeological significance. Therefore, further investigation is not warranted and works may proceed with caution.

Significance

The site is found to be of nil-low archaeological significance this is on account to the test excavation resulting in no Aboriginal objects and/or deposits of cultural or archaeological significance being located. The A horizon (artefact bearing deposit) was present in areas as well as intact soils. However, a significant portion of the study area was found to be disturbed.

Recommendations

The findings from the test excavation indicate the site to be of nil-low archaeological significance, intact A and A2 horizon was present, although majority of the study area was disturbed from past agricultural land use. Test excavation resulted in no Aboriginal objects and/or deposits of cultural significance being located, therefore the development should be allowed to proceed with caution.

The recommendations have been formulated after consultation with RAPs, the proponent and the Heritage NSW;

- Consultation with the registered Aboriginal stakeholders should continue. Stakeholders have been given the opportunity to comment on the recommendations of this report and these comments are included in this report;
- An Aboriginal Cultural Heritage Management Plan should be devised as a final document for the study area when State Significant Development (SSD) status (SSD #8859), in order to manage any unexpected Aboriginal archaeological and cultural constraints that may arise;
- Archaeological test excavation in accordance with Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, Part 6 National Parks and Wildlife Act 1974, (DECCW 2010) revealed no Aboriginal archaeological objects or deposits: the subdivision as shown (Figures 8.1) should be allowed to 'proceed with caution';
- After this and before any ground disturbance takes place all development staff, contractors and workers should be briefed prior to works commencing on site as to their responsibilities regarding any Indigenous archaeological deposits and/or objects that may be located during the following development;

If any Aboriginal archaeological deposits and/or objects are located during the development, then the following should take place;

- All work is to cease in the immediate vicinity of the deposits and/or objects
- The area is to be demarcated
- Heritage NSW, a qualified archaeologist and the participating RAPs are to be notified.

Should any human remains be located during the following development;

- All excavation in the immediate vicinity of any objects of deposits shall cease immediately;
- The NSW police and Heritage NSW's Enviroline be informed as soon as possible:
- Once it has been established that the human remains are Aboriginal ancestral remains, Heritage NSW and the relevant Registered Aboriginal Parties will identify the appropriate course of action.

CONTACT DETAILS

The contact details for the following archaeologist, NSW Police, Heritage NSW and Registered Aboriginal Parties are as follows:

Organisation	Contact	Contact Details
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NSW Fairfield City Police Area Command		LAC Office: 40-42 Smart Street Fairfield 2165 Ph: (02) 9728 8399 Fax: (02) 9728 8311
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Heritage NSW	Archaeologist – Head Office	PO Box 644 Parramatta 2124 Ph: (02) 9995 6900 info@environment.nsw.gov.au
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Amanda Hickey Cultural Services	Amanda DeZwart	Amandahickey@live.com.au
Badu	Karia Bond	baduchts@gmail.com
Biamanga	Seli Storer	biamangachts@gmail.com
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Cullendulla	Corey Smith	cullendullachts@gmail.com
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Darug Land Observations	Anna Ohara	daruglandobservations@gmail.com
Darug Tribal Aboriginal Corp	Dirk Schmitt	Darug_tribal@live.com.au
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Didge Ngunawal Clan	Paul Boyd	didgengunawalclan@yahoo.com.au
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Kawul Cultural Services	Aaron Slater	warragil_c.s@hotmail.com
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Yerramurra	Blaan Davis	yerramurra@gmail.com

1.0 INTRODUCTION

1.1 BACKGROUND

Archaeological Management and Consulting Group (AMAC) in conjunction with Streat Archaeological Services Pty Ltd (SAS) was commissioned by 1111 Elizabeth Drive, Cecil Park in January 2018, to prepare an Aboriginal Cultural Heritage Assessment for the proposed subdivision at Lot 2 Section 4 DP 2954 – 1111-1141 Elizabeth Drive, Cecil Park.

Since 2018 this report has been amended in response to the proposed acquisition of part of the Site which will reduce the site area by 26,617SQM. The acquisition of the area of the site proposed by TfNSW has required amendments to be made to the proposed development and development footprint which require a re-assessment of the impacts and design which responds to the new development Site.

This report conforms to the *Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW* (DECCW, 2011) and Part 6; National Parks and Wildlife Act *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010).

This assessment also conforms to requirement 5, 6, and 7 of the Secretary's Environmental Assessment Requirements for SSD #8859 (OEH 2017).

Aboriginal Cultural Heritage Requirements:

5. The EIS must identify and describe the Aboriginal Cultural Heritage values that exist across the whole area that will be affected by the development and document these to the EIS. This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011) and consultation with OEH regional officers.
6. Where Aboriginal Cultural Heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the EIS.
7. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the EIS. The EIS must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to the OEH.

1.2 STUDY AREA

The study site is that piece of land described as Lot 2 Section 4 of the Land and Property Information Deposited Plan 2954, forming the following street address 1111-1141 Elizabeth Drive, Cecil Park, in the Parish of Cabramatta, County of Cumberland. Since the 2018 assessment a portion of the study area has been acquired by TfNSW and as such the subdivision and associated impacts are now contained to only a portion of the aforementioned Lot and DP. See Figure 2.1.

Lot	Section	Deposited Plan
2	4	2954

1.3 SCOPE

The aims of this cultural heritage assessment are to assess the Aboriginal cultural heritage values of the study area, to provide registered Aboriginal persons or organisations who hold cultural knowledge relevant to determining the cultural significance of Aboriginal object(s) and/or place(s) within, or in the vicinity of the area of the proposed development, to present this knowledge for synthesis, analysis and compilation into a Cultural Heritage Assessment about the study area.

This report will assess the impact of the proposed development on any identified items or places of Aboriginal cultural heritage value and to develop mitigative strategies under the appropriate legislation for the management of Aboriginal archaeological and cultural heritage values of the study area. This process also involves the proponent and/or the proponent's representative to outline the project details and the participating Aboriginal parties to have input into formulating mitigative strategies at identified points in the impact assessment process.

A research design and test excavation methodology was developed outlining the timeline for completion of the assessment process as well as report delivery. This document was distributed to all registered parties for review and input for a period of no less than 28 days.

1.4 AUTHOR IDENTIFICATION

The analysis of the archaeological background and the reporting were undertaken by Mr. Benjamin Streat (BA, Grad Dip Arch Her, Grad Dip App Sc), archaeologist and Director of Streat Archaeological Services Pty Ltd in association with archaeologists Ms. Yolanda Pavincich (B. Arch, Grad Dip Cul Her) and Mr Steven J. Vasilakis (B. Arch. Hons) under the guidance of Mr. Martin Carney, archaeologist and Managing Director of AMAC Group.

1.5 LEGISLATIVE CONTEXT AND STATUTORY CONTROLS

This section of the report provides a brief outline of the relevant legislation and statutory instruments that protect Aboriginal archaeological and cultural heritage sites within the state of New South Wales. Some of the legislation and statutory instruments operate at a federal or local level and as such are applicable to Aboriginal archaeological and cultural heritage sites in New South Wales. This material is not legal advice and is based purely on the author's understanding of the legislation and statutory instruments. This document seeks to meet the requirements of the legislation and statutory instruments set out within this section of the report.

1.5.1 Commonwealth Heritage Legislation and Lists

One piece of legislation and two statutory lists and one non-statutory list are maintained and were consulted as part of this report: the National Heritage List and the Commonwealth Heritage List.

1.5.1.1 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) offers provisions to protect matters of national environmental significance. This act establishes the National Heritage List and the Commonwealth Heritage List which can include natural, Indigenous and historic places of value to the nation. This Act helps ensure that the natural, Aboriginal and historic heritage values of places under Commonwealth ownership or control are identified, protected and managed (Australian Government 1999).

1.5.1.2 National Heritage List

The National Heritage List is a list which contains places, items and areas of outstanding heritage value to Australia; this can include places, items and areas overseas as well as items of Aboriginal significance and origin. These places are protected under the Australian Government's EPBC Act.

1.5.1.3 Commonwealth Heritage List

The Commonwealth Heritage List can include natural, Indigenous and historic places of value to the nation. Items on this list are under Commonwealth ownership or control and as such are identified, protected and managed by the Federal Government.

1.5.2 New South Wales State Heritage Legislation and Lists

The state (NSW) based legislation that is of relevance to this assessment comes in the form of the acts which are outlined below.

1.5.2.1 National Parks and Wildlife Act 1974

The NSW National Parks and Wildlife Act 1974 (as amended) defines Aboriginal objects and provides protection to any and all material remains which may be evidence of the Aboriginal occupation of lands continued within the state of New South Wales. The relevant sections of the Act are sections 84, 86, 87 and 90.

An Aboriginal object, formerly known as a relic 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' (NSW Government, 1974).

It is an offence to harm or desecrate an Aboriginal object or places under Part 6, Section 86 of the NPW Act:

Part 6, Division 1, Section 86: Harming or desecrating Aboriginal objects and Aboriginal places:

- (1) *A person must not harm or desecrate an object that the person knows is an Aboriginal object.*

Maximum penalty:

- (a) *in the case of an individual—2,500 penalty units or imprisonment for 1 year, or both, or (in circumstances of aggravation) 5,000 penalty units or imprisonment for 2 years, or both, or*
 - (b) *in the case of a corporation—10,000 penalty units.*
- (2) *A person must not harm an Aboriginal object.*

Maximum penalty:

- (a) *in the case of an individual—500 penalty units or (in circumstances of aggravation) 1,000 penalty units, or*
- (b) *in the case of a corporation—2,000 penalty units.*
- (3) *For the purposes of this section, **circumstances of aggravation** are:*
 - (a) *that the offence was committed in the course of carrying out a commercial activity, or*
 - (b) *that the offence was the second or subsequent occasion on which the offender was convicted of an offence under this section.*

This subsection does not apply unless the circumstances of aggravation were identified in the court attendance notice or summons for the offence.

- (4) *A person must not harm or desecrate an Aboriginal place.*

Maximum penalty:

- (a) *in the case of an individual—5,000 penalty units or imprisonment for 2 years, or both, or*
- (b) *in the case of a corporation—10,000 penalty units.*
- (5) *The offences under subsections (2) and (4) are offences of strict liability and the defence of honest and reasonable mistake of fact applies.*
- (6) *Subsections (1) and (2) do not apply with respect to an Aboriginal object that is dealt with in accordance with section 85A.*
- (7) *A single prosecution for an offence under subsection (1) or (2) may relate to a single Aboriginal object or a group of Aboriginal objects.*
- (8) *If, in proceedings for an offence under subsection (1), the court is satisfied that, at the time the accused harmed the Aboriginal object concerned, the accused did not know that the object was an Aboriginal object, the court may find an offence proved under subsection (2).*

1.5.2.2 Environmental Planning & Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) states that environmental impacts of proposed developments must be considered in land use planning procedures. Four parts of this act relate to Aboriginal cultural heritage.

- *Part 3, divisions 3, 4 and 4A refer to Regional Environmental Plans (REP) and Local Environmental Plans (LEP) which are environmental planning instruments and call for the assessment of Aboriginal heritage among other requirements.*
- *Part 4 determines what developments require consent and what developments do not require consent. Section 79C calls for the evaluation of*

The likely impacts of that development, including environmental impacts on both the natural and built environments and the social and economic impacts in the locality (NSW Government 1979).

- *Part 5 of this Act requires that impacts on a locality which may have an impact on the aesthetic, anthropological, architectural, cultural, historic, scientific, recreational or scenic value are considered as part of the development application process (NSW Government, 1979).*

1.5.2.3 The Aboriginal Land Rights Act 1983

The NSW *Aboriginal Land Rights Act 1983* (ALR Act), administered by the NSW Department of Aboriginal Affairs, established the NSW Aboriginal Land Council (NSWALC) and Local Aboriginal Land Councils (LALCs). The ALR Act requires these bodies to:

- take action to protect the culture and heritage of Aboriginal persons in the council's area, subject to any other law;
- promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

These requirements recognise and acknowledge the statutory role and responsibilities of New South Wales Aboriginal Land Council and Local Aboriginal Land Councils. The ALR Act also establishes the Office of the Registrar whose functions include but are not limited to, maintaining the Register of Aboriginal Land Claims and the Register of Aboriginal Owners.

Under the ALR Act the Office of the Registrar is to give priority to the entry in the Register of the names of Aboriginal persons who have a cultural association with:

- lands listed in Schedule 14 to the NPW Act;
- lands to which section 36A of the ALR Act applies (NSW Government, 1974 & DECCW 2010).

1.5.2.4 The Native Title Act 1993

The *Native Title Act 1993* (NTA) provides the legislative framework to:

- recognise and protect native title;
- establish ways in which future dealings affecting native title may proceed, and to set standards for those dealings, including providing certain procedural rights for registered native title claimants and native title holders in relation to acts which affect native title;
- establish a mechanism for determining claims to native title;
- provide for, or permit, the validation of past acts invalidated because of the existence of native title.

The National Native Title Tribunal has a number of functions under the NTA including maintaining the Register of Native Title Claims, the National Native Title Register and the Register of Indigenous Land Use Agreements and mediating native title claims (NSW Government, 1974 & DECCW 2010).

1.5.2.5 New South Wales Heritage Register and Inventory 1999

The State Heritage Register is a list of places and objects of particular importance to the people of NSW. The register lists a diverse range of over 1,500 items, in both private and public ownership. Places can be nominated by any person to be considered to be listed on the Heritage register. To be placed an item must be significant for the whole of NSW. The State Heritage Inventory lists items that are listed in local council's local environmental plan (LEP) or in a regional environmental plan (REP) and are of local significance.

1.5.2.6 Register of Declared Aboriginal Places 1999

The NPW Act protects areas of land that have recognised values of significance to Aboriginal people. These areas may or may not contain Aboriginal objects (i.e. any physical evidence of Aboriginal occupation or use). Places can be nominated by any person to be considered for Aboriginal Place gazettal. Once nominated, a recommendation can be made to EPA/OEH for consideration by the Minister. The Minister declares an area to be an 'Aboriginal place' if the Minister believes that the place is or was of special significance to Aboriginal culture. An area can have spiritual, natural resource usage, historical, social, educational or other type of significance. Under section 86 of the NPW Act it is an offence to harm or desecrate a declared Aboriginal place. Harm includes destroying, defacing or damaging an Aboriginal place. The potential impacts of the development on an Aboriginal place must be assessed if the development will be in the vicinity of an Aboriginal place (DECCW 2010).

1.5.3 Local Planning Instruments

1.5.3.1 Fairfield Local Environmental Plan 2013

The Fairfield City Council Local Environment Plan was endorsed in 2013. Heritage Conservation is discussed in Part 5; Clause 5.10. The following section highlights the archaeological considerations of a site in relation to developments:

5.10 Heritage conservation

(1) Objectives

The objectives of this clause are as follows:

- (a) *to conserve the environmental heritage of Fairfield*
- (b) *to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,*
- (c) *to conserve archaeological sites,*
- (d) *to conserve Aboriginal objects and Aboriginal places of heritage significance.*

(2) Requirement for consent

Development consent is required for any of the following:

- (a) *demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):*
 - (i) *a heritage item,*
 - (ii) *an Aboriginal object,*
 - (iii) *a building, work, relic or tree within a heritage conservation area,*
- (b) *altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in Schedule 5 in relation to the item,*
- (c) *disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,*
- (d) *disturbing or excavating an Aboriginal place of heritage significance,*

- (e) *erecting a building on land:*
 - (i) *on which a heritage item is located or that is within a heritage conservation area, or*
 - (ii) *on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,*
- (f) *subdividing land:*
 - (i) *on which a heritage item is located or that is within a heritage conservation area, or*
 - (ii) *on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.*

(3) When consent not required

However, development consent under this clause is not required if:

- (a) *the applicant has notified the consent authority of the proposed development and the consent authority has advised the applicant in writing before any work is carried out that it is satisfied that the proposed development:*
 - (i) *is of a minor nature or is for the maintenance of the heritage item, Aboriginal object, Aboriginal place of heritage significance or archaeological site or a building, work, relic, tree or place within the heritage conservation area, and*
 - (ii) *would not adversely affect the heritage significance of the heritage item, Aboriginal object, Aboriginal place, archaeological site or heritage conservation area, or*
- (b) *the development is in a cemetery or burial ground and the proposed development:*
 - (i) *is the creation of a new grave or monument, or excavation or disturbance of land for the purpose of conserving or repairing monuments or grave markers, and*
 - (ii) *would not cause disturbance to human remains, relics, Aboriginal objects in the form of grave goods, or to an Aboriginal place of heritage significance, or*
- (c) *the development is limited to the removal of a tree or other vegetation that the Council is satisfied is a risk to human life or property, or*
- (d) *the development is exempt development.*

(8) Aboriginal places of heritage significance

The consent authority must, before granting consent under this clause to the carrying out of development in an Aboriginal place of heritage significance:

- (a) *consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place by means of an adequate investigation and assessment (which may involve consideration of a heritage impact statement), and*
- (b) *notify the local Aboriginal communities, in writing or in such other manner as may be appropriate, about the application and take into consideration any response received within 28 days after the notice is sent*

(10) Conservation incentives

The consent authority may grant consent to development for any purpose of a building that is a heritage item or of the land on which such a building is erected, or for any purpose on an Aboriginal place of heritage significance, even though development for that purpose would otherwise not be allowed by this Plan, if the consent authority is satisfied that:

- (a) the conservation of the heritage item or Aboriginal place of heritage significance is facilitated by the granting of consent, and*
- (b) the proposed development is in accordance with a heritage management document that has been approved by the consent authority, and*
- (c) the consent to the proposed development would require that all necessary conservation work identified in the heritage management document is carried out, and*
- (d) the proposed development would not adversely affect the heritage significance of the heritage item, including its setting, or the heritage significance of the Aboriginal place of heritage significance, and*
- (e) the proposed development would not have any significant adverse effect on the amenity of the surrounding area*

1.5.3.2 Fairfield Citywide Development Control Plan 2013

The Fairfield Citywide Development Control Plan was endorsed by Fairfield City Council in 2013. Chapter 14 refers to subdivisions of which section 14.3.2 outlines Aboriginal heritage controls with regards to vacant lot subdivisions, such as that subject to this report. The following control is mentioned.

14.3.2 Vacant Lot Subdivisions

“Vacant Lot Subdivisions” are defined at Appendix A. The location and orientation of future buildings can have an important influence on the quality of the rural environment. To enable proper consideration of this issue at the subdivision stage, vacant lot subdivisions are required to include particular information not otherwise required for subdivision of developed sites where no further development is likely.

Controls

- a) All subdivisions involving the creation of vacant lots in the rural areas must be accompanied by a site analysis in accordance with the provisions of Chapter 3 of this DCP as well as information covering the following:*
- a. Topographical features such as slope, native vegetation and watercourses, top of bank and riparian land;*
 - b. Phase 1 Contamination Assessment;*
 - c. Location of existing farm buildings and any industrial / commercial operations;*
 - d. Views and Vistas;*
 - e. Vehicular and pedestrian access;*
 - f. Availability of services including any easements affecting the land;*
 - g. Available waste water disposal areas based on a preliminary waste water disposal report prepared by a suitably qualified professional;*
 - h. Relationship to adjoining development (including extractive industries in accordance with Chapter 4);*
 - i. Setbacks from roads in accordance with Chapter 4;*
 - j. Aircraft Noise; and*

k. *Aboriginal and European Heritage items.*

b) *Subdivision plans must show available building envelopes where the site analysis demonstrates that the site is affected by any of the following constraints:*

- a. *Flooding;*
- b. *Any requirement for an activity approval under Part 3 of Chapter 3 of the Water Management Act 2000 which may be triggered by future development, in accordance with the Integrated Development Provisions of the Environmental Planning and Assessment Act 1979, generally a zone extending for a distance of 40 metres from the top of bank of a watercourse.*
- c. *Bushfire prone land;*
- d. *Contaminated Land;*
- e. *Aboriginal or European Heritage; and*
- f. *Threatened Species.*

Appendix H deals with heritage of which the following sections address Aboriginal Cultural Heritage;

2.1 Due Diligence

For activities that are not low impact and not on disturbed land (see 2.2 for definitions), evidence of following due diligence procedures in development is a defence against prosecution for the strict liability offence under s86(2) if an Aboriginal Object or Place is unknowingly harmed without an Aboriginal Heritage Impact Permit (AHIP).

The Office of Environment and Heritage has a Due Diligence Code of Practice, designed to assist proponents to exercise due diligence when carrying out activities that may harm Aboriginal objects and to determine whether they should apply for consent in the form of an Aboriginal Heritage Impact Permit (AHIP).

The due diligence procedure sets out reasonable and practicable steps which individuals and organisations need to take in order to:

1. *identify whether or not Aboriginal objects are, or are likely to be, present in an area*
2. *determine whether or not their activities are likely to harm Aboriginal objects (if present)*
3. *determine whether an AHIP application is required.*

Council has its own detailed due diligence procedure that is applied during the Development Assessment process based on the OEH Due Diligence Code of Practice. Prior to a submission of a Development Application proponents are able undertake an initial assessment of the potential impacts of their development on Aboriginal Heritage in accordance with the Office of Environment and Heritage's Due Diligence Code of Practice.

2.2 Low impact activities and disturbed land

The requirement to undertake Due Diligence for proposed activities has exemptions for 'low impact activities' in 'disturbed lands'. These are defined by the National Parks and Wildlife Regulation and may be subject to change. See

<http://www.legislation.nsw.gov.au/> for up to date regulations. The list of 'low impact activities' in the Regulation is lengthy and includes many common open space maintenance activities, however, for example, does not include activities such as the construction of a new dwelling or road.

The list of 'disturbed lands' in the Regulation is also lengthy, however, generally, land is considered 'disturbed' if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable. Some examples of activities that may have disturbed land include soil ploughing, the construction of rural infrastructure (such as dams and fences), roads, trails and tracks, buildings or structures, substantial grazing or earthworks.

NOTE: The exemption for 'low impact activities' in 'disturbed land' does not apply to Aboriginal Scarred trees whether or not they are 'known' through recording on the AHIMS Register.

The exemption only applies to 'low impact activities' in 'disturbed land'. It does not apply to other activities in 'disturbed land'. For example, constructing a house on land defined under the Regulation as 'disturbed' is not an exempt activity.

3. Potential Investigation Areas

To assist in the identification of areas of the City where Aboriginal Heritage needs to be taken into account, Council's Aboriginal Heritage Study identified Potential Investigation Areas based on best current archaeological practice (Figure 1). These areas include:

- Relatively undisturbed ground within 200m of creekline or major ridgeline
- Land within 50m of known aboriginal Sites
- Aboriginal Historical Places

Properties within Potential Investigation Areas will be noted within a Section 149(5) certificate.

More information on the methodology behind the determination of Potential Investigation Areas in Fairfield City is available within Section 6.2.2 of the Fairfield City Council Aboriginal Heritage Study 2017.

4. Procedure for Development Assessment

Each Development Application's impact on Aboriginal Heritage will be assessed by Council in accordance with the principles of Council's own Aboriginal Heritage Management system as recommended under Council's Aboriginal Heritage Study 2017.

If Council deems that a development may have an impact on Aboriginal Heritage, an Aboriginal Heritage Assessment will be required. The requirements for an Aboriginal Heritage Assessment are outlined below (Section 4.1, 4.2).

Under the development assessment process, if Council advises that an Aboriginal Heritage Assessment is not required, this indicates that there is a low likelihood that Aboriginal objects will be impacted by the proposal. It does not however constitute a guarantee that no Aboriginal heritage may be exist on a site.

Any Aboriginal objects which may be present within the property are still legally protected. All development applications in potential investigation areas contain an advisory note that outlines the legal responsibilities of all proponents regarding Aboriginal heritage.

NOTE: The presence of Aboriginal objects on a site does not prevent development from occurring. However, modifications may be required to a development to accommodate the presence of Aboriginal heritage.

4.1 Requirements for Aboriginal Heritage Assessment

Where proponents are required to provide an Aboriginal heritage assessment, the following standards need to be met. This will ensure that the assessment is consistent with the Office of Environment and Heritage Due Diligence Assessment requirements and the obligations of Council. Any Aboriginal heritage assessment report submitted to Council should:

- Be undertaken by a suitably qualified Aboriginal heritage consultant;
- Also meet the requirements for Due Diligence as per the OEH Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales;
- Contain evidence of Aboriginal community consultation with the relevant Local Aboriginal Land Councils;
- Include evidence of a current (no more than 12 months old) search of the AHIMS Aboriginal Sites Register and consideration of relevant previous Aboriginal heritage investigations;
- Involve a field inspection, or justification as to why an inspection was not considered necessary (for example if background research confirmed that the land has been comprehensively disturbed in the past);
- Consider ways in which harm to known or potential Aboriginal objects can be avoided in relation to the proposed activity and outline the steps to be followed to ensure this (e.g. an alternative location or method of construction);
- Identify further requirements in situations where harm cannot be avoided (e.g. archaeological test excavation, applications for an Aboriginal Heritage Impact Permit)

4.2 Actions Resulting from Aboriginal Heritage Assessments

All Aboriginal heritage assessments received by Council will be reviewed to determine:

- a) If the assessment and documentation is sufficient to support a determination in relation to the proposal;
- b) If the assessment report and proposal will require referral to the Office of Environment & Heritage as Integrated Development under Part 5 of the Environmental Planning and Assessment Act (1979);

It is noted that there are some options under current procedure which allow further investigation without referral to the Office of Environment & Heritage. Under the Office of Environment and Heritage Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW, in certain circumstances, archaeological test excavation can be undertaken without an Aboriginal Heritage Impact Permit. As part of the Aboriginal Heritage Assessment, a proponent may decide, on advice from their Aboriginal heritage consultant, that such test excavations will take place prior to obtaining development consent. The resulting report will be described as an Aboriginal Cultural Heritage Assessment report, and will require referral to the Office of Environment & Heritage unless no Aboriginal objects were uncovered during the excavations and it is assessed that no potential harm will arise from the proposed development activity.

NOTE: The requirements stated in 2.1 and 2.2 above will not apply to developments where there is no:

- a) Disturbance of the soil, or;
- b) Construction works on the land. For the purposes of this section, any internal or external works to an existing building is not deemed to be construction work.

1.5.4 Code of Practice for Archaeological Investigation of Aboriginal objects in New South Wales

Any further work resulting from recommendations should be carried out conforming to the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, Part 6 National Parks and Wildlife Act 1974, (DECCW 2010).

1.5.5 Guidelines

This report has been carried out in consultation with the following documents which advocate best practice in New South Wales:

- Aboriginal Archaeological Survey, Guidelines for Archaeological Survey Reporting (NSW NPWS 1998);
- Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales, Part 6 National Parks and Wildlife Act 1974, (DECCW 2010);
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, Part 6 National Parks and Wildlife Act 1974, (DECCW 2010);
- Aboriginal Cultural Heritage Standards and Guidelines Kit (NPWS 1998);
- Australia ICOMOS 'Burra' Charter for the conservation of culturally significant places (Australia ICOMOS 1999);
- Part 6; National Parks and Wildlife Act Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010);
- Protecting Local Heritage Places: A Guide for Communities (Australian Heritage Commission 1999).

1.6 ACKNOWLEDGEMENTS

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- Cullendulla;
- Darug Aboriginal Land Care;
- Darug Land Observations;
- Darug Tribal Aboriginal Corp.;
- Deerubbin Local Aboriginal Land Council;
- Dharug CHTS;
- Didge Ngunawal Clan;
- Djiringanj CHTS;
- Elouera;
- Gangangarra;
- Goobah;
- Gunjeewong Cultural Heritage Aboriginal Corp.;
- Kamilaroi- Yankuntjatjara Working Group;
- Kawul Cultural Services;
- Koori;
- Kuringgai;
- Muragadi;
- Murra Bidgee Mullangari Aboriginal Corp.;
- Murramarang;
- Ngunnawal CHTS;
- Nundagurri;
- Thauaira CHTS;
- Thawawal CHTS;
- Walbunja;
- Wandandian CHTS;
- Warragil;
- Widescope Indigenous Group;
- Yerramurra;

2.0 DESCRIPTION OF STUDY AREA

The study site is that piece of land described as Lot 2 Section 4 of the Land and Property Information Deposited Plan 2954, forming the following street address 1111-1141 Elizabeth Drive, Cecil Park, in the Parish of Cabramatta, County of Cumberland. Since the 2018 assessment a portion of the study area has been acquired by TfNSW and as such the subdivision and associated impacts are now contained to only a portion of the aforementioned Lot and DP. See Figure 2.1.

Lot	Section	Deposited Plan
2	4	2954

2.1 REGISTERED ARCHAEOLOGICAL SITES WITHIN THE STUDY AREA

There are no registered sites within the study area that the author of this report is aware of. Test excavation resulted in no Aboriginal archaeological and cultural objects and/or deposits being located.

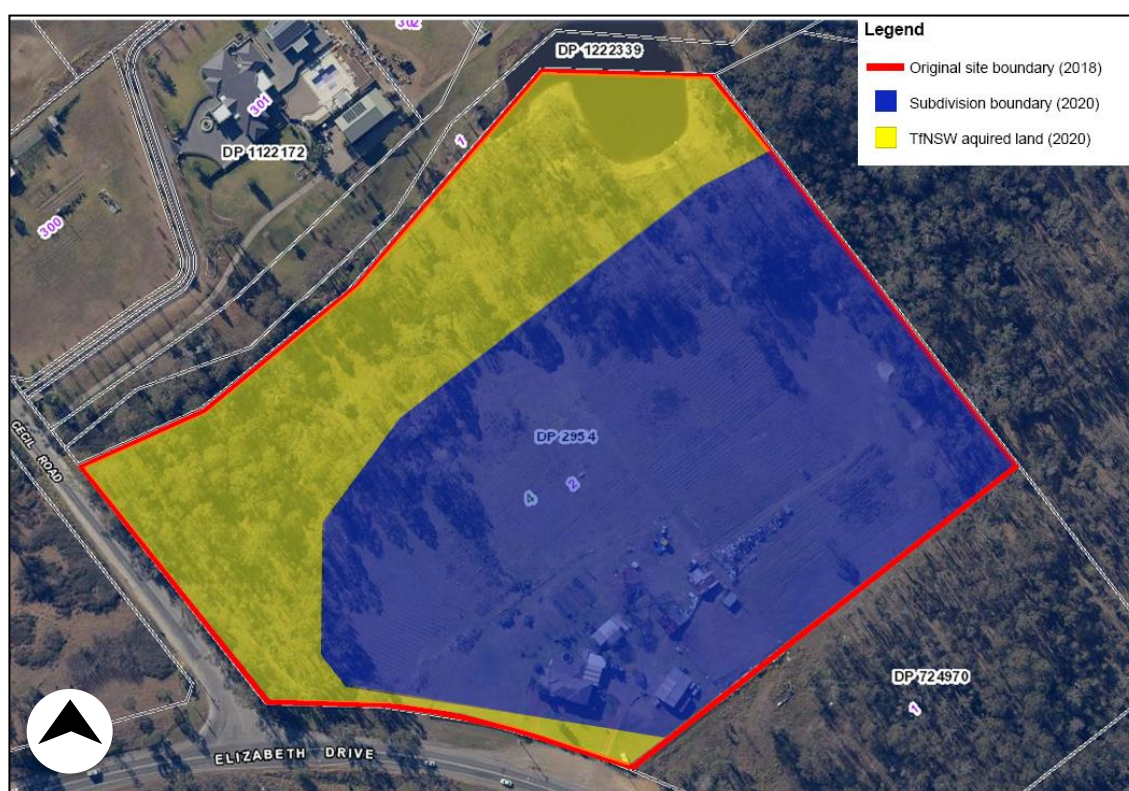


Figure 2.1 Aerial of study area.
Study area outlined in red. Six Maps, LPI Online (accessed 26/2/18).

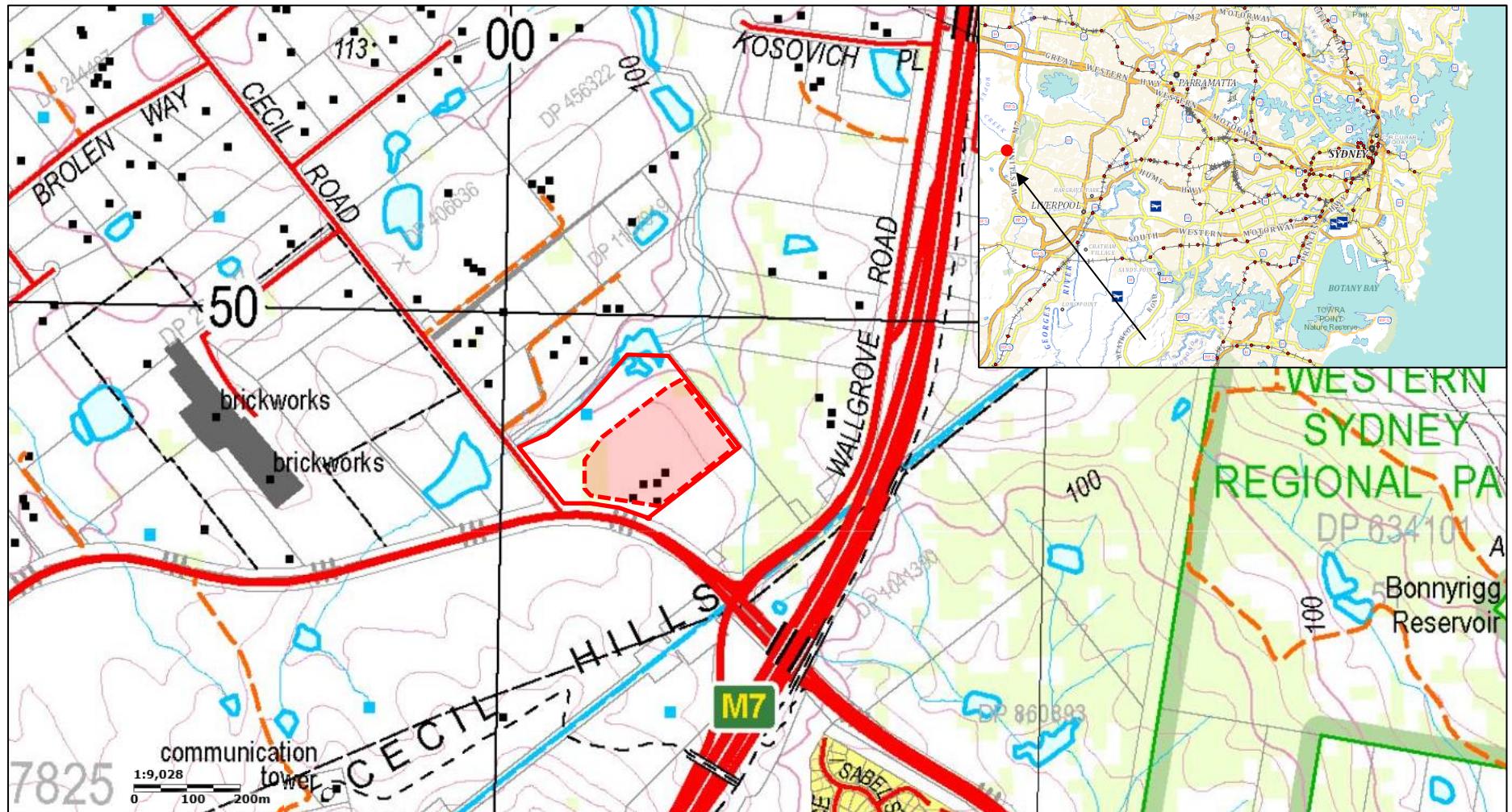


Figure 2.2 Topographic map with site location.
Study area outlined in red. Six Maps, LPI Online, accessed 12/04/2018.

2.2 ENVIRONMENTAL CONTEXT

To adequately understand and assess the potential Aboriginal archaeological resource that may be present within the study area it is vital to understand the environment in which the Aboriginal inhabitants of the study area carried out their activities. The environment that Aboriginal inhabitants lived in is a dominant factor in shaping their activity and therefore the archaeological evidence created by this activity. Not only will the resources available to the Aboriginal population have an influence on the evidence created but the survival of said evidence will also be influenced by the environment.

2.2.1 Topography

The study area extends over one topographic zones, the Luddenham (lu) Soil Landscape (Figure 2.3). This soil landscape is often located towards the south and west in the Cumberland Lowlands. This is an erosional landscape subject to moderate sheet erosion and water erosion causing surface movement and potential mass movement.

The topography consists of low rolling to steep low hills with a local relief of 50 -120m and slopes ranging between 5-20%. Narrow ridges and hillcrests in the area are found to grade into moderately inclined side-slopes with narrow drainage lines.

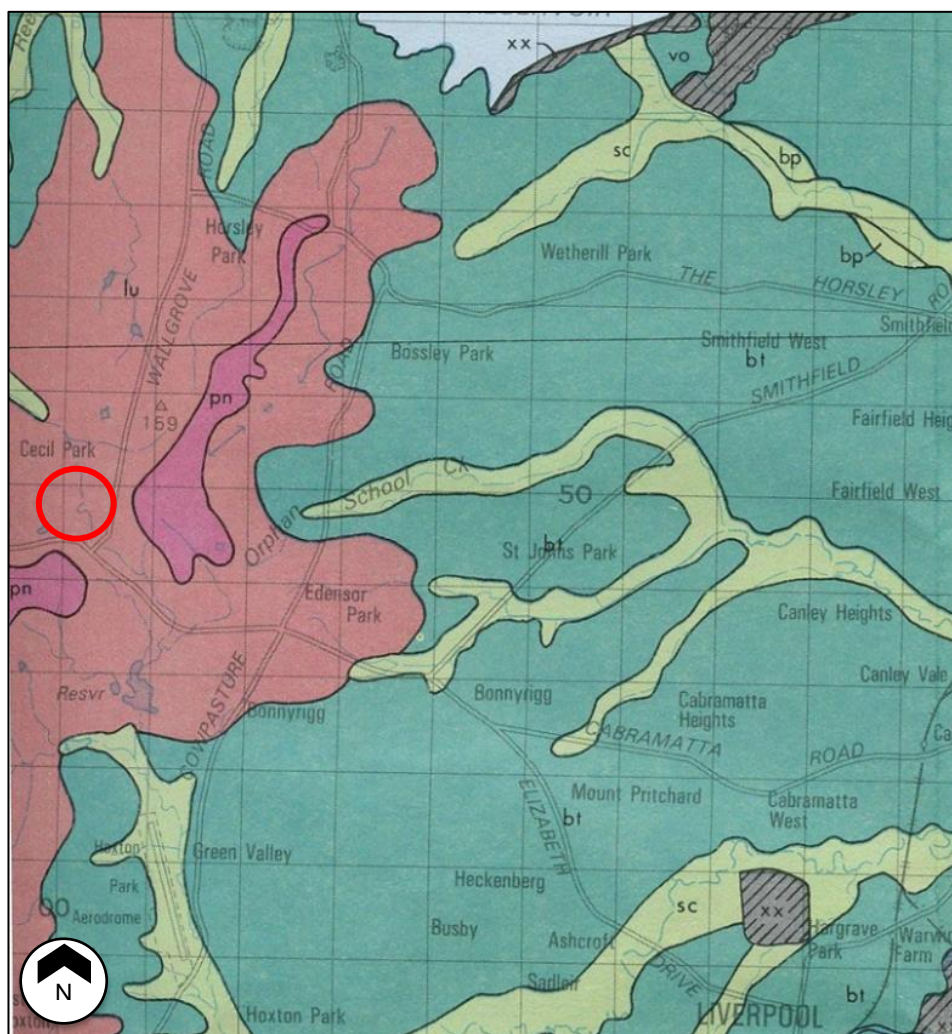


Figure 2.3 Approximate study area (outlined in red) on soil map.
Bannerman & Hazelton (1990) & AMAC (2018).

2.2.2 Geology and Soils

The geology of the study area consists of both Wianamatta Group Ashfield Shale as well as Bringelly Shale formations which are dominant geological formations of the Sydney Basin. The Ashfield Shale consists of laminate and dark grey shale while the Bringelly Shale consists of calcareous claystone and laminate. These two shales can be found along with Minchinbury Sandstone which is a fine – medium grained lithic quartz sandstone in the area.

The soils are found to be shallow – moderately deep (<100 cm – 150 cm) dark podzolic soils in shallow areas or massive earthy clays. Along crests and upper slopes these soils are moderately deep red and, along slopes, yellow podzolic soils. Located within drainage lines and lower slopes are softer prairie soils.

Table 2.1 Description of dominant soil material

Dominant Soil Material	Soil Horizon	Description
lu1	A1 Horizon	Friable dark brown loam to silt loam or silty clay loam. Soil can range in colour from brownish black to brown. It has a strong structure with subangular blocky peds. When uncompacted, peds can break down into crumbs. It is subject to compacting and hardsetting when dry. Shale fragments and charcoal can occur, roots are also common.
lu2	A2 Horizon	Hardsetting brown clay loam to fine sandy clay loam. Soil can range in colour from brown to dull yellowish brown as well as reddish brown. It has a weakly pedal structure, can be earthy and porous. It is hardsetting when exposed at the surface. Shale fragments, charcoal and roots are present.
lu3	B Horizon	Whole coloured medium clay. Soil can range in colour from reddish brown to bright reddish brown as well as bright yellowish brown. It has a strong structure and smooth faced, dense ped fabric. Shale fragments are common, however, roots and charcoal are absent.
lu4	B/C Horizon	Mottled grey plastic medium clay. Soil can range in colour from light grey to light reddish grey. Yellow and red mottles are common. It is usually moist and very plastic. It has a strongly pedal structure and dense, smooth-ped fabric. Found in deep subsoils. Shale rock fragments and gravels are common, all other inclusions are absent.
lu5	B Variation	Apedal brown sandy clay to light clay. Soil can range in colour from brown to dull reddish brown and dull yellowish brown. It has a weak subangular blocky structure and a dense earthy fabric. Roots are common as well as weathered shale fragments, no other inclusions occur.

Table 2.2 Table of expected Luddenham soil profiles based on landform

<p>Crest</p> <ul style="list-style-type: none"> ➤ up to 10 cm of friable dark brown loam (lu1) overlies ➤ <40 cm of sandy clay (lu5) ➤ Directly overlies deeply weathering shale bedrock or sometimes >200 cm mottled grey plastic clay (lu4) <p><i>N.B The total soil profile consists of >200 cm. In places lu1 is absent. The boundaries between the soil horizons are sharp and clear.</i></p>
<p>Upper Slopes and Mid Slopes</p> <ul style="list-style-type: none"> ➤ <10 cm of sandy clay (lu1) can occur on surface. ➤ up to 40 cm of clay loam (lu2) overlies ➤ sometimes where Minchinbury Sandstone is present up to 60 cm of lu5 can occur between lu2 and lu3 ➤ >50 cm of medium or heavy clay (lu3) overlies ➤ <90 cm of grey mottled clay (lu4) <p><i>N.B The total soil profile consists of >100 cm. The boundaries between the soil horizons are clear but can be gradual.</i></p>
<p>Lower Slopes</p> <ul style="list-style-type: none"> ➤ Up to 50 cm of loamy sand overlies ➤ >100 cm of sandy clay (lu5). <p>In other locations the following profile can be found;</p> <ul style="list-style-type: none"> ➤ Up to 40 cm of clay loam (lu2) overlies ➤ <50 cm sandy clay (lu5) ➤ >100 cm of whole coloured medium clay (lu3). This occasionally is underlain by ➤ >150 cm mottled grey plastic clay (lu4) <p><i>N.B The total soil profile consists of > 200cm. The boundaries between the soil horizons are clear sometimes gradual.</i></p>
<p>Poor Drainage</p> <ul style="list-style-type: none"> ➤ Greyish brown loam or clayey sand (lu1) <p><i>N.B The soil profile is shallow <50 cm. It contains small amounts of gravels and charcoal.</i></p>

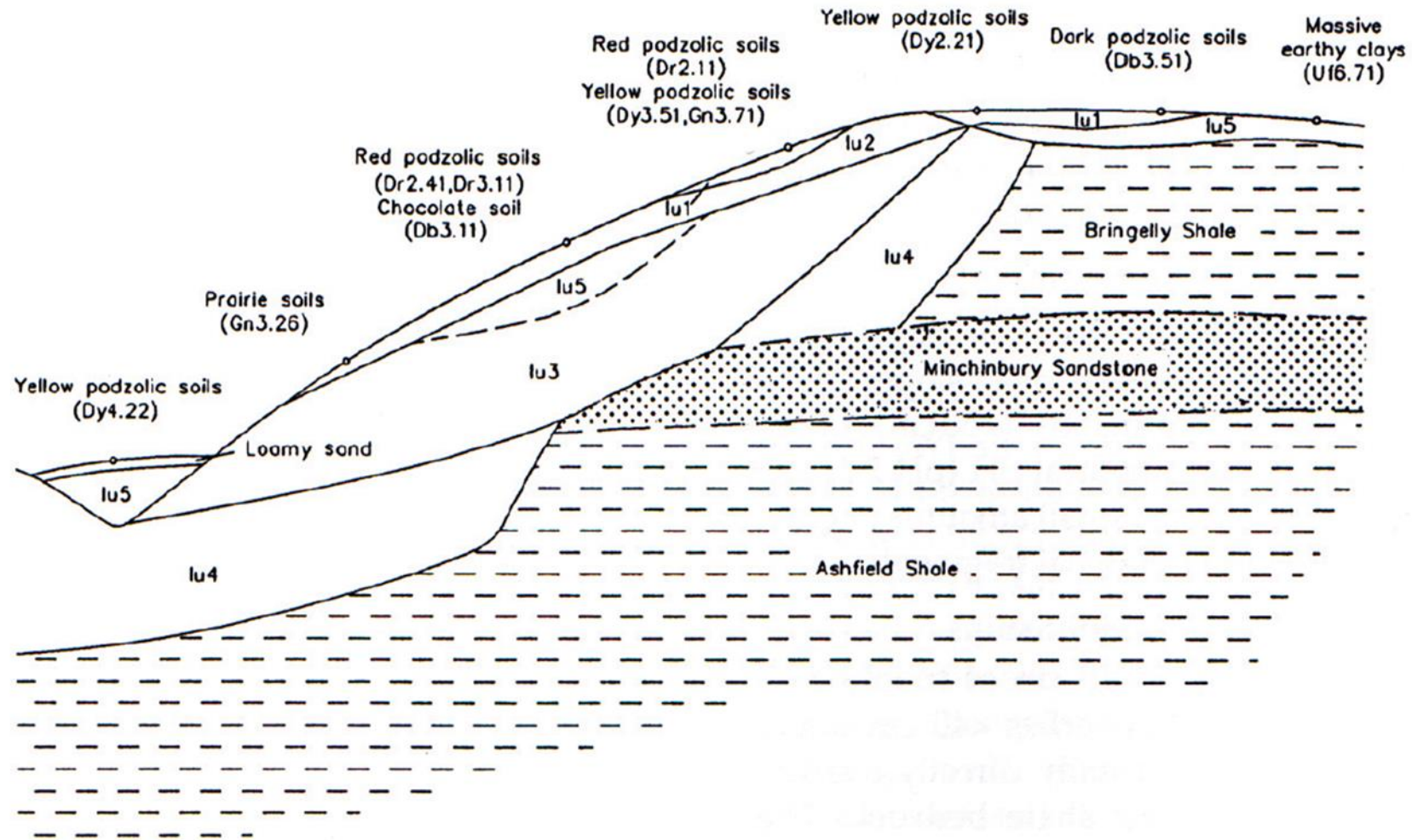


Figure 2.4 Cross Section of soil landscape illustrating relationships between landscape features and dominant soil materials.
Soil Landscapes of the Sydney 1:100 000 sheet (Bannerman and PA Hazelton 1990).

2.2.3 Watercourses

The study area lies near two high order streams, Prospect Reservoir which is dammed approximately 5.9km to the northeast and one of the 2 upper canal systems that supply Sydney (Figure 2.5) and runs underground past the study site approximately 220m to the southeast. Located to the northeast is Eastern Creek with its many watercourses. There are a number of drainage channels and manmade dams within the vicinity as a result of European occupation and past land use. These watercourses would have provided valuable resources.

2.2.4 Vegetation

The vegetation found in the study area is no longer in a native state and is comprised of a variety of introduced and noxious types of vegetation. This movement away from the natural vegetation is a result of previous land clearing for farming and development. These lands were cleared soon after European settlement due to the relatively high agricultural value of the soils upon which they are situated.

The native vegetation of this area probably comprised of cleared open dry sclerophyll forests that are associated with the Wianamatta and Bringelly Shale Groups. These vegetative communities principally contain Spotted Gum (*Eucalyptus maculate*), Grey Box (*E. moluccana*), Broad-leaved Ironbark (*E. fibrosa*), Narrow-leaved Ironbark (*E. crebra*), Forest Red Gum (*E. tereticornis*) and Woollybutt (*E. Longifolia*)

Understorey species included Blacktorn (*Bursaria spinose*), Coffee Bush (*Breynia oblongifolia*), Forest oak (*Allocasuarina torulosa*), Hickory (*Acacia implexa*), Hairy Clerodendrum (*Clerodendrum tomentosum*), as well as grasses such as Speargrass (*Aristida vagans*), Bordered Panic (*Entolasia marginata*), Paddock Lovegrass (*Eragrostis leptostachya*) and Kangaroo Grass (*Themeda australis*). For the most part this indigenous vegetation has been cleared for grazing, urban residential and light industry land use throughout the Cumberland Plain (Walker 1975: 11–13).

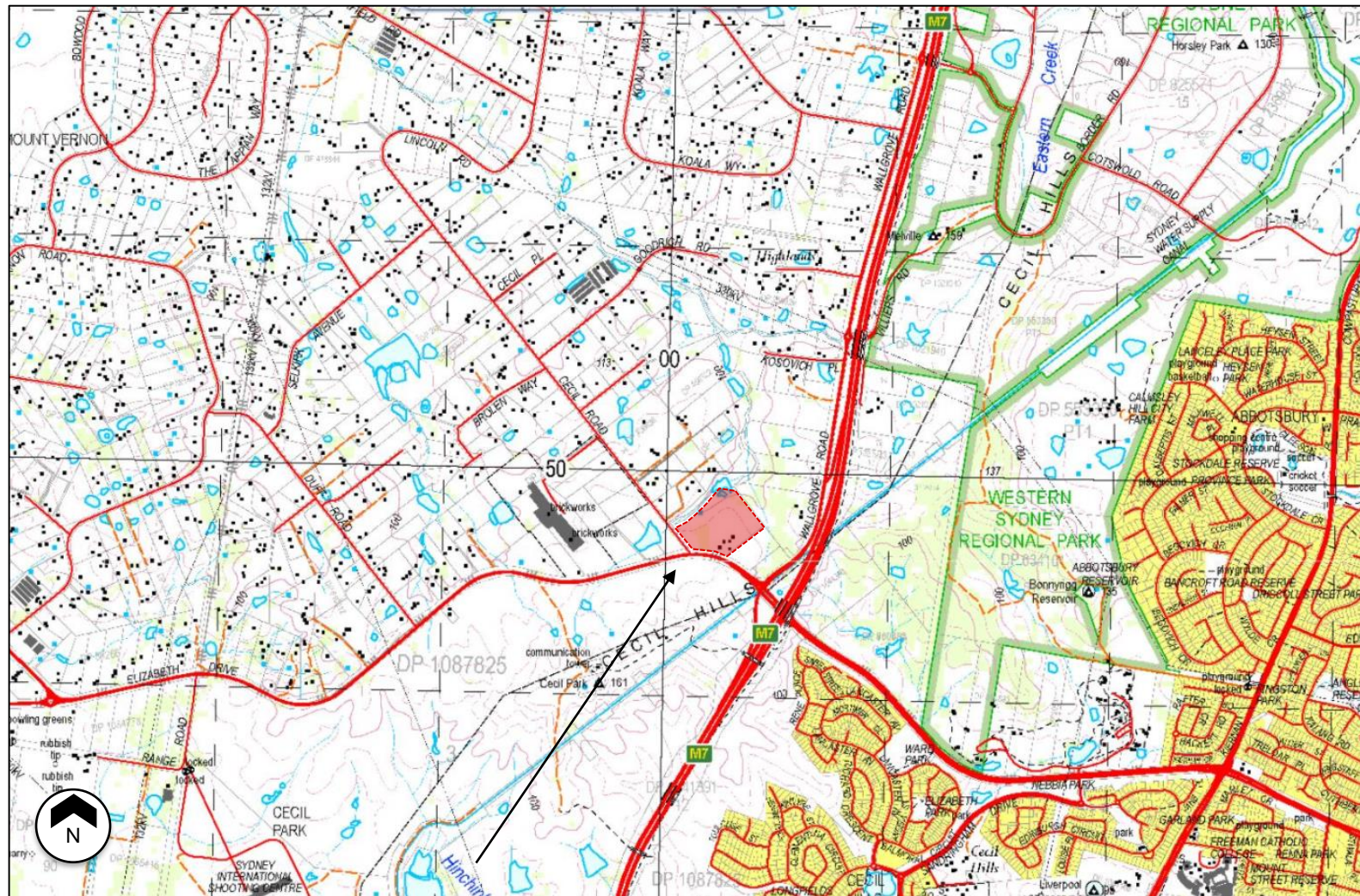


Figure 2.5 Topographic Map indicating watercourses in blue.
Study site indicated in red with black arrow. Six Maps (accessed 21/02/18), AMAC (2018).

2.3 LAND USE AND DISTURBANCE FACTORS

This section of the report provides an assessment of land use, the level of disturbance and the likely archaeological potential of the study area. The archaeological potential is based on the level of previous disturbance as well as the previously discussed predictive model for the region.

The Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales, Part 6 National Parks and Wildlife Act 1974, (DECCW 2010); defines disturbed lands as given below:

“Land is disturbed if it has been the subject of a human activity that has changed the land’s surface, these being changes that remain clear and observable. Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure and construction of earthworks).”

This definition is based on the types of disturbance as classified in The Australian Soil and Land Survey Field Handbook (CSIRO 2010). The following is a scale formulated by CSIRO (2010) of the levels of disturbances and their classification.

Minor Disturbance		Moderate Disturbance		Major Disturbance	
0	No effective disturbance; natural	3	Extensive clearing (eg: poisoning and ringbarking)	6	Cultivation; grain fed
1	No effective disturbance other than grazing by hoofed animals	4	Complete clearing; pasture native or improved, but never cultivated	7	Cultivation; irrigated, past or present
2	Limited clearing (eg: selected logging)	5	Complete clearing; pasture native or improved, cultivated at some stage	8	Highly disturbed (quarrying, road works, mining, landfill, urban)

The above scale is used in determining the level of disturbance of the study area and its impact on the potential archaeology which may be present.

2.3.1 Aboriginal Land Use and Resources

The study area lies in a resource zone which had resources that may have been exploited on either a regular or repeated basis. Reliable access to fresh water may have been present nearby to the study area.

Sites containing fresh water and sedentary food sources, coupled with the presence of other resources which may have been exploited or available on a seasonal basis, would suggest that Aboriginal land use of the study area was regular and repeated, with this reflected in the archaeological record.

Concentrated and repeated occupation may be represented in areas that have reliable access to water and foods sources. These areas will possess a high archaeological potential (Goodwin 1999).

The Eastern Creek and Prospect Creek catchment areas provided a rich dietary intake for the local inhabitants, in which estuarine marine resources could be exploited. These are major creek lines within the landscape that has been associated with Aboriginal activity. The accessibility of permanent water and resources along the bank would have channeled Aboriginal movement and land use to this location.

2.3.2 European Land Use

Background research indicates that the entirety of the study area has been impacted on during the 19th Century – 21st Century for agricultural purposes. Past European land use has led to the clearing of the land and construction of some dwellings and outbuildings to the southeast of the study area. Past aerials indicate that no deep excavation, construction of basements or bulk soil removal has taken place. The property, however, has what may be 2 man-made water holes the smaller of which is towards the western boundary and the larger one is located on the north-western boundary crossing over into the neighbouring properties, e.g. DP 1222339 and DP 1122172.

2.3.3 Disturbance and Archaeological Potential

It is important to note that the following assessments describe the archaeological potential of the study area. It is acknowledged that if the study area has little or no archaeological potential, the study area may still have cultural significance to the Aboriginal community.

Background research indicates that the entirety of the study area has been impacted on during the 19th Century – 21st Century for agricultural purposes which only pose an impact to the surface. The depth of the soil profile indicate intact soils may remain intact. There is no indication that any deep excavation, construction of basements has taken place. The only bulk soil removal associated with the property is the possible man-made water holes to the west and north west. Given the nature of the predicted deep soil profile, research suggests that there is original soil profile left intact. The following is predicted;

There are areas which would have been exposed to minor disturbances. A disturbance map has been developed which assesses the development area (Figure 2.6).

In light of this, and in the context of the information provided about the land use of the site and its proximity to two major water sources, the following has been predicted.

Low/ Moderate disturbance to sections of the landscape: Sub-surface Aboriginal objects with potential conservation value have a low-moderate probability of being present within the study area.



Figure 2.6 Disturbance Map of study area.
Moderate disturbance indicated in orange. Minor disturbance indicated in green. Six Maps (accessed 26.02.18) & overlay AMAC (2018).

3.0 ABORIGINAL CONSULTATION

This section documents the requirements of the Aboriginal consultation process that should be undertaken as part of any Aboriginal archaeological and cultural heritage assessment where an Aboriginal Heritage Impact Permit (AHIP) or test excavation is required. Section 4.1 outlines the guidelines for Aboriginal consultation issued by the DECCW. Section 4.2 documents the steps taken for this Aboriginal cultural assessment and the outcomes of the consultation.

3.1 CONSULTATION REQUIREMENTS

Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW 2010), referring to Part 6 Approvals under the NPW Act were released in April 2010. The responsibilities of the proponent when test excavation is to take place and/or permit under section 90 of the NPW Act are listed below.

<http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf>

Stage 1 – Notification of project proposal and registration of interest

Stage 1 states that:

4.1.2- Proponents are responsible for ascertaining, from reasonable sources of information, the names of Aboriginal people who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places. Reasonable sources of information could include (a) to (g) below. Proponents must compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places by writing to:

- (a) the relevant DECCW (sic) EPRG regional office*
- (b) the relevant Local Aboriginal Land Council(s)*
- (c) the Registrar, Aboriginal Land Rights Act 1983 for a list of Aboriginal owners*
- (d) the National Native Title Tribunal for a list of registered native title claimants, native title holders and registered Indigenous Land Use Agreements*
- (e) Native Title Services Corporation Limited (NTSCORP Limited)*
- (f) the relevant local council(s)*
- (g) the relevant catchment management authorities for contact details of any established Aboriginal reference group.*

4.1.3- Proponents must write to the Aboriginal people whose names were obtained in step 4.1.2 and the relevant Local Aboriginal Land Council(s) to notify them of the proposed project. The proponent must also place a notice in the local newspaper circulating in the general location of the proposed project explaining the project and its exact location. The notification by letter and in the newspaper, must include:

- (a) the name and contact details of the proponent*

- (b) a brief overview of the proposed project that may be the subject of an application for an AHIP, including the location of the proposed project*
- (c) a statement that the purpose of community consultation with Aboriginal people is to assist the proposed applicant in the preparation of an application for an AHIP and to assist the Director General of DECCW in his or her consideration and determination of the application*
- (d) an invitation for Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation with the proposed applicant regarding the proposed activity*
- (e) a closing date for the registration of interests.*

4.1.4- There must be a minimum of 14 days from the date the letter was sent, or notice published in the newspaper to register an interest. The time allowed to register an interest should reflect the project's size and complexity.

4.1.5- The proponent must advise Aboriginal people who are registering an interest that their details will be forwarded to DECCW and the Local Aboriginal Land Council (LALC) unless they specify that they do not want their details released.

4.1.6- The proponent must make a record of the names of each Aboriginal person who registered an interest and provide a copy of that record, along with a copy of the notification from 4.1.3 to the relevant DECCW EPRG regional office and LALC within 28 days from the closing date for registering an interest.

4.1.7- LALCs holding cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area who wish to register an interest to be involved in consultation must register their interest as an Aboriginal organisation rather than as individuals.

4.1.8- Where an Aboriginal organisation representing Aboriginal people who hold cultural knowledge has registered an interest, a contact person for that organisation must be nominated. Aboriginal cultural knowledge holders who have registered an interest may indicate to the proponent they have appointed a representative to act on their behalf. Where this occurs, the registered Aboriginal party must provide written confirmation and contact details of those individuals to act on their behalf.

Stage 2 – Presentation of information about the proposed project

Stage 2 states that:

4.2.1- The proponent must initiate arrangements for presenting the proposed project information to the registered Aboriginal parties (from Stage 1).

4.2.2- The presentation of proposed project information should provide the opportunity for:

- (a) the proponent to present the proposal, outline project details relevant to the nature, scope, methodology and environmental and other impacts*
- (b) the proponent to outline the impact assessment process including the input points into the investigation and assessment activities*

- (c) the proponent to specify critical timelines and milestones for the completion of assessment activities and delivery of reports*
- (d) the proponent and registered Aboriginal parties to clearly define agreed roles, functions and responsibilities*
- (f) the registered Aboriginal parties to identify raise and discuss their cultural concerns, perspectives and assessment requirements (if any).*

4.2.3- The proponent should record or document that the proposed project information has been presented. This record or documentation should include any agreed outcomes, and any contentious issues that may require further discussion to establish mutual resolution (where applicable). The proponent should provide a copy of this record or documentation to registered Aboriginal parties.

4.2.4- Depending on the nature, scale and complexity of the proponent's project, it may be reasonable and necessary for the proponent to:

- (a) conduct additional project information sessions to ensure that all necessary information about the project is provided and enable registered Aboriginal parties to provide information about the cultural significance of Aboriginal object(s) and/or place(s) that may be present on the proposed project area*
- (b) create the opportunity for registered Aboriginal parties to visit the project site" (DECCW 2010).*

Stage 3 – Drafting, review and finalisation of the Cultural Heritage Assessment Report

Stage 3 states that:

4.3.1- The proponent must present and/or provide the proposed methodology(s) for the cultural heritage assessment to the registered Aboriginal parties.

4.3.2- The registered Aboriginal parties must be given the opportunity to review and provide feedback to the proponent within a minimum of 28 days of the proponent providing the methodology. The review should identify any protocols that the registered Aboriginal parties wish to be adopted into the information gathering process and assessment methodology and any matters such as issues/areas of cultural significance that might affect, inform or refine the assessment methodology. Comments should be provided in writing or may be sought verbally by the proponent and accurately recorded.

4.3.3- As part of this consultation, the proponent must also seek cultural information from registered Aboriginal parties to identify:

- (a) whether there are any Aboriginal objects of cultural value to Aboriginal people in the area of the proposed project*
- (b) whether there are any places of cultural value to Aboriginal people in the area of the proposed project (whether they are Aboriginal places declared under s.84 of the NPW Act or not). This will include places of social, spiritual and cultural value, historic places with cultural significance, and*

potential places/areas of historic, social, spiritual and/or cultural significance.

4.3.4- Some information obtained from registered Aboriginal parties may be sensitive or have restricted public access. The proponent must, in consultation with registered Aboriginal parties, develop and implement appropriate protocols for sourcing and holding cultural information. In some cases, the sensitive information may be provided to the proponent by an individual and the proponent should not share that information with all registered Aboriginal parties or others without the express permission of the individual.

4.3.5- Information obtained in 4.3.4 is used to understand the context and values of Aboriginal object(s) and/or place(s) located on the proposed project site. This information must be integrated with the scientific (archaeological) assessment of significance. Together the context, values, and scientific assessment provide the basis for assessing Aboriginal heritage values and recommending management options.

The information collected by the proponent during the consultation process must be used only to inform decision making for any application for an AHIP, unless the registered Aboriginal parties agree otherwise.

4.3.6- The proponent must seek the views of registered Aboriginal parties on potential management options. Management options will include ways to avoid or mitigate harm and/or conserve known Aboriginal object(s) and/or place(s). Management options should consider how Aboriginal people can continue their association with identified Aboriginal heritage values.

4.3.7- The proponent must document all feedback received in Stage 3 from registered Aboriginal parties in the final cultural heritage assessment report. This must include copies of any submissions received and the proponent's response to the issues raised. In some cases, this may require an acknowledgment of sensitive information and a list of Aboriginal people who should be contacted for permission to receive further details" (DECCW 2010).

Stage 4 – Review of draft cultural heritage assessment report.

Stage 4 states that:

4.4.1- The proponent must prepare a draft cultural heritage assessment report.

4.4.2- The proponent must provide a copy of the draft cultural heritage assessment report to registered Aboriginal parties for their review and comment.

4.4.3- The proponent must give registered Aboriginal parties a minimum of 28 days from sending the draft report to make submissions. The time allowed for comment on the draft report should reflect the project's size and complexity. Comments should be provided in writing or, where provided verbally, accurately recorded.

4.4.4- After considering the comments received on the draft report the proponent must finalise the report. The final report must include copies of any submissions received, including submissions on the proposed methodology and on the draft report. The final report must also include the proponent's response to each submission. The report must then be submitted to DECCW for consideration with the proponent's application for an AHIP.

4.4.5- The proponent must provide or make available copies of the final cultural heritage assessment report and the AHIP application to registered Aboriginal parties and the relevant LALC(s) (whether or not the LALC is registered in Stage 1). The report and application must be provided or made available within 14 days of the AHIP application being made" (DECCW 2010).

3.2 CONSULTATION SUMMARY

Consultation for this report has been undertaken in accordance with the National Parks and Wildlife Act 1974: Part 6; *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW 2010).

All registered stakeholders were given a copy of a proposed Aboriginal Cultural Heritage research methodology and given 28 days to respond to this document.

Archaeological test excavation has been undertaken and resulted in no Aboriginal archaeological and cultural objects and/or deposits being located. The findings of this investigation have been synthesised into a report *Aboriginal Test Excavation Report, Lot 2 Section 4 DP 2954, 1111 - 1141 Elizabeth Drive, Cecil Park (Fairfield LGA)*. All registered parties were given 28 days to review and comment on this document. A full consultation log containing documented evidence and submissions can be available on request, however, as the testing programme resulted in no archaeological and/or cultural material, only a summary of the consultation has been supplied and a full log is not required.

All registered stakeholders were given a copy of this Aboriginal Cultural Heritage Assessment. All registered parties will have the opportunity to review and comment on this document. A final Aboriginal stakeholder approved version of this report shall be issued at the close of the mandatory 28-day period (should any changes be required as a result of the exhibition process or Aboriginal stakeholder comment they will be included at this stage).

Following amendments made to this Aboriginal Cultural Heritage Assessment in September 2020, a copy of the updated report will be given to the registered Aboriginal stakeholders.

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Table 3.1 Consultation Summary

STAGE 1						
Authority Letters & Advertisement						
Authority Body/ Organisation	Contact Person	Contact Details	Date Sent	Method	Responded	Date
Fairfield City Council	Heritage Officer		21/12/2017	Mail	Yes	17/1/18
Greater Sydney LLS	Heritage Officer	PO BOX 4515, Westfield Penrith NSW 2750	21/12/2017	Mail		
Deerubbin Local Aboriginal Land Council	Heritage Officer	PO BOX 40, Penrith BC NSW 2751	21/12/2017	Mail		
NSW Native Title Services	Heritage Officer	PO BOX 2105, Strewberry Hills NSW 2012	21/12/2017	Mail		
NNTT	Heritage Officer	GPO BOX 9973, Sydney NSW 2001	21/12/2017	Mail	Yes	4/1/18
NTSCORP	Heritage Officer	PO BOX 2105, Strewberry Hills NSW 2012	21/12/2017	Mail		
OEH	Archaeologist	PO BOX 644, Parramatta NSW 2124	21/12/2017	Mail	Yes	31/1/18
Office of Registrar	Heritage Officer	PO BOX 112, Glebe NSW 2037	21/12/2017	Mail	Yes	10/1/18
Newspaper Advertisement:		Fairfield City Champion	Date printed: 10/1/18		End Period: 24/1/18	
Stakeholders Contacted		Minimum 14 days to register	(7/2/2018) - (21/2/2018)			
Name/Organisation	Contact Person	Contact Details	Date Sent	Method	Notes	
Deerubbin LALC	Steve Randall	PO BOX 40, Penrith NSW 2750	7/2/2018	Mail		
Darug Custodian Aboriginal Corp (DCAC)	Justin Coplin	justinecoplin@optusnet.com.au	7/2/2018	Mail		
Darug Tribal Aboriginal Corp		PO BOX 441, Blacktown NSW 2148	7/2/2018	Mail		
Darug Aboriginal Cultural Heritage Assessments	Celestine Everingham	Unit 9/ 6 Chapman Ave, Chatswood NSW 2067	7/2/2018	Mail		
Darug Land Observations	Gordon Workman	PO BOX 2006, Bendalong NSW 2539	7/2/2018	Mail		
Darug Aboriginal Land Care	Des Dyer	18a Perigee Cl, Doonside NSW 2767	7/2/2018	Mail		
Gunjeewong Cultural Heritage Aboriginal Corp	Cherie Carroll Turrise	1 Bellvue Pl, Portland NSW 2847	7/2/2018	Mail		
Merrigarn Indigenous Corporation	Shaun Carroll	GPO BOX 158, Canberra City, ACT 2601	7/2/2018	Mail		
Murri bidee Mullangari Aboriginal Corporation	Darleen Johnson	PO BOX 246, Seven Hills NSW 2155	7/2/2018	Mail		
Bidjalong Aboriginal Corp	James Carroll	PO BOX 124, Round Corner NSW 2158	7/2/2018	Mail		
Kamilaroi-Yankuntjatjara Working Group	Phil Khan	78 Forbes St, Emu Plains NSW 2750	7/2/2018	Mail		
Wurrumay Consultancy	Kerrie Slater	89 Pyramid St, Emu Plains NSW 2750	7/2/2018	Mail		
Warragil Cultural Services	Aaron Slater	warragil_c.s@hotmail.com	7/2/2018	Email		
Kawul Cultural Services	Vicky Slater	89 Pyramid St, Emu Plains NSW 2750	7/2/2018	Mail		
Tocumwall	Scott Franks	PO BOX 76 Caringbah NSW 1495	7/2/2018	Mail		
Amanda Hickey Cultural Services	Amanda Hickey	41 Dempsey St, Emu Heights NSW 2750	7/2/2018	Mail		
Widescope Indigenous Group	Steven Hickey	73 Russell St, Emu Plains NSW 2750	7/2/2018	Mail		

HSB Consultants	Patricia Hampton	62 Ropes Crossing Boulevard, Ropes crossing NSW 2760	7/2/2018	Mail	
Rane Consulting	Tony Williams	1 Pyrenees Way Beaumont Hills NSW 2155	7/2/2018	Mail	
Aboriginal Archaeological Services	Andrew Williams	Unit 2/ 24 Goodwin St, Narrabeen NSW 2101	7/2/2018	Mail	
Dhinawan-Dhigaraa Culture & Heritage	Ricky Fields	16 Yantara Pl, Woodcroft NSW 2767	7/2/2018	Mail	
Gunyu	Kylie ann bell	gunyuuchts@gmail.com	7/2/2018	Email	
Walbunga	Hika te Kowhai	walbunga@gmail.com	7/2/2018	Email	
Badu	Karia Lea Bond	11 Jeffery Pl, Moruya NSW 2537	7/2/2018	Mail	
Goobah Developments	Basil Smith	66 Grantham Rd, Batehaven NSW 2536	7/2/2018	Mail	
Wullung	Lee-Roy James Boota	54 Blackwood St, Gerringong NSW 2534	7/2/2018	Mail	
Yerramurra	Robert Parson	Yerramurra@gmail.com	7/2/2018	Email	
Nundagurri	Newton Carriage	Nundagurri@gmail.com	7/2/2018	Email	
Murrumbul	Mark Henry	murrumbul@gmail.com	7/2/2018	Email	
Jerringong	Joanne Anne Stewart	Jerringong@gmail.com	7/2/2018	Email	
Pemulwuy CHTS	Pemulwuy Johnson	pemulwuyd@gmail.com	7/2/2018	Email	
Bilinga	Simalene Carriage	bilingachts@gmail.com	7/2/2018	Email	
Munyunga	Kaya Dawn Bell	munyangchts@gmail.com	7/2/2018	Email	
Wingikara	Hayley Bell	wingikarachts@gmail.com	7/2/2018	Email	
Minnamunnung	Aaron Broad	1 Waratah Ave, Albion Park Rail NSW 2527	7/2/2018	Email	
Jerringong	Joanne Anne Stewart	Jerringong@gmail.com	7/2/2018	Email	
Gundungurra Tribal Technical Services	Christopher Payne	chrispayne776@gmail.com	7/2/2018	Mail	
Walgalu	Ronald Stewart	walgaluchts@gmail.com	7/2/2018	Email	
Thauaira	Shane Carriage	thauairachts@gmail.com	7/2/2018	Email	
Dharug	Andrew Bond	dharugchts@gmail.com	7/2/2018	Email	
Bilinga CHTS	Robert Brown	bilinga@mirramajah.com	7/2/2018	Email	Bounced - Invalid Address
Gunyu CHTS	Darlene Hoskins-McKenzie	gunyu@mirramajah.com	7/2/2018	Email	Bounced - Invalid Address
Munyunga CHTS	Suzannah McKenzie	munyunga@mirramajah.com	7/2/2018	Email	Bounced - Invalid Address
Murrumbul CHTS	Levi McKenzie-Kirkbright	murrumbul@mirramajah.com	7/2/2018	Email	Bounced - Invalid Address
Wingikara CHTS	Wandai Kirkbright	wingikarachts@gmail.com	7/2/2018	Email	
Gulaga	Wendy Smith	gulagachts@gmail.com	7/2/2018	Email	
Biamanga	Seli Storer	biamangachts@gmail.com	7/2/2018	Email	
Cullendulla	Corey Smith	cullendullachts@gmail.com	7/2/2018	Email	
Murramarang	Roxanne Smith	murramarngchts@gmail.com	7/2/2018	Email	
Butucarbin Aboriginal Corporation	Jennifer Beale	PO BOX E18, Emerton NSW 2770	7/2/2018	Mail	

Didge Ngunawal Clan	Lillie Carroll	7 Siskin St, Quakers Hill NSW 2763	7/2/2018	Mail	
Ginninderra Aboriginal Corp	Steven Johnson	PO BOX 3143, Grose Vale NSW 2754	7/2/2018	Mail	
Nerrigundah	Newton Carriage	nerrigundachts@gmail.com	7/2/2018	Email	
Wailwan Aboriginal Digging Group	Philip Boney	waarian12@outlook.com	7/2/2018	Mail	
Registered Organisations/Individuals	Contact Person	Email Address	Date	Method	Notes
Thawawal CHTS	John Carriage	tharawalchts@gmail.com	23/02/2018	Email	
Thauaira CHTS	Shane Carriage	Thauairachts@gmail.com	22/02/2018	email	
Badu	Karia Bond	baduchts@gmail.com	22/02/2018	email	
Ngunnawal chts	Edward Stewart	ngunawalchts@gmail.com	22/02/2018	Email	
Dharug chts	Andrew Bond	dharugchts@gmail.com	22/02/2018	Email	
Gangangarra	Kim Carriage	gangangarra@gmail.com	22/02/2018	Email	
Wandandian chts	William bond	wandandianchts@gmail.com	22/02/2018	Email	
Djiringanj chts	Keith Nye	djiringanjchts@gmail.com	22/02/2018	Email	
Bidawal chts	Shakiha Archival	bidawalchts@gmail.com	22/02/2018	Email	
Yerramurra		yerramurra@gmail.com	22/02/2018	Email	
Kuringgai	Toni Brierley	kuringgaichts@gmail.com	22/02/2018	Email	
Elouera	Leeanne Tungai	elouerachts@gmail.com	22/02/2018	Email	
Warragil	Aaron Slater	warragil_c.s@hotmail.com	22/02/2018	Email	
Kawul Cultural Services	Aaron Slater		22/02/2018	Email	
Nundagurri	Thomas Tighe	nundagurri@gmail.com	22/02/2018	Email	
Goobah	Basil Smith	goobahchts@gmail.com	21/02/2018	Email	
Cullendulla		cullendullachts@gmail.com	21/02/2018	Email	
Murramarang		murramarangchts@gmail.com	21/02/2018	Email	
Biamanga		biamangachts@gmail.com	21/02/2018	Email	
Murra Bidgee Mullangari	Ryan Johnson	murrabidgeemullangari@yahoo.com.au	20/02/2018	Email	
Muragadi	-	muragadi@yahoo.com.au	20/01/2018	Email	
Koori	Jennifer Beale	koori@ozmail.com.au	20/02/2018	Email	
Amanda Hickey Cultural Services	Amanda Hickey	-		Email	
A1 Indigenous Services	Carolyn Hickey	cazadirect@live.com	16/02/2018	Email	
KYWG	Phil Khan	phillipkhan.acn@live.com.au	10/02/2018	letter	
Darug Land Observations	Anna Ohara	daruglandobservations@gmail.com	13/02/2018	Email	
Widescope	Steven Hickey	widescope.group@live.com	13/02/2018	Email	
Darug Aboriginal Land Care	Des Dyer	desmond4552@hotmail.com	10/02/2018		
Darug Tribal Aboriginal Corp	Dirk Schmitt	darug_tribal@live.com.au	9/02/2018		
Didge Ngunawal Clan	Paul Boyd	didgengunawalclan@yahoo.com.au	9/02/2018		
Gunjeewong	Cherie	gunjeewong53@hotmail.com	12/02/2018	Email	
Walbunja		walbunja@gmail.com	8/02/2018		

STAGE 2 & 3					
ACHA Research Design Test Excavation Methodology		Minimum 28 days to respond		(27/02/2018) - (27/3/2018)	
Contacted Organisation/ Individuals	Contacted by Organisation/ Individual	Subject	Date	Method	Notes
All Raps	Consultation/ AMAC	ACHA methodology Dispatch	27/02/2018	Email	
Consultation/ AMAC	Des Dyer/ Darug Aboriginal Land Care	ACHA methodology review	28/02/2018	Email	Attached letter - Agrees with methodology
Consultation/ AMAC	Cherie Carroll/ Gunjeewong	ACHA methodology review	7/03/2018	Email	Agrees with methodology
Consultation/ AMAC	Amanda DeZwart/ AHCS	ACHA methodology	14/03/2018	Email	Agrees with methodology
Consultation/ AMAC	Carolyn Hickey/ A1 Indigenous	ACHA methodology	14/03/2018	Email	Agrees with methodology

4.0 BACKGROUND INFORMATION

Pre-field work research consisted of an analysis and synthesis of the background data to determine the nature of the potential archaeological and cultural heritage resource in the region.

Background research entailed a detailed review of sources of information on the history, oral history, ethno-history and archaeological background of the study area and surrounds and will include but not be limited to material from:

- Heritage NSW archaeological assessment and excavation reports and cultural heritage assessments;
- Heritage NW Library;
- State Library of NSW including the Mitchell Library;
- Local libraries and historical associations;
- National Library of Australia.

A search of the OEH AHIMS was undertaken and the results examined. The site card for each site within 1000m in all directions from the centre of the study area was inspected (where available) and an assessment made of the likelihood of any of the sites being impacted by the proposed development. The OEH library of archaeological reports (Hurstville) was searched and all relevant reports were examined. Searches were undertaken on the relevant databases outlined in Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, Part 6 National Parks and Wildlife Act 1974, (DECCW 2010);

Further to this the following sources were examined:

- The National Heritage List;
- The Commonwealth Heritage List;
- The NSW State Heritage Inventory;
- The National Native Title Register;
- The Register of Declared Aboriginal Places;
- Prevailing local and regional environmental plans;
- Environmental background material for the study area.

4.1 AHIMS SEARCH RESULTS

The Archaeological Heritage and Information Management System Database (AHIMS) is located at the Heritage NSW Offices at Hurstville in New South Wales. This database comprises information about all the previously recorded Aboriginal archaeological sites registered with Heritage NSW. Further to the site card information that is present about each recorded site, the assessments and excavation reports that are associated with the location of many of these sites are present in the library of reports.

The location of these sites must be viewed as purely indicative as errors in the recording of the locations of sites often occurs due to the disparate nature of the recording

process, the varying level of experience of those locating the sites and the errors that can occur when transferring data. If possible, sites that appear to be located near a study area should be relocated.

An AHIMS extensive 1km search was conducted on the 10th September 2020 (ID 534418). This search resulted in 10 registered sites within 1000 m of the study area. The following table is comprised of the results listed from the extensive search.

Table 4.1 AHIMS Search Results

Site ID	Site name	Site status	Site features
45-5-2561	GLC1	Valid	Artefact
45-5-2563	DLC2	Valid	Artefact
45-5-2468	P-CP14	Valid	Artefact
45-5-2476	IF10	Valid	Artefact
45-5-2477	IF11	Valid	Artefact
45-5-2721	PAD-OS-7	Valid	Artefact
45-5-2773	HC/ED1	Valid	Artefact
45-5-4022	Artefact Scatter PAD 2023-846	Valid	Artefact; PAD
45-5-4935	M12-AS-03	Valid	Artefact
45-5-5300	Cecil Hill Ridge Place (CHRP) PAD	Valid	Artefact; PAD

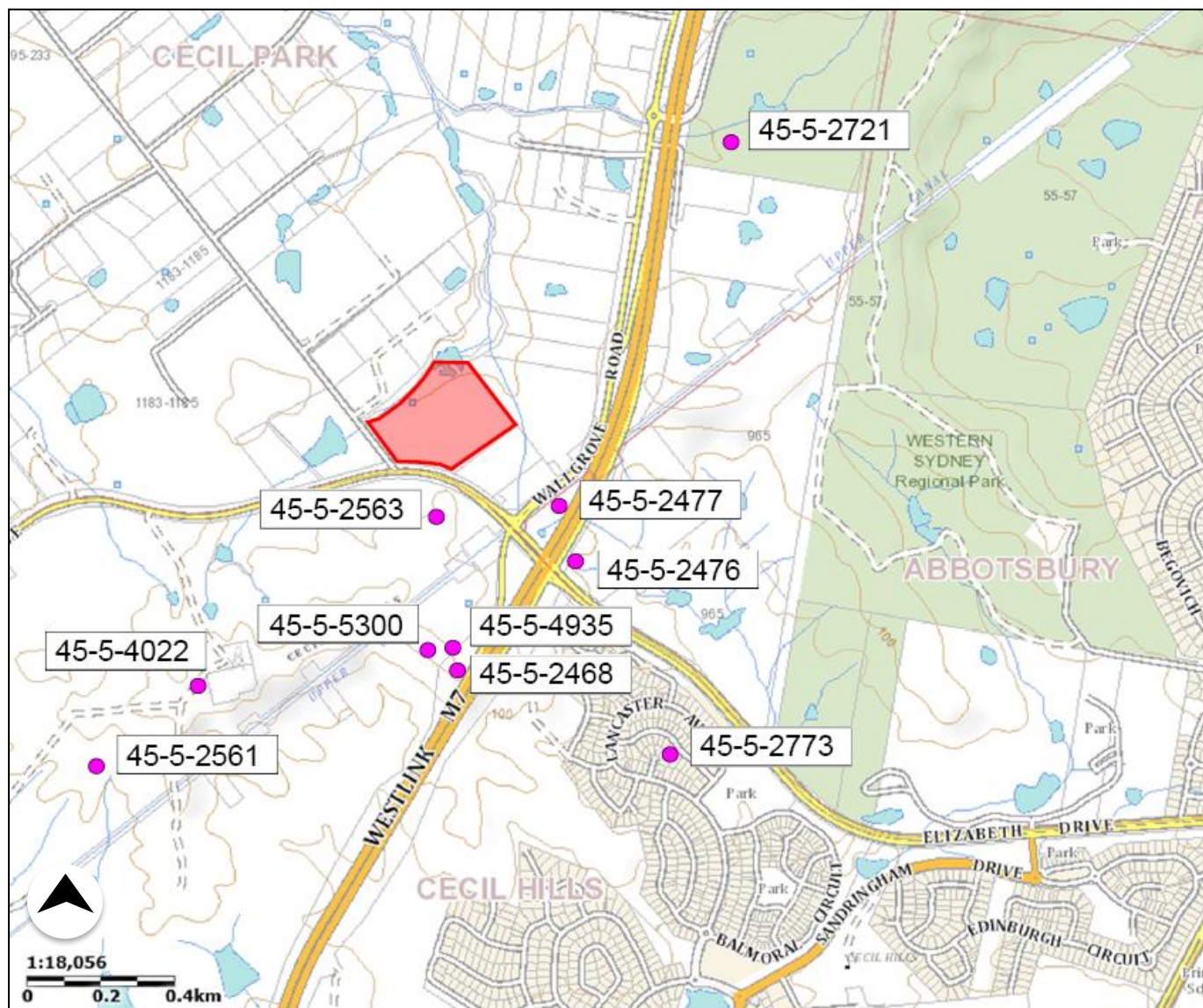


Figure 4.1 AHIMS Search Results.
Registered sites indicated in pink.
Study area indicated in red.
Heritage NSW (2020). Six Maps
(2020).

4.2 OTHER SEARCH RESULTS

Results for other statutory databases searched are given below;

Heritage Listings/ Register/ Other	Result
National Heritage List	N/a
Commonwealth Heritage List	N/a
NSW State Heritage Register	N/a
Register of Declared Aboriginal Places	N/a
National Native Title Register	N/a
Fairfield Citywide Development Control Plan 2013 – Potential Investigation Areas	Located in potential investigation area



Figure 4.2 Potential Investigation Areas within Fairfield City Council.
Study Area indicated in yellow. Fairfield Citywide DCP 2013, Appendix G: Figure 1 Potential Investigation Areas within Fairfield City Council.

4.3 SUMMARY OF ARCHAEOLOGICAL PREDICTIVE MODEL FOR THE REGION

Predictive modelling is an adaptive process which relies on a framework formulated by a number of factors, including but not limited to the use of local land systems, the environmental context, archaeological work and any distinctive sets of constraints that would influence land use patterns. This is based on the concept that different landscape zones may offer different constraints, which is then reflected in the spatial distributions and forms of archaeological evidence within the region (Hall and Lomax 1996).

Early settlement models focused on seasonal mobility, with the exploitation of inland resources being sought once local ones become less abundant. These principles were adopted by Foley (1981) who developed a site distribution model for forager settlement patterns. This model identifies two distinctive types of hunter and gatherer settlements; 'residential base camps' and 'activities areas'. Residential base camps are predominately found located in close proximity to a reliable source of permanent water and shelter. From this point the surrounding landscape is explored and local resources gathered. This is reflected in the archaeological record, with high density artefact scatters being associated with camp bases, while low density and isolated artefacts are related to the travelling routes and activity areas (Figure 4.3) (Foley 1981).

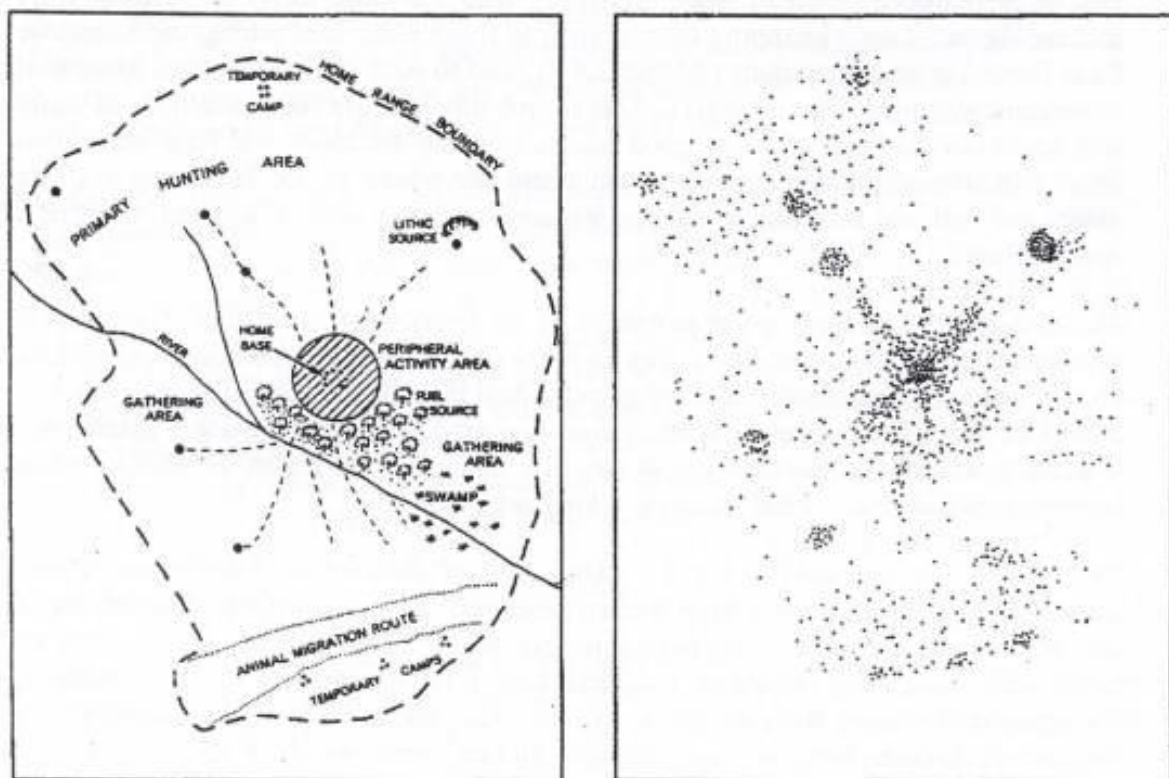


Figure 4.3 Examples of forager settlement patterns.
Foley (1981).

However, more recently, investigation into understanding the impacts of various episodes of occupation on the archaeological record has been explored, of which single or repeated events are being identified. This is often a complex process to establish, specifically within predictive models as land use and disturbance can often result in post depositional processes and the superimposition of archaeological materials by repeated episodes of occupation

The principals behind this model have been incorporated into other predictive models such as that of McBryde (1976). McBryde's model is centred on the utilisation of food resources as a contributor to settlement patterns, specifically with reference to the predictability and reliability of food resources for Aboriginal people within the immediate coastal fringe and/or hinterland zone, with migratory behaviour being a possibility. Resources such as certain species of animals, particularly; small marsupials and reptiles, plant resources and nesting seabirds may have been exploited or only available on a seasonal or intermittent basis. As such, archaeological sites which represent these activities whilst not being representative of permanent occupation may be representative of brief, possibly repeated occupation.

Jo McDonald and Peter Mitchell have since contributed to this debate, with reference to Aboriginal archaeological sites and proximity to water using their Stream order model (1993). This model utilises Strahler's hierarchy of tributaries (Figure 4.4). This model correlates with the concept of proximity to permanent water and site locations and their relationship with topographical units. They identify that artefact densities are greatest on terraces and lower slopes within 100m of water.

Intermittent streams however, also have an impact on the archaeological record. It was discovered that artefacts were most likely within 50 – 100m of higher (4th) order streams, within 50m (2nd) order streams and that artefact distributions around (1st) order streams was not significantly affected by distance from the watercourse. Landscapes associated with higher order streams (2nd) order streams were found to have higher artefact densities and more continuous distribution than lower order streams.

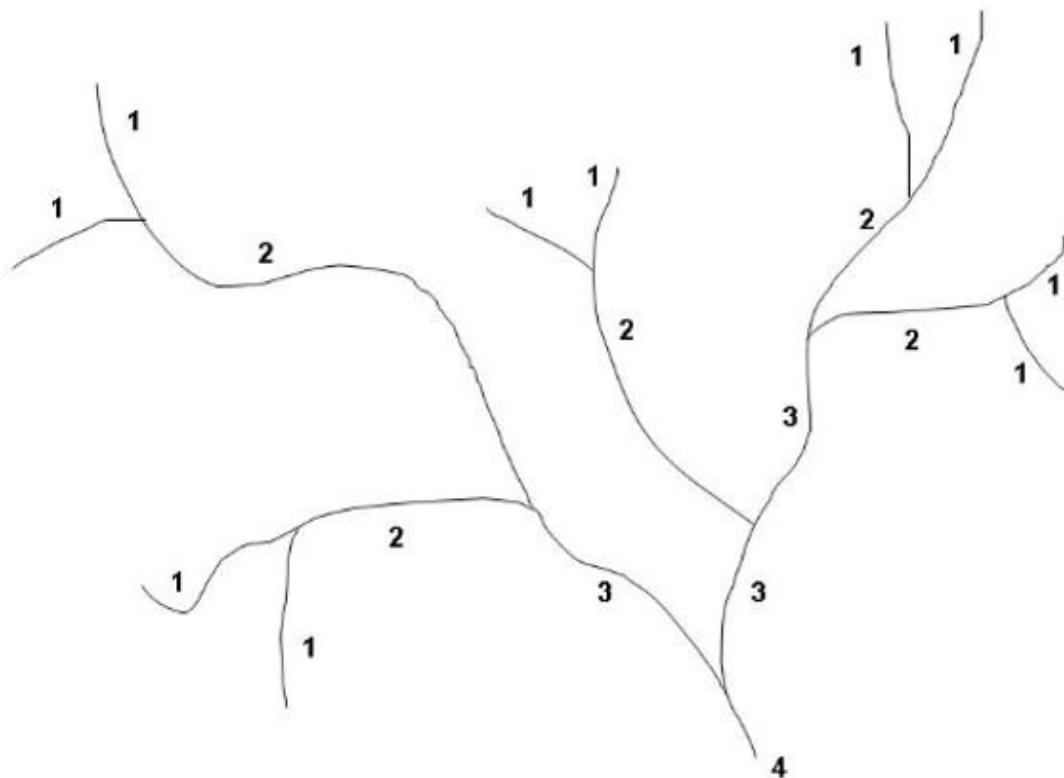


Figure 4.4 Strahler's hierarchy of tributaries.
Strahler (1957).

Table 4.2 Relationship between landscape unit and site distribution for region

Landscape Unit /Site types	Site Distribution and activity
1st order stream	Archaeological evidence will be sparse and reflect little more than a background scatter
Middle reaches of 2nd Order Stream	Archaeological evidence will be sparse but focus activity (one off camp locations, single episodes and knapping floor)
Upper reaches of 2nd order stream	Archaeological evidence will have a relatively sparse distribution and density. These sites contain evidence of localised one-off behaviour.
Lower reaches of 3rd order stream	Archaeological evidence for frequent occupation. This will include repeated occupation by small groups, knapping floors (used and unused material) and evidence of concentrated activities.
Major creeklines 4th order streams	Archaeological evidence for more permanent or repeated occupation. Sites will be complex and may be stratified with a high distribution and density.
Creek junctions	This landscape may provide foci for site activity, the size of the confluence in terms of stream rankings could be expected to influence the size of the site, with the expectation of there being higher artefact distribution and density.
Ridge top locations between drainage lines	Ridge Tops will usually contain limited archaeological evidence, although isolated knapping floors or other forms of one off occupation may be in evidence in such a location.
Raw Materials near water-sources	The most common raw materials are silcrete and chert in sites closer to coastal headlands, though some indurated mudstone/silicified tuff and quartz artefacts may also be found.
Grinding Grooves	Grinding Grooves may be found in the sandstone or shale/sandstone transition areas.
Scarred trees -	May occur in stands of remnant vegetation.
Ceremonial Sites	Consultation with relevant Aboriginal Stakeholder groups, individuals and review of ethnographic sources often reveal the presence of ceremonial or social sites.

This predictive model has been refined with focus on the dominant environment and landscape zones of the Cumberland Lowlands, such as the Wianamatta Group Shales, Hawksbury Sandstone, Quaternary alluvium, Quaternary Aeolian and Tertiary alluvium. Attenbrow (2002) discovered that the Quaternary alluvial deposits had a greater concentration of archaeological sites, which is likely the result of these deposits being located towards major creeklines and rivers, such as Eastern Creek, Second Ponds Creek etc. Areas of alluvial deposits were found by Kohen (1986) to contain artefact scatters of a large and complex nature the closer they were to permanent creeks.

Umwelt (2004) have identified similar environmental – archaeological relationships which contribute to the mapping and modelling of archaeological sites, such as;

- The pattern of watercourses and other landscape features such as ridge lines affected the ease with which people could move through the landscape;
- Certain landscape features such as crests or gently sloping, well-drained landforms influenced the location of camping places or vantage points that provided outlooks across the countryside;
- The morphology of different watercourses affected the persistence of water in dry periods and the diversity of aquatic resources and so influenced where, and for how long, people could camp or procure food;
- The distribution of rock outcrops affected the availability of raw materials for flakes and ground stone tools;
- The association of alluvial, colluvial and stable landforms affects the potential that sites will survive;
- European land-use practices affect the potential for site survival and/or the capacity for sites to retain enough information for us to interpret the types of activities that took place at a specific location.

The Aboriginal Cultural Heritage Data Audit (DOP, 2005) produced the following table as part of the NSW Comprehensive Coastal Assessment Toolkit (DOP, 2005) which made the following statements outlined in table 4.3 about the predictive location of Aboriginal sites in Coastal NSW. These statements support the conclusions drawn in the following predictive model established for the study area. The study makes one very important claim which is that Aboriginal Ceremonial or Dreaming Sites can only be identified by Aboriginal community knowledge.

All models state that the primary requirement of all repeated, concentrated or permanent occupation is reliable access to fresh water. Brief and possibly repeated occupation may be represented in areas that have unreliable access to ephemeral water sources, however these areas will not possess a high archaeological potential (Goodwin 1999).

Table 4.3 Aboriginal Cultural Heritage Data Audit, Predictive Modelling for Coastal Aboriginal Sites, NSW.

Site Type	Archaeological/ Predictive Modelling
Aboriginal Ceremony and Dreaming Sites	Can only be identified on the basis of Aboriginal community knowledge.
Aboriginal Resource and Gathering Sites	Can occur at any location where plant and animal target species are found at present or were available in the past.
Art Sites:	All rock paintings or drawings and some rock engravings will occur within rock shelters/overhangs, most commonly within sandstone cliff lines and in granite boulder fields. Rock engravings may occur wherever there are suitable rock-surface exposures.
Artefacts:	Will occur in all landscapes with varying densities. Artefacts of greatest scientific significance will occur in stratified open contexts (such as alluvial terraces, sand bodies) and rock shelter floors.
Burials:	Most likely (but not always) to be buried in, or eroding from, sandy soils. Can occur within rock shelters/overhangs, most commonly within sandstone cliff lines and in granite boulder fields.
Ceremonial Ring Sites:	Environmental factors may be of particular importance in site location including association with sources of water, ridges, unstructured soils and geological boundaries. Distance to adjacent ceremonial ring sites may influence site location.
Conflict Sites:	Can only be identified on the basis of historical records and community knowledge.
Grinding Grooves:	Most likely to occur on surface exposures of sandstone. Occasionally occur within sandstone rock shelters.
Modified Trees	Will only occur where target tree species survive and if these are of an age generally greater than 100 years old.
Non-Human Bone and Organic Material Sites:	Will occur in any surface or buried context where preservation conditions allow. Most commonly survive in open shell midden sites and in rock shelter floor deposits.
Ochre Quarry Sites:	Can occur at any location where suitable ochre sources are found, either as isolated nodules or as suitable sediments (clays).
Potential Archaeological Deposits:	Can occur in all landscape types. PADs of greatest scientific significance will occur in stratified open contexts (such as alluvial terraces, sand bodies) and rock shelter floors.
Shell Middens:	Will occur as extensive packed shell deposits to small shell scatters in all coastal zones along beaches, headlands and estuaries, both in open situations and in rock shelters. May occur along rivers and creeks where edible shellfish populations exist or existed in the past.
Stone Arrangements	Tend to be on high ground, often on the tops of ridges and peaks commanding views of the surrounding country. Often situated in relatively inaccessible places.
Stone Quarry Sites:	Can occur at any location where suitable raw materials outcrop, including pebble beds/beaches.
Waterholes	May occur within any river or creek. Rare examples may occur in open exposures of rock.

4.4 ARCHAEOLOGICAL PREDICTIVE MODEL FOR THE STUDY AREA

The following section gives an indication of the likelihood of certain site types being located within the study area. These indications are based on the research and results of assessments and excavations in the vicinity of the study area and also from the greater Cumberland Region

Site Type	Research	Likelihood
Open Artefact Scatters	Higher order streams are located within the vicinity of the study area. The dearth of known reliable raw material source within nearby landscape units, would suggest that the artefacts may be significant in number but smaller in size, on account to greater levels of stone tool reduction. Excavations in the vicinity of the study area indicate the presence of deposits that are suggestive of concentrated and repeated occupation.	Likely within undisturbed parts of the study area.
Isolated Artefacts	Higher order streams are located within the vicinity of the study area. The dearth of known reliable raw material source within nearby landscape units, would suggest that the artefacts may be significant in number but smaller in size, on account to greater levels of stone tool reduction. Excavations in the vicinity of the study area indicate the presence of deposits that are suggestive of concentrated and repeated occupation.	Likely within undisturbed parts of the study area.
Grinding Grooves	Boulders of sandstone or outcrops do not occur in the landscape units represented in the study area.	Unlikely
Stone Resource Sites	Rock outcrops of suitable flaking material are almost absent from the soil landscapes represented within the study area.	Unlikely
Scarred Trees	Trees of sufficient age are not located within the study area due to land clearing.	Unlikely
Sandstone Shelters	The soil landscapes of the study area do not contain sandstone overhangs	Unlikely
Burials	Undisturbed sandy loam deposits do not lie within the study area and the soil landscapes in which the study area is located are generally acidic. Skeletal remains tend to decompose very quickly in acidic soil profiles.	Unlikely
Ceremonial Sites	Consultation with relevant Aboriginal parties and individuals is taking place, however it is possible that such information may become available in the future as a result of further consultation	Possible that Ceremonial/Social sites will be present within the study area

4.5 ARCHAEOLOGICAL CONTEXT

It is generally accepted that Aboriginal occupation of Australia dates back at least 40,000 years (Attenbrow 2002: 20-21 & Kohen et. al. 1983). The result of this extensive and continued occupation which includes the Sydney region has left a vast amount of accumulated depositional evidence and the Cumberland Lowlands is no exception. The oldest date generally considered to be reliable for the earliest occupation around the region comes from excavations at Parramatta which contain objects or features which have been dated to 30,735 ± 407 BP (McDonald et. al. 2005).

The majority of reliably dated archaeological sites within the region are less than 5,000 years old which places them in the mid to late Holocene period. A combination of reasons has been suggested for this collection of relatively recent dates. There is an argument that an increase in population and 'intensification' of much of the continent took place around this time, leading to a great deal more evidence being deposited than was deposited as a result of the sparser prior occupation period. It is also the case that many archaeological sites along the past coastline may have been submerged as the seas rose approximately to their current level around 6,000 years ago. This would have had the effect of covering evidence of previous coastal occupation. In addition, it is also true that the acidic soils which are predominate around the Sydney region do not allow for longer-term survival of sites (Hiscock 2008: 106).

Different landscape units not only influence the preservation of sites but can determine where certain site types will be located. Across the whole of the Sydney Basin, the most common Aboriginal archaeological site type is occupation evidence within Rock Shelters. However, the most common Aboriginal archaeological site type in the Cumberland Lowlands is Open Artefact Scatters or Open Campsites, which are locations where two or more pieces of stone show evidence of human modification. These sites can sometimes be very large, with up to thousands of artefacts and include other habitation remains such as animal bone, shell or fireplaces [known as *hearths*] (Attenbrow 2002: 75–76). Many hundreds of artefact sites have been recorded within the Cumberland Lowlands. This is despite the fact that at least 50% of the Cumberland Lowlands has already been developed to such an extent that any archaeological evidence which may have once been present has been destroyed.

4.6 THE DARUG AND GANDANGARA NATION

It is estimated that around 250 distinct languages were in use throughout the Australian continent at the time of contact. The exact number cannot be known for certain, however 250 is a conservative estimate. These languages fell within two language groups; the *Pama-Nyungan* and *Non Pama-Nyungan* languages. Knowledge of the different language groups in a given area is variable. Early European recordings noted the names of particular Aboriginal individuals and groups but were not always clear about which named groups represented a language rather than some other social grouping (Hardy and Streat 2008).

There were two known distinct language groups observed in the Cumberland Lowlands at the time of contact. Each one is likely to have had a number of dialects, but the observed language groups appear to have been the Darug and Gandangara. One of these language groups, the Darug, was divided into two dialects, a coastal dialect and a hinterland dialect; the later may have been spoken by the inhabitants of the Cumberland Lowlands (Attenbrow 2002).

The boundary between the territories of these two language groups and dialect groups is unclear. Attenbrow (2002) suggests that speakers of the hinterland dialect of the Darug were spread across the Cumberland Lowlands, from the Hawkesbury River in the north to Appin in the area south-west of the Georges River, Parramatta, the Lane Cove River and Berowra Creek. The Gandangara inhabited the southern rim of the Cumberland Lowlands, west of the Georges River and into the southern Blue Mountains. Kohen (1993) suggests that the boundary between the hinterland dialect speakers of the Darug language and the Gandangara was the Nepean River and the Gandangara occupied an area that “extended from the Blue Mountains at Hartley and Lithgow through the Burragong and Megalong Valleys at least as far as the Nepean River” (Kohen 1993: 13). This view is concurred with by the Australian Institute of Aboriginal and Torres Strait Islander Studies (2000). There may have been a significant amount of interaction both cultural and linguistic between these two nations and it is probable that the territorial boundary altered from time to time.

Within these large language groups resource access and ownership was centred on extended family groups or ‘clans’ which appear to have had ownership of land (Attenbrow 2002). As it was unlikely to be acceptable to find sexual partners within the family grouping and for other reasons such as resource sharing, a number of clans would often travel together in a larger group. These groups are referred to as *bands*. Whether the clan or the band was the most important group politically to an individual is likely to have varied from place to place. Group borders were generally physical characteristics of the landscape inhabited, such as waterways or the limits of a particular resource. Groups also shared spiritual affiliations, often a common dreaming ancestor, history, knowledge and dialect (Hardy 2008).

A wide variety of activities comprised the lifestyle of the Aboriginal groups across the Cumberland Lowlands. Some behaviours leave traces which can be retrieved by archaeological study of material remains. Many of these can only be reconstructed by oral history, observations of European explorers and ethnologists, and other forms of past recording such as photography or art. Some of the details of the complexity and sophistication of the past lifestyles of Aboriginal people in the area have been lost, but many can be reconstructed using the sources available.

4.7 PREVIOUS ARCHAEOLOGICAL STUDIES NEAR THE STUDY AREA

As part of the research process of this report the library of Archaeological assessments, test excavation and salvage excavation reports, which is located at the offices of OEH at Hurstville, was consulted. This list is by no means exhaustive and merely represents some of the more relevant recent studies that have taken place within the vicinity of the study area in the opinion of the author of this document.

AHMS (2012) – Cultural Heritage Assessment - Old Wallgrove Road Upgrade, Eastern Creek

In 2012, Archaeological & Heritage Management Solutions (AHMS) conducted a Cultural Heritage Assessment (Stage 3) and issued the Final Report for the Old Wall Grove Road Upgrade (Roberts Road to M7 Motorway), Eastern Creek for NSW Roads & Maritime Services. This assessment identified 40 Aboriginal objects and indicated that the low-density scatter was present across the lower slope near Eksdale Creek with the area heavily disturbed, silcrete dominated the assemblage. The study included ethnographic and cultural information in Aboriginal consultation in accordance with OEH’s consultation procedures (DECCW, 2010).

AMBS (2009) – Aboriginal Heritage Assessment – Middleton Grange Release Area

In 2009, Liverpool City Council (LCC) commissioned Australian Museum Business Services (AMBS) to undertake an Aboriginal Heritage Assessment of the Landscape Transition Zone (LTZ) at Middleton Grange, as part of the Southern Hoxton Park Release Area Master Plan. The results of the survey indicated that 3 new Aboriginal sites were identified and 19 artefacts found and concluded that the site is considered to have low to moderate archaeological sensitivity.

CHC (2006) – Archaeological Assessment -Southern Sydney Freight Line

In 2005, Cultural Heritage Connections Pty Ltd (CHC) were commissioned by Parsons Brinckerhoff to undertake, as part of an environmental assessment, an Aboriginal archaeological assessment for the proposed Southern Sydney Freight Line (SSFL). This was a desktop study with Aboriginal consultation and 2 archaeological sites were identified for which further consultation was advised and a permit application for a Section 90 of the National Parks and Wildlife Act 1974 be sought if further investigation is required.

ASR (2006) – Archaeological Investigation – Sixteenth Avenue, West Hoxton

In 2005, Archaeological Surveys and Reports Pty Ltd (ASR) were commissioned by Wyndam Prince Pty Ltd to undertake an archaeological assessment of 'PAD 8,' for Danallam Developments Pty Ltd at Sixteenth Avenue, West Hoxton. The site, PAD 8, was recorded in 2001 by Jo McDonald Cultural Heritage Management Pty Ltd as a location requiring further sub-surface investigation. The investigation identified no artefactual material in PAD 8 and subsequently informed the Site Registrar that the PAD was a 'non-site.'

AHMS (2005) – Aboriginal Archaeological Survey and Impact Assessment – Catholic Health Care Services Limited (CHCS), Emmaus Village, 85 bakers Lane, Kemps Creek

In 2005, the Catholic Health Care Services Limited (CHCS), engaged Archaeological & Heritage Management Solutions (AHMS) to undertake an Aboriginal Archaeological Survey and Impact Assessment in the proposed development at 85 Bakers Lane Kemps Creek. The survey identified 4 locations containing Aboriginal objects and a number of PADS containing Aboriginal sites and/or isolated objects in surface and sub-surface deposits. It was recommended that archaeological testing be carried out at these sites.

AHMS (2004) – Aboriginal Heritage Impact Assessment – Cowpasture Road Upgrade and Realignment, Hoxton Park

In 2003, the Roads and Traffic Authority (RTA) engaged Archaeological & Heritage Management Solutions (AHMS) to undertake an Aboriginal Heritage Impact Assessment (AHIA) for the proposed upgrade and realignment of a section of Cowpasture Road, Liverpool. The survey identified 10 Open Sites (artefact scatters) and 6 Isolated Finds (isolated artefacts). An Aboriginal Heritage Impact Permit (AHIP) was recommended for the sites of archaeological potential.

ASR (2002) – Archaeological Investigation – Old Wall grove Road, Horsley Park

In 2002, Archaeological Surveys and Reports Pty Ltd (ASR) were engaged by R.W. Corkery & Co. Pty Ltd to conduct an archaeological investigation for The Austral Brick Company Pty Ltd as part of an Environmental Impact Statement for the development of a new extraction area at Old Wall grove Road, Horsley Park. The survey identified 2 isolated artefacts and an area of Potential Archaeological Deposits (PAD). In addition, 2 locations were identified as areas of Potential Archaeological Sensitivity (PAS). While

these 2 areas are not recorded on the Aboriginal Sites Register, it was recommended that the PAS areas warrant further investigation if further development was considered.

GLALC (1998) – Aboriginal Survey – South Creek, Kemps Creek.

In 1998, Liverpool Council commissioned Gandangara LALC to conduct an Aboriginal site survey for proposed flood mitigation works as part of a drainage channel to accommodate flooding stemming from South Creek. No artefacts were found in the study site during the survey. However, just outside the study site an isolated stone silcrete artefact was located and was documented as a Possible Archaeological Deposit (PAD). GLALC recommended should any changes to the development plan take place, further investigation by representatives of GLALC would be required at the Developers expense.

Brayshaw & McDonald (1992) – Archaeological Survey –Bringelly and Rossmore

In 1992, EDAW (Australia) Pty Ltd, on the behalf of Prospect Electricity, commissioned Brayshaw & McDonald Pty Ltd to conduct an archaeological survey for the proposed extension to a 33kV transmission line from an existing line on Herbert Street, Kemps Creek to the sub-station at Bringelly. The survey identified one archaeological site and recorded 11 artefacts considered to be a low-density surface scatter of stone artefacts. It was recommended that should any excavation take place at the southern end of the extension routes archaeological monitoring should be advised to ensure no sub-surface archaeological material is present.

Pam Dean-Jones Archaeological Services (1991) – Archaeological Survey - Adams Road, Luddenham

In 1991, R.A. Cole Town Planning Pty Ltd engaged Pam Dean-Jones Archaeological Services to conduct a archaeological survey for proposed clay shale extraction at Adams Road, Luddenham. The survey identified one archaeological site with surface scatter of 22 artefacts comprising of flaked stone. However, none are considered to be in situ due to the extensive disturbance across the site. The report recommended that NPW (NSW) be notified should any archaeological sites be identified during development works.

Denis Byrne & Hilary du Cros (1985) -Archaeological Survey - Prospect Creek, Fairfield

In 1985, EBC Consultants Pty Ltd commissioned Denis Byrne & Hilary du Cros to undertake a survey for Aboriginal archaeological sites, requested by the National Parks and Wildlife Service (NSW), at Prospect Creek between Widemere Road and Fairfield Street. Results of the survey identified 9 isolated artefacts considered to be in a secondary context due to the history of ground disturbance in the area. A scatter of shells found along a gravelled track on the north side of creek were considered to be introduced with the gravel and advised that they were a non-archaeological feature. The report recommended that NPW (NSW) be notified should any archaeological sites be identified during development works.

The practical ramifications of the results of the above mentioned archaeological assessments and excavations indicates that there is a low - moderate potential for Aboriginal archaeological objects and/or deposits to be present within any intact original soil profiles located within study area.

5.0 TEST EXCAVATION

Test excavation was undertaken over four days 26/03/18 – 29/03/18. The programme was conducted under the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales and consisted of the excavation of 30 test trenches (50cm x 50cm).

The footprint of the proposed development will encompass the majority of the site excluding the riparian area towards the northern end of the study area which buffers the unnamed creek.

In review of the test excavation results, of which although intact soils were found to be present, the study area was however absent of any Aboriginal objects and/or deposits or features of cultural significance. Significant disturbance was encountered towards the furrowed paddocks as a result of past agricultural activity which a reformed topsoil was evident overlaying the B Horizon. Therefore, further investigation is not warranted and works may 'proceed with caution'.

Further details and documents pertaining to the test excavation can be viewed within the *Aboriginal Test Excavation Report; Lot 2 Section 4 DP 2954; 1111-1141 Elizabeth Drive; Cecil Park NSW* (AMAC 2020)

6.0 CULTURAL HERITAGE RESPONSES

All registered stakeholders were given a copy of this report and were given a minimum of 28 days to comment on this report. All comments will be incorporated into this report. This section outlines the research questions and responses concerning the cultural heritage of the study area.

6.1 REGISTERED STAKEHOLDER QUESTIONS

All registered stakeholders were given a copy of a proposed Aboriginal Cultural Heritage Assessment (ACHA) research methodology and given 28 days to respond to this methodology.

The following is a questionnaire that was included with the ACHA methodology.

- Does the study area hold any social, spiritual or cultural values to the participating Aboriginal stakeholders? If so what are these values and are they confined to particular parts of the study area?
- Why are these parts or the whole of the study area culturally significant to the participating Aboriginal stakeholders?
- Are particular parts of the study area more important than others?
- Are any previously unidentified known culturally significant places present within the study area? If so where are they located?
- Are any previously unidentified Aboriginal objects or Aboriginal places present within the study area? If so where are they located?
- Are any previously unidentified natural or archaeological resources present within the study area? If so where are they located?
- Are there any traditional stories or legends associated with the study area?
- Are there any recollections of Aboriginal people living within the study area?
- Is there any information to suggest the presence of burials within the study area?
- Are any traditional flora or fauna resources associated with the study area?
- Does the study area have any sensory scenic or creatively significant cultural values? If so what are these values and are they confined to particular parts of the study area and where are they located?
- In what way, if any, will the proposed development harm the identified cultural heritage and archaeological values of the study area?
- Do the participants have suggestions on the mitigative strategies for the management of the cultural and archaeological values of the study area?
- Are there any gender specific cultural values associated with the study area which cannot be raised in a male presence?
- Are there any gender specific cultural values associated with the study area which cannot be raised in a female presence? If so how would the Aboriginal stakeholders like these dealt with?
- Do the participants have any concerns not yet raised in this interview?

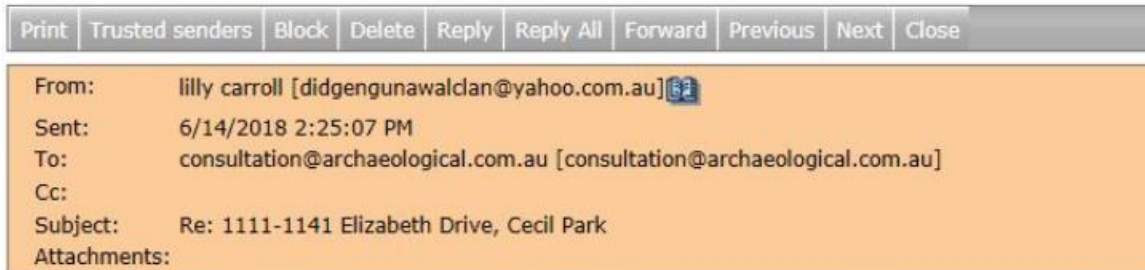
6.2 REGISTERED STAKEHOLDER SUBMISSIONS TO QUESTIONS

There were no formal responses received from registered stakeholders.

6.3 REGISTERED STAKEHOLDER SUBMISSIONS TO ACHA

6.3.1 Didge Ngunawal Clan

Re: 1111-1141 Elizabeth Drive, Cecil Park



Hi Guys,

DNC are happy with all proceedings, and thank you for including us on your project

Warm regards
Paul Boyd & Lilly Carroll
Directors DNC

6.3.2 Darug Aboriginal Land Care

Darug Aboriginal Land care



Uncle Des Dyer

18 a Perigee Close
Doonside
NSW 2767
ABN 71 301 006 047

Steve. J. Vasilakis
Archaeologist
AMAC Group
122c-d Percival Road
Stanmore 2048
NSW

Re: 1111-1141 Elizabeth Drive Cecil Park.

Dear, Steve,

The Darug Aboriginal Land care/ Uncle Des Dyer, has no objections to the planned development.

We have read your report and agree with the recommendations, Methodology, test excavation in your report.

We ask that while the development is in progress if any Artefacts are uncovered that work stops until the Artefacts can be salvaged and moved.

We make Recommendation that this is strongly heard to for projects!!!!

We ask that Artefacts can be Salvaged.

we ask that all artefacts be reburied on site out of harm's way, that any rock cravens, and scared tree be preserved, were possible, and be recorded.

Or Artefacts are put in the local museum, or displayed in the foyer of new building with signage on where they came from.

The Darug Aboriginal Land care have and always will holds all land specific social, spiritual and have a responsibility to look after the plants, animals creeks rivers on Darug land has cultural values to our organisation.

We are Traditional Owner, our members have lived on Darug land for most of their lives and worked in the area. We have been doing Cultural Heritage Assessments for over 20 years and still do today.

Respectfully yours,
Uncle Des Dyer
Darug Elder
Darug Aboriginal Land Care
Mobile 0408 360 814

6.3.3 Gunjeewong

Re: 1111-1141 Elizabeth Drive, Cecil Park

Print	Trusted senders	Block	Delete	Reply	Reply All	Forward	Previous	Next	Close
Full header									
From:	Cherie Carroll [Gunjeewong53@hotmail.com]								
Sent:	6/16/2018 7:32:53 AM								
To:	consultation@archaeological.com.au [consultation@archaeological.com.au]								
Cc:									
Subject:	Re: 1111-1141 Elizabeth Drive, Cecil Park								
Attachments:									

Hi Ben,

I am Aboriginal Elder with a great knowledge of many areas and has I have told u before I lived there but it seems that ppl who go on internet searching for history of area get the consultants field work when I am a Elder with the knowledge it is a in sult too me so I leave this in your hands and yes I have the knowledge.

Aboriginal Elder Cherie Carroll Turrise

7.0 SIGNIFICANCE ASSESSMENT

The processes of assessing significance for items of cultural heritage value are set out in *The Australian ICOMOS Charter for the Conservation of Places of Cultural Significance: the Burra Charter* (amended 1999) formulated in 1979 and based largely on the Venice Charter of International Heritage established in 1966. Archaeological sites may be significant according to four criteria, including scientific or archaeological significance, cultural significance to Aboriginal people, representative significance which is the degree to which a site is representative of archaeological and/or cultural type, and value as an educational resource. In New South Wales the nature of significance relates to the scientific, cultural, representative or educational criteria and sites are also assessed on whether they exhibit historic or cultural connections.

7.1 ARCHAEOLOGICAL SIGNIFICANCE

7.1.1 Educational Significance

The educational value of any given location will depend on the importance of any archaeological material located, on its rarity, quality and the contribution this material can have on any educational process (Australia ICOMOS, 1999 p. 11).

No archaeological and/or Aboriginal cultural material was located as a result of the programme of test excavation. Therefore, no educational significance can be assigned to the study area

7.1.2 Scientific Significance

The scientific value of any given location will depend on the importance of the data that can be obtained from any archaeological material located, on its rarity, quality and on the degree to which this may contribute further substantial information to a scientific research process. (Australia ICOMOS, 1999 p.11).

No archaeological and/or Aboriginal cultural material was located as a result of the programme of test excavation. Therefore, no scientific significance can be assigned to the study area.

7.1.3 Representative Significance

The representative value of any given location will depend on rarity and quality of any archaeological material located and on the degree to which this representativeness may contribute further substantial information to an educational or scientific research process. (Australia ICOMOS, 1999 p.11).

No archaeological and/or Aboriginal cultural material was located as a result of the programme of test excavation. Therefore, no representative significance can be assigned to the study area.

7.2 SOCIAL AND CULTURAL SIGNIFICANCE

As defined in the 'Burra Charter' (ICOMOS, 1999) cultural significance is broken into three parts: aesthetic, historic and scientific value for past, present or future generations. Cultural significance is a concept which assists in estimating the value of any given place. Places that are likely to be of significance are those which can contain information which may assist with the understanding of the past or enrich the present, and which will

be of value to future generations. The meaning of these terms in the context of cultural significance is outlined below. It should be noted that they are not mutually exclusive, (Australia ICOMOS, 1999 p.12).

7.2.1 Historic Significance

A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment. (Australia ICOMOS, 1999 p.11).

No specific historic significance has been assigned by registered Aboriginal parties.

7.2.2 Scientific Significance

The scientific value of any given location will depend on the importance of the data that can be obtained from any archaeological material located, on its rarity, quality and on the degree to which this may contribute further substantial information to a scientific research process. (Australia ICOMOS, 1999 p.11).

No specific scientific significance has been assigned by registered Aboriginal parties.

7.2.3 Aesthetic Significance

Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; the smells and sounds associated with the place and its use. (Australia ICOMOS, 1999 p.11).

No specific Aesthetic significance has been assigned by registered Aboriginal parties.

8.0 PROPOSED ACTIVITY

This section outlined the proposed activity including the staging and timeframes along with the potential harm of the proposed activity on Aboriginal objects and or declared Aboriginal places, assessing both the direct and indirect result of the activity on any cultural heritage values associated with the study area.

It also aims to outline the justification for harm with the intention of avoiding and minimising harm where possible.

8.1 DESCRIPTION OF PROPOSED ACTIVITY

The proposed activity is a State Significant Development (SSD) # 8859 for the subdivision of the subject site 1111-1141 Elizabeth Street, Cecil Park, into 12 allotments (Figure 8.1 and Figure 8.2) with 26,621.7SQM having been acquisitioned by TfNSW.

The proposed works are to include bulk earthworks, stormwater infrastructure, lead in services, the clearing of vegetation with environmental works including rehabilitation of riparian corridors and landscaping. In addition, access streets to the subdivision are to be constructed from the proposed Wallgrove Road upgrade by TfNSW.

The proposed development will impact and harm any objects and/or deposits of Aboriginal and/or archaeological significance that may be present. Test excavation has been proposed under the Code of Practice (DECCW 2010), to assess the level of disturbance of the site and the potential harm that may be the result of the proposed activity. The results of said excavation will assist in minimising harm to Aboriginal objects and/or places, if present.

No formal areas of exclusion have been identified in the current plans. There will be no excavation works along the proposed Wallgrove Road acquisition easement located on the western end of the study site (see Figure 8.1).

Table 8.1 Detail of the proposed subdivision.

Allotment No.	Size (m2)		Allotment No.	Size (m2)
1	2,511		7	2,087
2	2,511	8	8	2,087
3	3,879	9	9	2,087
4	3,727		10	5,084
5	6,811		11	4,343
6	2,831		12	3,419

8.2 PROPOSED DEVELOPMENT JUSTIFICATION

It is envisaged that the subdivision will in future accommodate a range of commercial uses (subject to future DA) complimenting its strategic location:

- Approximately 8 kilometres east of the Western Sydney Airport (DoUI 2017, p. 9):
- 11,346 jobs during the construction phase;
- 27,947 jobs in the operation phase (2031); and
- 47,474 jobs in the operation phase (2041).

- Approximately 3 kilometres east of the Western Sydney Employment Area (DoPI 2013, p. 1):
- 57,000 new jobs in the next 30 years; and
- 212,000 new jobs beyond 2046.

Access to these jobs will be given by:

- Initially: Elizabeth Drive (to which the site has primary frontage) via the Westlink M7 (off-ramp 200 metres east of the site, on-ramp 400 metres east of the site).
- In future: the M12 Motorway, connecting to the Westlink M7 approximately 2 kilometres south of the subject site

8.3 POTENTIAL HARM TO ABORIGINAL OBJECTS AND CULTURAL HERITAGE

No Aboriginal objects and/or features of cultural and archaeological significance were located during the programme of test excavation. Although the A and A2 horizon was found to be present, in review of the results and level of disturbance located across majority of the study area, there is a nil-low possibility of their being artefacts present and as such works may proceed with caution.

8.4 ASSESSING HARM

No Aboriginal objects and/or features of cultural and archaeological significance were located during the programme of test excavation. Although the A and A2 horizon was found to be present, in review of the results and level of disturbance located across majority of the study area, there is a nil-low possibility of their being artefacts present and as such works may proceed with caution.

8.5 AVOIDING AND MINIMISING HARM TO ABORIGINAL OBJECTS

No Aboriginal objects and/or features of cultural and archaeological significance were located during the programme of test excavation. Although the A and A2 horizon was found to be present, in review of the results and level of disturbance located across majority of the study area, there is a nil-low possibility of their being artefacts present and as such works may proceed with caution.

8.6 JUSTIFICATION OF HARM TO ABORIGINAL OBJECTS

No Aboriginal objects and/or features of cultural and archaeological significance were located during the programme of test excavation. Although the A and A2 horizon was found to be present, in review of the results and level of disturbance located across majority of the study area, there is a nil-low possibility of their being artefacts present and as such works may proceed with caution.

8.7 ECOLOGICALLY SUSTAINABLE DEVELOPMENT AND INTERGENERATIONAL EQUITY

The ability of any development to be completely ecologically sustainable will be limited by definition. However, the proponents of this subdivision appear to have made significant efforts to meet the needs of the current generation without compromising the

ability of future generations to meet their own needs. This has been accomplished by proposing a plan on a manageable and affordable scale while still protecting and conserving the archaeological resources. This is being accomplished by a program of subsurface test excavation with the possibility of further salvage excavation if needed as well as extensive consultation with the relevant Aboriginal community.

Inter-generational equity refers to the equitable sharing of resources between current and future generations. The planet's current generation should ensure that future generations have the same opportunities and resources available. This idea is being accomplished by designing a building with as little disturbance to the ground surface as possible and as such any archaeological or cultural material that may be present in these areas either identified or unidentified will be left intact and persevered for future generations.

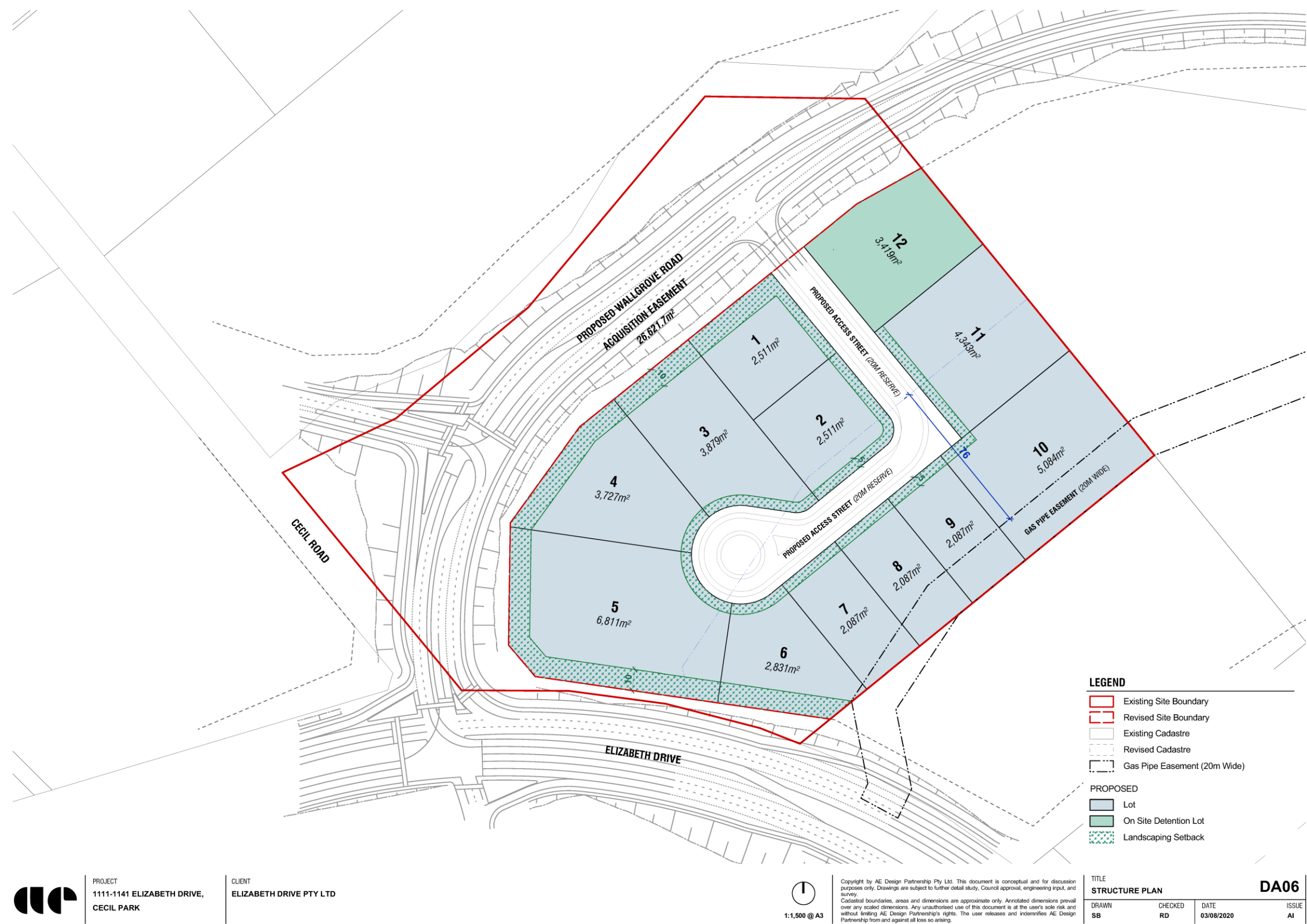


Figure 8.1: Proposed Structure Plan DA06.
AE design Partnership (August 2020).

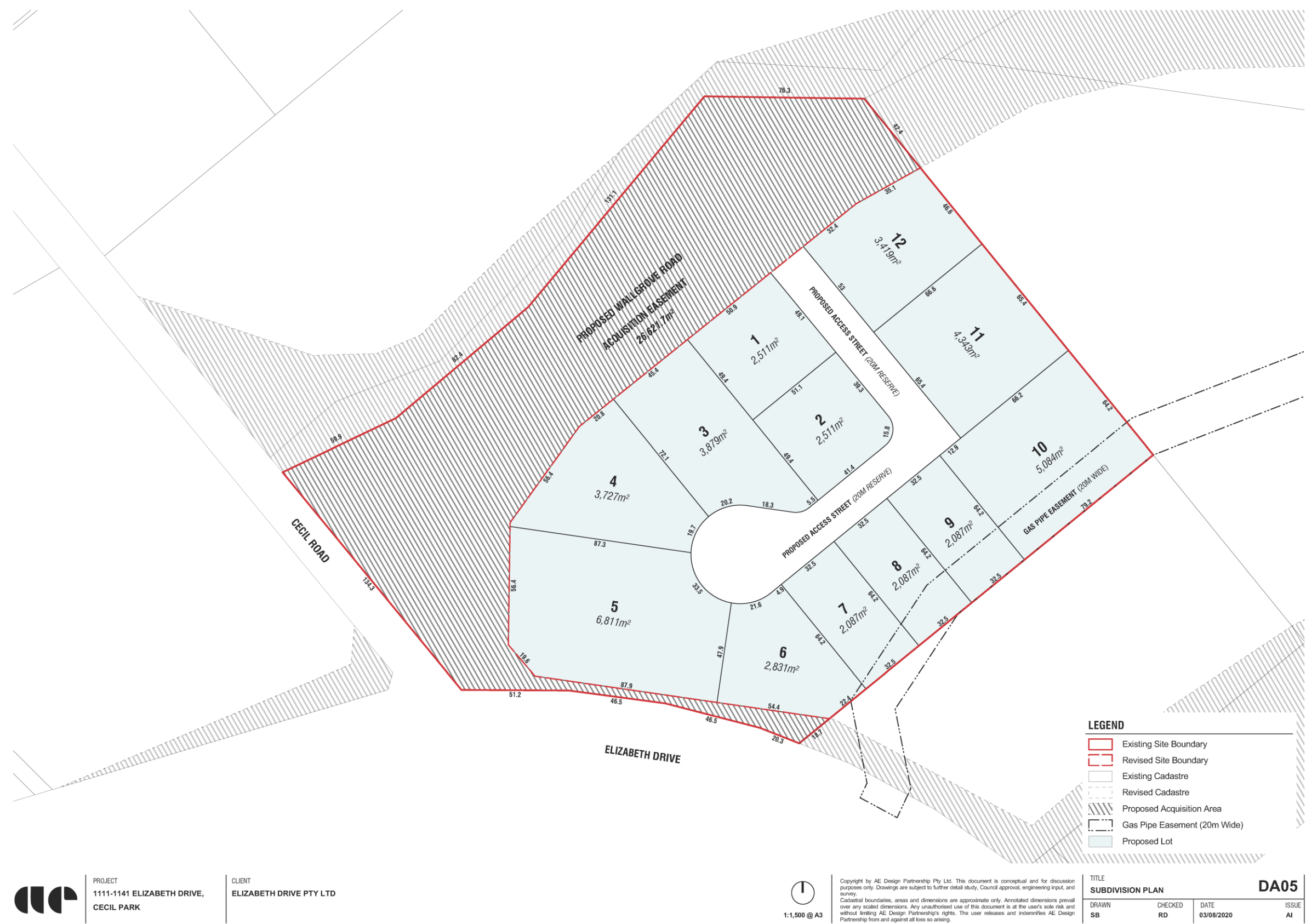


Figure 8.2 Proposed Subdivision Plan DA05
AE design Partnership (August 2020).

9.0 MANAGEMENT AND MITIGATION

The management recommendations presented in the following section of the report take into account the following:

- Legislation outlined in this report which protects Aboriginal cultural and archaeological objects and places in New South Wales;
- Research and assessment carried out by the author/s of this report;
- Results of previous archaeological assessment and excavation in the vicinity of the study area;
- The concerns and views of the Aboriginal stakeholders listed in this report;
- The impact of the proposed development on any Aboriginal archaeological material that may be present;
- The requirements of the consent authority (Fairfield City Council).

9.1 CARE AND CONTROL

If any archaeological material is recovered it shall be subject to a care and control agreement established after the nature and significance of the archaeological or cultural material is understood as per requirement 26 of the Code of Conduct for the investigation of Archaeological objects in NSW.

9.2 RECOMMENDATIONS

The findings from the test excavation indicate the site to be of nil-low archaeological significance, intact A and A2 horizon was present, although majority of the study area was disturbed from past agricultural land use. Test excavation resulted in no Aboriginal objects and/or deposits of cultural significance being located, therefore the development should be allowed to proceed with caution.

The recommendations have been formulated after consultation with RAPs, the proponent and the Heritage NSW;

- Consultation with the registered Aboriginal stakeholders should continue. Stakeholders have been given the opportunity to comment on the recommendations of this report and these comments are included in this report;
- An Aboriginal Cultural Heritage Management Plan should be devised as a final document for the study area when State Significant Development (SSD) status (SSD #8859), in order to manage any unexpected Aboriginal archaeological and cultural constraints that may arise;
- Archaeological test excavation in accordance with Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, Part 6 National Parks and Wildlife Act 1974, (DECCW 2010) revealed no Aboriginal archaeological objects or deposits: the subdivision as shown (Figures 8.1) should be allowed to 'proceed with caution';
- After this and before any ground disturbance takes place all development staff, contractors and workers should be briefed prior to works commencing

on site as to their responsibilities regarding any Indigenous archaeological deposits and/or objects that may be located during the following development;

If any Aboriginal archaeological deposits and/or objects are located during the development, then the following should take place;

- All work is to cease in the immediate vicinity of the deposits and/or objects
- The area is to be demarcated
- Heritage NSW, a qualified archaeologist and the participating RAPs are to be notified.

Should any human remains be located during the following development;

- All excavation in the immediate vicinity of any objects of deposits shall cease immediately;
- The NSW police and Heritage NSW's Enviroline be informed as soon as possible:
- Once it has been established that the human remains are Aboriginal ancestral remains, Heritage NSW and the relevant Registered Aboriginal Parties will identify the appropriate course of action.

Term	Definition
Aboriginal/ Aborigine	These terms apply to indigenous Australians throughout time.
Aboriginal Object	A term now used (formerly 'relic') within the NSW <i>National Parks and Wildlife Act, 1974</i> to refer to "...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."
AHIP	Aboriginal Heritage Impact Permit, issued under Part 6 of the National Parks and Wildlife Act 1974, where harm to an Aboriginal object or Aboriginal place cannot be avoided.
Alluvial	Describes material deposited by, or in transit in flowing water.
AMAC	Archaeological Management and Consulting Group.
Artefact	Any object, usually portable, that has been made or shaped by human hand.
Assemblage	A collection of artefacts found in close proximity with one another often excavated together.
Axe grinding Grooves	Areas on a stone surface where other items such as stone tools, wood or bones have been sharpened.
Basalt	A dark coloured, basic volcanic rock.
Bioturbation	Reworking of sediments through the action of ground dwelling life forms. This can also include soil cracking and root activity.
Broken Flake	A flake fragment which displays only part of the diagnostic features of a complete flake.
BP	Before present (AD1950).
Burial	Sites containing the physical remains of deceased Aboriginal people.
Ceremonial Sites	Places or objects of ceremonial, religious or ritual significance to Aboriginal people.
Chert	A hard siliceous rock suitable for flaking into tools.
DCP	Development Control Plan.
DP	Deposited Plan.
Erosion	Process where particles are detached from rock or soil and transported away principally via water, wind and ice.
Flake	A piece of stone, detached by striking a core with another stone.
Flaking/Knapping	The process of making stone tools by detaching flakes from a piece of stone.
Friable	Easily crumbled or cultivated.
Hard setting	Soil which is compact and hard. It appears to have a pedal structure when dried out.
Heritage Division	Formerly known as the Heritage Branch
Holocene	The period of time since the last retreat of the polar icecaps, commencing approximately 10,000 – 110,000
Intensification	Increased social and economic complexity.
Landscape Unit	An area of land where topography and soils have distinct characteristics, are recognisable, describable by concise statements and capable of being represented on a map.

Term	Definition
Laminite	A thinly bedded, fine grained sedimentary rock.
LEP	Local Environment Plan.
LGA	Local Government Area.
Lithics	A term used to describe stone and stone artefacts.
Loam	A medium textured soil of approximate composition of 10-25% clay, 25-50% silt and 2% sand.
Loose	A soil which is not cohesive.
Matrix	Finer grained fraction, typically a cementing agent within soil or rock in which larger particles are embedded.
Midden	Aboriginal occupation site consisting chiefly of shells, which can also include bone, stone artefacts and other debris.
NPW Act	National Parks and Wildlife Act 1974
OEH	NSW Office of Environment and Heritage (formerly known as the DECCW)
Open Campsite	A surface accumulation of stone artefacts and/ or other artefacts exposed on the ground surface.
Potential Archaeological Deposit (PAD)	An area where no surface archaeological remains are visible but where it has been assessed that there is some potential for sub-surface archaeological remains to be present.
Ped	An individual, natural soil aggregate.
Pedal	Describes a soil in which some or all of the soil material occurs in the form of peds in a moist state.
Pleistocene	The epoch of geological time starting 1.8 million years ago.
Quartz	Common mineral with naturally sharp edges and poor fracturing properties. Colour ranging from clear, to milky white and pink.
Quartzite	Homogenous medium to coarse grained metamorphosed sandstone.
Rock Painting	Encompassing drawing, paintings or stencils that have been placed on a rock surface usually within a rock shelter.
Rock Engraving	Pictures which have been carved, pecked or abraded into a rock surface, usually sandstone and predominantly open, flat surfaces.
Sandstone	A detrital sedimentary rock with predominantly sand sized particles.
Scarred/ Carved Tree	A tree from which bark has been deliberately removed.
Sclerophyll	Denoting the presence of hard stiff leaves, typically used to classify forest and indicative of drier conditions.
Sedimentation	Deposition of sediment typically by water.
Silcrete	A sedimentary rock comprising of quartz grains in a matrix of fine grained – amorphous silica.
Silt	Fine soil particles in size ranges of 0.02 – 0.002mm.
Slope	A landform element inclined from the horizontal at an angle measured in degrees or as a percentage.
SHI	State Heritage Inventory
SHR	State Heritage Register
Subsoil	Subsurface material comprising the B and C horizons of soils with distinct profiles.
Stone Resource Site	A geological feature in the landscape from which raw material for the manufacture of stone tools was obtained.

Term	Definition
Texture	The coarseness or fineness of a soil as measured by the behaviour of a moist ball of soil when pressed between the thumb and forefinger.
Topsoil	A part of the soil profile, typically the A1 Horizon, containing material which is usually darker, more fertile and better structured than the underlying layers.
Weathering	The physical and chemical disintegration, alteration and decomposition of rocks and minerals at or near the earth's surface by atmospheric and biological agents.

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APPENDICES

APPENDIX ONE OFFICE OF ENVIRONMENT AND HERITAGE DOC 17/543197 CORRESPONDENCE 16/11/17 REGARDING SEARS SSD#8859



Office of
Environment
& Heritage

DOC17/543197

Ms Joanna Bakopanos
Team Leader, Industry Assessments
NSW Department of Planning and Environment
chole.dunlop@planning.nsw.gov.au

Attention: Chloe Dunlop

Dear Ms Bakopanos

I refer to email correspondence received 2 November 2017 by the Office of Environment and Heritage (OEH) requesting input into the Secretary's Environmental Assessment Requirements (SEARs) for subdivision, site establishment and enabling works for facilitate a range of uses on a site located at Lot 2 DP 2954 (known as 1111-1141 Elizabeth Drive (SSD 8859)).

The works include subdivision, bulk earthworks, stormwater infrastructure, clearing of vegetation and construction of access roads. An AHIMS Basic Search of the subject site identified an Aboriginal site recorded in or near the site. The site also contains vegetation representative of the critically endangered ecological community Cumberland Plain Woodland.

OEH's standard requirements for the SEARs and additional specific requirements are provided in Attachment 1. The additional requirements relate to consideration of impacts on the adjoining Parklands as the site is within the Western Sydney Parklands.

A separate response may be provided on heritage matters by the Heritage Division. If you have any further questions about this issue please contact Rachel Lonie, Senior Operations Officer on 9995 6837 or by email at rachel.lonie@environment.nsw.gov.au.

Yours sincerely

S. Harrison 16/11/17

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Attachment A – Standard Environmental Assessment Requirements

Biodiversity	
1.	Biodiversity impacts related to the proposed works at Lot 2 DP 2954 (known as 1111-1141 Elizabeth Drive (SSD 8859) are to be assessed in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR).
2.	The BDAR must include information in the form detailed in the Biodiversity Conservation Act 2016 (s 6.12), Biodiversity Conservation Regulation 2017 (s 6.8) and Biodiversity Assessment Method including details of the measures proposed to address the offset obligation as follows; <ul style="list-style-type: none"> • The total number and classes of biodiversity credits required to be retired for the development/project; • The number and classes of like-for-like biodiversity credits proposed to be retired; • The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules; • Any proposal to fund a biodiversity conservation action; • Any proposal to make a payment to the Biodiversity Conservation Fund (Fund).
3.	If requesting the application of the variation rules, the BDAR must contain details of what reasonable steps have been taken to attempt to obtain the required like-for-like biodiversity credits.
4.	The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under S6.10 of the Biodiversity Conservation Act 2016
Aboriginal cultural heritage	
5.	The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in the EIS. This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the <u>Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011)</u> and consultation with OEH regional officers.
6.	Where Aboriginal cultural heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with the <i>Aboriginal cultural heritage consultation requirements for proponents 2010</i> (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the EIS.
7.	Impacts on Aboriginal cultural heritage values are to be assessed and documented in the EIS. The EIS must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.
Water and soils	
8.	The EIS must map the following features relevant to water and soils including: <ul style="list-style-type: none"> a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map). b. Rivers, streams, wetlands, estuaries (as described in Appendix 2 of the Framework for Biodiversity Assessment). c. Groundwater. d. Groundwater dependent ecosystems.

e. Proposed intake and discharge locations.
<p>9. The EIS must describe background conditions for any water resource likely to be affected by the development, including:</p> <ul style="list-style-type: none"> a. Existing surface and groundwater. b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations. c. Water Quality Objectives (as endorsed by the NSW Government http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters. d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government.
<p>10. The EIS must assess the impacts of the development on water quality, including:</p> <ul style="list-style-type: none"> a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction. b. Identification of proposed monitoring of water quality.
<p>11. The EIS must assess the impact of the development on hydrology, including:</p> <ul style="list-style-type: none"> a. Water balance including quantity, quality and source. b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas. c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems. d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches). e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water. f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options. g. Identification of proposed monitoring of hydrological attributes.
Flooding and coastal erosion
<p>12. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:</p> <ul style="list-style-type: none"> a. Flood prone land b. Flood planning area, the area below the flood planning level. c. Hydraulic categorisation (floodways and flood storage areas).
<p>13. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.</p>

14. The EIS must model the effect of the proposed development (including fill) on the flood behaviour under the following scenarios:
 - a. Current flood behaviour for a range of design events as identified in 11 above. This includes the 1 in 200 and 1 in 500-year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.
15. Modelling in the EIS must consider and document:
 - a. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood.
 - b. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories.
 - c. Relevant provisions of the NSW Floodplain Development Manual 2005.
16. The EIS must assess the impacts on the proposed development on flood behaviour, including:
 - a. Whether there will be detrimental increases in the potential flood affection of other properties, assets and infrastructure.
 - b. Consistency with Council floodplain risk management plans.
 - c. Compatibility with the flood hazard of the land.
 - d. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
 - e. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
 - f. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
 - g. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the SES and Council.
 - h. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the SES and Council.
 - i. Emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES.
 - j. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

Attachment B – Project Specific Environmental Assessment Requirements

Biodiversity	
As the site is within the Western Sydney Parklands, the assessment of impacts should address impacts on the natural and cultural values of the adjoining Parkland areas. Consider the matters outlined in the Guidelines for developments adjoining land managed by the Office of Environment and Heritage (OEH 2013) including:	
i.	The nature of the impacts, including direct and indirect impacts.
ii.	The extent of the direct and indirect impacts.
iii.	The duration of the direct and indirect impacts.
a.	Measures proposed to prevent, control, abate, minimise and manage the direct and indirect impacts including an evaluation of the effectiveness and reliability of the proposed measures.
b.	Residual impacts.

Guidance Material

Title	Web address
Relevant Legislation	
<i>Biodiversity Conservation Act 2016</i>	https://www.legislation.nsw.gov.au/#/view/act/2016/63/full
<i>Coastal Management Act 2016</i>	https://www.legislation.nsw.gov.au/#/view/act/2016/20/full
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
<i>Environmental Planning and Assessment Act 1979</i>	http://www.legislation.nsw.gov.au/main/top/view/inforce/act+203+1979+cd+0+N
<i>Fisheries Management Act 1994</i>	http://www.legislation.nsw.gov.au/main/top/view/inforce/act+38+1994+cd+0+N
<i>Marine Parks Act 1997</i>	http://www.legislation.nsw.gov.au/main/top/view/inforce/act+64+1997+cd+0+N
<i>National Parks and Wildlife Act 1974</i>	http://www.legislation.nsw.gov.au/main/top/view/inforce/act+80+1974+cd+0+N
<i>Protection of the Environment Operations Act 1997</i>	http://www.legislation.nsw.gov.au/main/top/view/inforce/act+156+1997+cd+0+N
<i>Water Management Act 2000</i>	http://www.legislation.nsw.gov.au/main/top/view/inforce/act+92+2000+cd+0+N
<i>Wilderness Act 1987</i>	http://www.legislation.nsw.gov.au/view/top/inforce/act+196+1987+FIRST+0+N
Biodiversity	
Biodiversity Assessment Method (OEH, 2017)	https://biodiversity-ss.s3.amazonaws.com/Uploads/1494298079/Biodiversity-Assessment-Method-May-2017.pdf
Guidance and criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	https://biodiversity-ss.s3.amazonaws.com/Uploads/1494298198/Serious-and-Irreversible-Impact-Guidance.PDF
Fisheries NSW policies and guidelines	http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies-guidelines-and-manuals/fish-habitat-conservation
List of national parks	http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
Revocation, recategorisation and road adjustment policy (OEH, 2012)	http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm
Guidelines for developments adjoining land and water managed by the	http://www.environment.nsw.gov.au/protectedareas/developmentadjoiningdecc.htm

Title	Web address
Department of Environment, Climate Change and Water (DECCW, 2010)	
Heritage	
The Burra Charter (The Australia ICOMOS charter for places of cultural significance)	http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf
Statements of Heritage Impact 2002 (HO & DUAP)	http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf
NSW Heritage Manual (DUAP) (scroll through alphabetical list to 'N')	http://www.environment.nsw.gov.au/Heritage/publications/
Aboriginal Cultural Heritage	
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)	http://www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf
Aboriginal Site Recording Form	http://www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf
Aboriginal Site Impact Recording Form	http://www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf
Aboriginal Heritage Information Management System (AHIMS) Registrar	http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm
Care Agreement Application form	http://www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf
Water and Soils	
Acid sulphate soils	
Acid Sulfate Soils Planning Maps via Data.NSW	http://data.nsw.gov.au/data/
Acid Sulfate Soils Manual (Stone et al. 1998)	http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
Flooding and Coastal Erosion	
Reforms to coastal erosion management	http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm
Floodplain development manual	http://www.environment.nsw.gov.au/floodplains/manual.htm
Guidelines for Preparing Coastal Zone Management Plans	Guidelines for Preparing Coastal Zone Management Plans http://www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf
NSW Climate Impact Profile	http://climatechange.environment.nsw.gov.au/
Climate Change Impacts and Risk Management	Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm

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Title	Web address
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1
Applying Goals for Ambient Water Quality Guidance for Operations Officers -- Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf