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URBIS

ABORIGINAL CULTURAL HERITAGE ASSESSMENT

**IVANHOE ESTATE,
MACQUARIE PARK**

Prepared for

FRASERS PROPERTY AUSTRALIA

6 August 2021

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GLOSSARY

Term	Definition
Aboriginal cultural heritage	The tangible (objects) and intangible (dreaming stories, legends and places) cultural practices and traditions associated with past and present-day Aboriginal communities.
Aboriginal object(s)	As defined in the NPW Act, any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.
Aboriginal place	As defined in the NPW Act, any place declared to be an Aboriginal place (under s.84 of the NPW Act) by the Minister administering the NPW Act, by order published in the NSW Government Gazette, because the Minister is of the opinion that the place is or was of special significance with respect to Aboriginal culture. It may or may not contain Aboriginal objects.
ACHA	Aboriginal Cultural Heritage Assessment
ACHAR	Aboriginal Cultural Heritage Assessment Report
AHIMS	Aboriginal Heritage Information Management System: a register of previously reported Aboriginal objects and places managed by the DPC
AHIP	Aboriginal Heritage Impact Permit. A permit issued under Section 90, Division 2 of Part 6 of the <i>NPW Act</i> .
Archaeology	The scientific study of human history, particularly the relics and cultural remains of the distant past.
Art	Art sites can occur in the form of rock engravings or pigment on sandstone outcrops or within shelters. An engraving is some form of image which has been pecked or carved into a rock surface. Engravings typically vary in size and nature, with small abstract geometric forms as well as anthropomorphic figures and animals also depicted. Pigment art is the result of the application of material to a stone to leave a distinct impression. Pigment types include ochre, charcoal and pipeclay.
Artefact	An object made by human agency (e.g. stone artefacts).
Consultation Requirements	<i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECCW, 2010).
DCP	Development Control Plan
DECCW	Department of Environment, Climate Change and Water NSW.
DPC	Department of Premier and Cabinet

Term	Definition
EP&A Act	<i>NSW Environmental Planning and Assessment Act 1979.</i>
Grinding Grooves	The physical evidence of tool making, or food processing activities undertaken by Aboriginal people. The manual rubbing of stones against other stones creates grooves in the rock; these are usually found on flat areas of abrasive rock such as sandstone.
Harm	As defined in the NPW Act, to destroy, deface, damage or move an Aboriginal object or destroy, deface or damage a declared Aboriginal place. Harm may be direct or indirect (e.g. through increased visitation or erosion). Harm does not include something that is trivial or negligible.
Isolated find	A single artefact found in an isolated context.
LALC	Local Aboriginal Land Council: corporate body constituted under the <i>Aboriginal Land Rights Act 1983</i> , having a defined boundary within which it operates.
LEP	Local Environment Plan.
Midden	Midden sites are indicative of Aboriginal habitation, subsistence and resource extraction. Midden sites are expressed through the occurrence of shell deposits of edible shell species often associated with dark, ashy soil and charcoal. Middens may or may not contain other archaeological materials including stone tools.
NPW Act	<i>National Parks and Wildlife Act 1974</i>
NPW Regulation	<i>National Parks and Wildlife Regulation 2019</i>
PAD	Potential archaeological deposit. A location considered to have a potential for subsurface archaeological material.
RAPs	Registered Aboriginal Parties: Aboriginal persons or organisation who have registered to be consulted on the Project in accordance with the Consultation Requirements.
Scarred / Modified Trees	Trees which display signs of human modification in the form of scars left from intentional bark removal for the creation of tools, or which are carved for ceremonial purposes.
SU	Survey Unit

EXECUTIVE SUMMARY

Urbis has been engaged by Frasers Property Australia ('the Proponent') to conduct an Aboriginal Cultural Heritage Assessment (ACHA) of the Ivanhoe Estate, Macquarie Park, NSW, 2113 ('the subject area'), which comprises Ivanhoe Place (Lot 100 in DP1262209) and 2-4 Lyon Park Road (Lot 101 in DP 1263727).

The present Aboriginal Cultural Heritage Assessment Report (ACHAR) is based on the ACHA and has been produced to accompany an Environmental Impact Statement (EIS) in support of State Significant Development Applications for the subject area.

The ACHA has been carried out in accordance with Part 6 of the *National Parks and Wildlife Act 1974* and Part 5 of the *National Parks and Wildlife Regulation 2019*. The ACHAR was prepared according to the guidelines that accompany the NPW Act including:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water (DECCW), 2010) (the Consultation Guidelines).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011) (the Assessment Guidelines).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010).
- *The Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter, 2013* (Burra Charter).

The ACHA concluded that:

- No Aboriginal objects or places are registered within the curtilage of the subject area.
- Within the regional context of the subject area, registered Aboriginal sites tend to be located near waterways.
- Archaeological reports from other sites near the present subject area indicate that archaeological potential may be significantly reduced by historical ground disturbing activity, despite proximity to waterways.
- A due diligence assessment (Eco Logical Australia, 2017) relating directly to the subject area indicates that the portion of the subject area west of Shrimptons Creek is highly disturbed and has low to nil archaeological potential.
- The subject area does not include any topographic features that are indicative of archaeological potential.
- The majority of subject area has been subjected to a high degree of ground disturbance, which is likely to significantly reduce archaeological potential.
- The shallow natural soil profile in areas of moderate ground disturbance (SU3) would reduce archaeological potential in those areas.
- The entirety of SU1 is considered to contain nil subsurface archaeological potential. No Aboriginal sites were identified in SU1.
- The entirety of SU2 is considered to contain nil to low subsurface archaeological potential. No Aboriginal sites were identified in SU2.
- The entirety of SU3 is considered to contain nil to low subsurface archaeological potential. No Aboriginal sites were identified in SU3.
- The entirety of SU4 is considered to contain nil subsurface archaeological potential. No Aboriginal sites were identified in SU4.
- Based on the above considerations, the archaeological potential of the subject area is determined to be nil to low.
- Kamilaroi Yankuntjatjara Working Group (KYWG) consider the subject area culturally significant due to landscape features such as proximity to water and connection to Country. The cultural value of the subject area is considered moderate.

Based on the conclusions of this assessment there is no further investigation warranted and the proposed activity can proceed under the following recommendations:

Recommendation 1 – Aboriginal Cultural Heritage Induction

It is recommended that induction materials be prepared for inclusion in site inductions for any contractors working at the subject area. The induction material should include an overview of the types of sites to be aware of (i.e. artefact scatters or concentrations of shells that could be middens), obligations under the NPW Act, and the requirements of an archaeological finds' procedure (refer below). This should be prepared for the project and included in any site management plans.

The induction material may be paper based, included in any hard copy site management documents; or electronic, such as "PowerPoint" for any face to face site inductions.

Recommendation 2 – Archaeological Chance Find Procedure

Although considered highly unlikely, should any archaeological deposits be uncovered during any site works, a procedure must be implemented. The following steps must be carried out:

1. All works stop in the vicinity of the find. The find must not be moved 'out of the way' without assessment.
2. Site supervisor, or another nominated site representative must contact either the project archaeologist (if relevant) or DPC to contact a suitably qualified archaeologist.
3. The nominated archaeologist examines the find, provides a preliminary assessment of significance, records the item and decides on appropriate management, in conjunction with the RAPs for the project. Such management may require further consultation with DPC, preparation of a research design and archaeological investigation/salvage methodology and preparation of AHIMS Site Card.
4. Depending on the significance of the find, reassessment of the archaeological potential of the subject area may be required, and further archaeological investigation undertaken.
5. Reporting may need to be prepared regarding the find and approved management strategies. Any such documentation should be appended to this ACHAR and revised accordingly.
6. Works in the vicinity of the find can only recommence upon relevant approvals from DPC.

Recommendation 3 – Human Remains Procedure

In the unlikely event that human remains are uncovered during any site works, the following must be undertaken:

1. All works within the vicinity of the find immediately stop.
2. Site supervisor or other nominated manager must notify the NSW Police and DPC.
3. The find must be assessed by the NSW Police, and may include the assistance of a qualified forensic anthropologist.
4. Management recommendations are to be formulated by the Police, DPIE and site representatives.
5. Works are not to recommence until the find has been appropriately managed.

Recommendation 4 – RAP consultation

A copy of the final ACHAR must be provided to all RAPs. Ongoing consultation with RAPs should occur as the project progresses, to ensure ongoing communication about the project and key milestones, and to ensure the consultation process does not lapse, particularly with regard to consultation should the CFP be enacted.

1. INTRODUCTION

Urbis has been engaged by Frasers Property Australia ('the Proponent') to conduct an Aboriginal Cultural Heritage Assessment (ACHA) of the Ivanhoe Estate, Macquarie Park, NSW, 2113 ('the subject area'), which comprises Ivanhoe Place (Lot 100 in DP1262209) and 2-4 Lyon Park Road (Lot 101 in DP 1263727). The present Aboriginal Cultural Heritage Assessment Report (ACHAR) is based on that ACHA and has been produced to accompany an Environmental Impact Statement (EIS) in support of State Significant Development Applications for the subject area.

1.1. SUBJECT AREA DESCRIPTION

The subject area is located within the City of Ryde Local Government Area (LGA), approximately 12.5km north-west of the Sydney CBD (Figure 1 and Figure 2). It is located on the southern fringe of Macquarie Park, and is within approximately 500 metres of both Macquarie Shopping Centre and Macquarie University. The surrounding area is characterised by a mix of commercial and education uses, as well as student accommodation and residential dwellings. The subject area is approximately 8.2ha and is irregular in shape. It has frontages on Epping Road to the south, Lyon Park Road to the east and Herring Road to the west. It is further bounded to the west and north by mixed use and lots and parkland and to the east by commercial lots. The subject area previously accommodated 259 social housing dwellings comprising a mix of townhouse and apartment buildings set around a cul-de-sac street layout, with all dwellings now demolished.

1.2. PROPOSED DEVELOPMENT

The subject area is being redeveloped as part of the NSW Government's 'Communities Plus' program, which seeks to deliver new communities with good access to transport, employment, improved facilities, and open space through leveraging the expertise and capacity of the private and non-government sectors. Development delivered under Communities Plus is mixed tenure, combining both social and market housing.

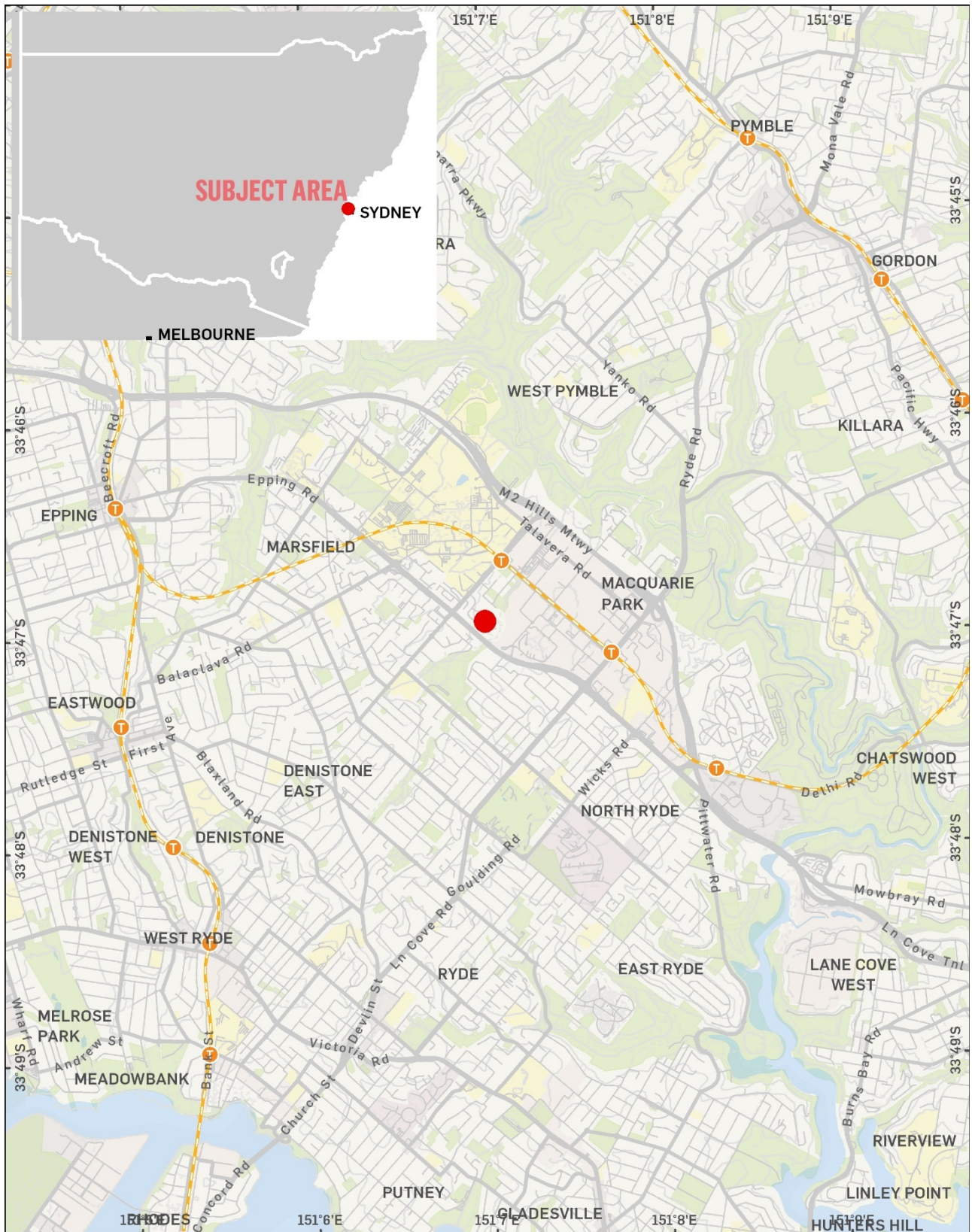
Consent was granted by the Minister for Planning and Public Spaces on 30 April 2020 for the Ivanhoe Estate - Concept Masterplan (SSD-8707) and for the first stage of physical works (SSD-8903) referred to as Stage 1.

The present ACHAR relates to subsequent State Significant Development Applications (SSDA) for the Ivanhoe Estate redevelopment (including but not limited to Stage 2). These SSDAs will be pursuant to the approved Ivanhoe Estate Concept Masterplan (SSD-8707) and subsequent to the approved Stage 1 works (SSD-8903).

Stage 2 of the proposed redevelopment comprises the Village Green and Community Centre (C2), and residential buildings C3 and C4 (Figure 3). The Stage 2 application will include the following works, noting site preparation works, roads, servicing and public domain works across the site have already been approved under SSD-8903:

- The detailed design, construction, and operation of:
 - C2 composing the community centre, pool, gym and Village Green central open space area.
 - C3 comprising a 17-storey mixed use building with approximately 170 market housing residential apartments and ground floor retail uses.
 - C4 comprising a 24-storey building with 268 market apartments and 4 x 3-storey market townhouses and a 17-storey building comprising 216 social housing apartments
- Excavation of basements for Buildings C3 and C4, and detailed earthworks to achieve the required levels for the community centre and Village Green.
- Utilities and services infrastructure to tie-into the detailed requirements of the proposed buildings.
- New driveways and public domain areas to tie-into the approved internal road network and road reserves.
- Stratum subdivision to correspond with the proposed buildings.

The capital investment value of Stage 2 is over \$30 million and is carried out on behalf of the NSW Land and Housing Corporation, as such is classified as State Significant Development (SSD) in accordance with Clause 10, Schedule 2 of State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD).



GDA 1994 MGA Zone 56

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● Subject Area

REGIONAL LOCATION
Ivanhoe Estate
Fraser's Property Aus

Figure 1 – Regional location

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Project No: P0032333

Project Manager: Andrew Crisp

 Subject Area Contours

Location of the Subject Area
Ivanhoe Estate
Frasers Property Aus

Figure 2 – Location of the subject area

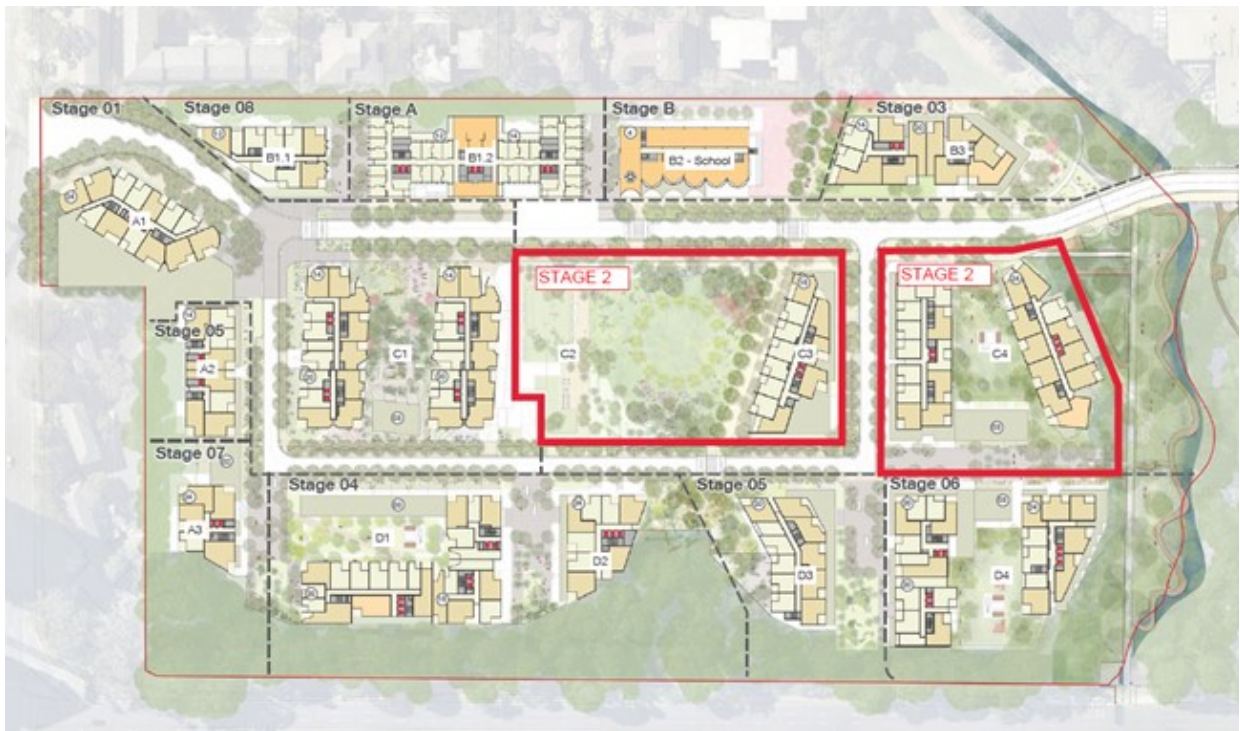


Figure 3 – Ivanhoe Masterplan
Source: Ethos Urban

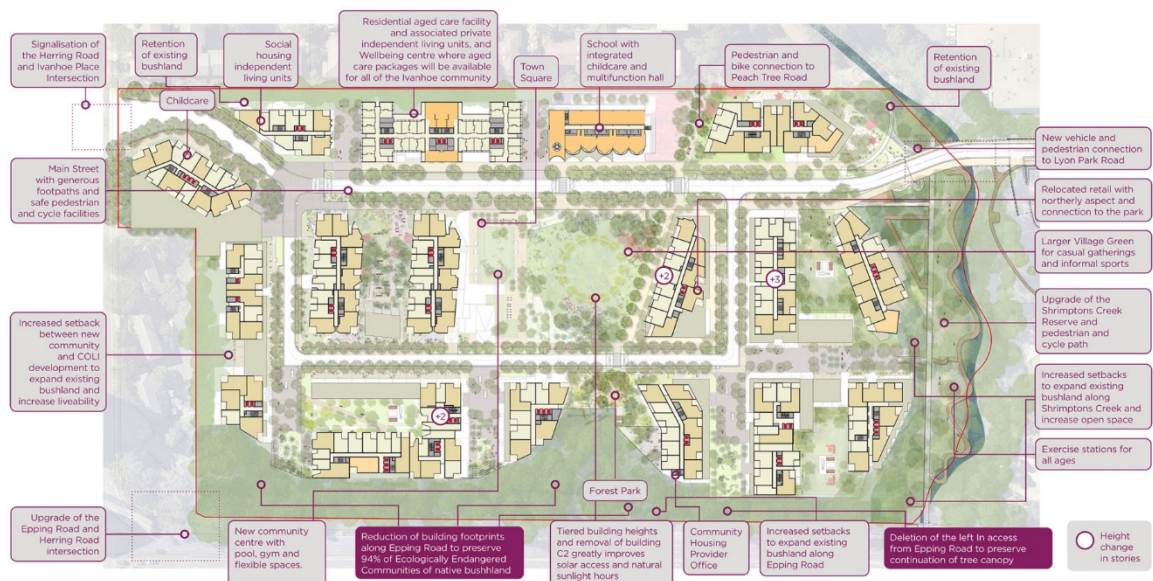


Figure 4 – Ivanhoe Masterplan
Source: Ethos Urban

1.3. RESPONSE TO SEARS

The ACHAR has been guided by the anticipated Secretary's Environmental Assessment Requirements (SEARs) for all SSDAs relating to Stage 2 and subsequent stages of the proposed development. The SEARs for this project are anticipated to include requirements for heritage and archaeology identified in Table 1 below. The section of the present ACHAR in which those requirements are addressed is also indicated in Table 1.

Table 1 – Anticipated SEARs and relevant report sections

Anticipated SEARs	Section of Report
Identify and describes the Aboriginal cultural heritage values that exist across the site.	Sections 2, 4 and 5
Undertake surface surveys and test excavations where necessary.	Section 3.3
Incorporate consultation with Aboriginal people in accordance with <i>Aboriginal Cultural Heritage Consultation Requirements for Proponents</i> (DECCW, 2010).	Section 4
Document the significance of cultural heritage values of Aboriginal people who have a cultural association with the land.	Section 5
Identify, assess, and document all impacts on the Aboriginal cultural heritage values.	Section 6
Demonstrate attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR and EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to the Environment, Energy and Science Group of the Department of Planning, Industry and Environment.	Section 6

1.4. THE CURRENT ASSESSMENT REPORT

1.4.1. Objectives

The objectives of the ACHA are to:

- Investigate the presence, or absence, of Aboriginal objects and/or places within and in close proximity to the subject area, and whether those objects and/or places would be impacted by the proposed development.
- Investigate the presence, or absence, of any landscape features that may have the potential to contain Aboriginal objects and/or sites and whether those objects and/or sites would be impacted by the proposed development.
- Document the nature, extent and significance of any Aboriginal objects and/or place and sites that may located within the subject area.
- Document consultation with the Registered Aboriginal Parties (RAPs) with the aim to identify any spiritual, traditional, historical or contemporary associations or attachments to the subject area and any Aboriginal objects and/or places that might be identified within the subject area.
- Provide management strategies for any identified Aboriginal objects and/or places or cultural heritage values.
- Provide recommendations for the implementation of the identified management strategies.
- Prepare a final ACHAR to accompany an EIS in support of State Significant Development Applications for the subject area.

1.4.2. Assessment and Reporting

The ACHA on which the present report is based has been carried out in accordance with Part 6 of the NPW Act and Part 5 of the NPW Reg.

The ACHAR was prepared according to the guidelines that accompany the NPW Act including:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (Department of Environment, Climate Change and Water (DECCW), 2010) (the Consultation Guidelines).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (Office of Environment and Heritage 2011) (the Assessment Guidelines).
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010) (the Code of Practice).
- *The Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter, 2013* (Burra Charter).

Section 3.1 of the Assessment Guidelines specifies the content requirements of an ACHAR, which includes the requirements of Regulation 61 of the NPW Reg. The requirements are listed in Table 2 below, together with the sections of the present ACHAR in which they are addressed.

Table 2 – ACHAR Requirements

Requirement	Section of Report
A description of the Aboriginal objects and declared Aboriginal places located within the area of the proposed activity	Section 2
A description of the cultural heritage values, including the significance of the Aboriginal objects and declared Aboriginal places, that exist across the whole area that will be affected by the proposed activity and the significance of these values for the Aboriginal people who have a cultural association with the land	Section 5
How the requirements for consultation with Aboriginal people have been met (as specified in clause 80C of the NPW Regulation)	Section 4
The views of those Aboriginal people regarding the likely impact of the proposed activity on their cultural heritage (if any submissions have been received as a part of the consultation requirements, the report must include a copy of each submission and your response)	Section 4, Section 5 & Appendix C
Actual or likely harm posed to the Aboriginal objects or declared Aboriginal places from the proposed activity, with reference to the cultural heritage values identified	Section 6
Any practical measures that may be taken to protect and conserve those Aboriginal objects or declared Aboriginal places	Section 7
Any practical measures that may be taken to avoid or mitigate any actual or likely harm, alternatives to harm or, if this is not possible, to manage (minimise) harm.	Section 7

1.5. AUTHORSHIP

The present ACHAR has been prepared by Aaron Olsen, Urbis Consultant (Archaeology), and Andrew Crisp, Urbis Senior Consultant (Archaeology), with review and quality control undertaken by Balazs Hansel, Urbis Associate Director (Archaeology).

Aaron Olsen holds a Diploma of Arts (Archaeology) from the University of Sydney, a Bachelor of Science (Honours - First Class in Chemistry) and PhD (Chemistry) from the University of Newcastle and a Masters (Industrial Property) from the University of Technology Sydney. Andrew Crisp holds a Bachelor of Arts (Honours - First Class in Archaeology) from the University of Sydney. Balazs Hansel holds a Masters (History) and Masters (Archaeology and Museum Studies) from the University of Szeged (Hungary) and is currently completing a PhD (Archaeology) at the University of Sydney.

2. STATUTORY CONTEXT

2.1. HERITAGE CONTROLS

The protection and management of Aboriginal cultural heritage items, places and archaeological sites within New South Wales is governed by the relevant Commonwealth, State or local government legislation. These are discussed below in relation to the present subject area.

2.1.1. The National Parks and Wildlife Act 1974

Management of Aboriginal objects and places in NSW falls under the statutory control of the *National Parks and Wildlife Act 1974* (NPW Act). Application of the NPW Act is in accordance with the *National Parks and Wildlife Regulation 2019* (NPW Reg).

Section 5 of the NPW Act defines Aboriginal objects and Aboriginal places as follows:

Aboriginal object means 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.

Aboriginal place means any place declared to be an Aboriginal place under section 84 of the NPW Act.

The NPW Act provides statutory protection for Aboriginal objects, defining two tiers of offence against which individuals or corporations who harm Aboriginal objects or Aboriginal places can be prosecuted. The highest tier offences are reserved for knowledgeable harm of Aboriginal objects or knowledgeable desecration of Aboriginal places. Second tier offences are strict liability offences - that is, offences regardless of whether or not the offender knows they are harming an Aboriginal object or desecrating an Aboriginal place - against which defences may be established under the *National Parks and Wildlife Regulation 2009* (NSW) (the NPW Regulation).

Section 86 of the NPW Act identifies rules and penalties surrounding harming or desecrating Aboriginal objects and Aboriginal places. These are identified as follows:

- (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.*

- (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).*

Section 87 (1), (2) and (4) of the NPW Act establishes defences against prosecution under s.86. The defences are as follows:

- The harm was authorised by an Aboriginal Heritage Impact Permit (AHIP) (s.87(1)).
- Due diligence was exercised to establish Aboriginal objects will not be harmed (s.87(2)).

Due diligence may be achieved by compliance with requirements set out in the NPW Regulation or a code of practice adopted or prescribed by the NPW Regulation (s.87(3)).

The present ADD follows the Due Diligence Code and aims to establish whether any Aboriginal objects would be harmed by the proposed redevelopment of the subject area, consistent with s.87(2) of the NPW Act.

2.1.2. Environment Protection and Biodiversity Conservation Act 1999

In 2004, a new Commonwealth heritage management system was introduced under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act protects any items listed in the National Heritage List (NHL) and the Commonwealth Heritage List (CHL).

The National Heritage List (NHL) is a list of natural, historic and Indigenous places of outstanding significance to the nation. It was established to protect places that have outstanding value to the nation.

The Commonwealth Heritage List (CHL) was established to protect items and places owned or managed by Commonwealth agencies. The Australian Government Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) is responsible for the implementation of national policy, programs and legislation to protect and conserve Australia's environment and heritage and to promote Australian arts and culture. Approval from the Minister is required for controlled actions which will have a significant impact on items and places included on the NHL or CHL.

2.1.3. Ryde Local Environmental Plan 2014

The *Environmental Planning and Assessment Act 1979* (EP&A Act) requires each LGA to produce a Local Environment Plan (LEP). The LEP identifies items and areas of local heritage significance and outlines development consent requirements.

The subject area falls within the City of Ryde LGA and is subject to the Ryde Local Environmental Plan 2014. Under Section 5.10(2) of the Sydney LEP, development consent is required for:

- (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.*

The ADD was undertaken to determine whether or not Aboriginal archaeological resources are present within the subject area.

2.1.4. Ryde Development Control Plan 2014

The EP&A Act requires each LGA to produce a Development Control Plan (DCP). Not all LGAs provide information regarding Aboriginal cultural heritage and specific development controls to protect Aboriginal cultural heritage. The subject area is encompassed by the Ryde Development Control Plan 2014, which does not identify any controls relating to Aboriginal cultural heritage.

2.2. HERITAGE LISTS & REGISTERS

A review of relevant heritage lists and registers was undertaken to determine whether any Aboriginal cultural heritage items are located within the curtilage of, or in proximity to, the subject area.

2.2.1. Australian Heritage Database

The Australian Heritage Database is a database of heritage items included in the World Heritage List, the National Heritage List (NHL), the Commonwealth Heritage list (CHL) and places in the Register of the National Estate. The list also includes places under consideration, or that may have been considered, for any one of these lists.

A search of the Australian Heritage Database was undertaken on 15 March 2021. The search did not identify any heritage items within, or near to, the curtilage of the subject area.

2.2.2. NSW State Heritage Inventory

The State Heritage Inventory (SHI) is a database of heritage items in NSW which includes declared Aboriginal Places, items listed on the SHR, listed Interim Heritage Orders (IHOs) and items listed of local heritage significance on a local council's LEP.

A search of the SHI was undertaken on 1 July 2021. The search identified no heritage or archaeological items within the curtilage of the subject area (Figure 5). The nearest registered item is Item 10 of Ryde LEP (Local Significance), "Macquarie University (ruins)", which is located at 192 Balaclava Road, Macquarie Park, approximately 750m north-west of the present subject area.

2.3. SUMMARY

The statutory context of the subject area is summarised as follows:

- The present ACHA aims to establish whether any Aboriginal objects would be harmed by the proposed development of the subject area, thus addressing s.87(2) of the NPW Act and Section 5.10(2) of the Ryde LEP.
- No historical heritage items have been identified within the curtilage of the subject area.
- The nearest heritage item is located approximately 750m north-west of the present subject area.
- The potential impacts of any development on built heritage items is not the purview of the present report and can be addressed by preparation of a Heritage Impact Statement.



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Project No: P0032333

Project Manager: Andrew Crisp

Subject Area Hydrology Item - General

Contours

Historical Heritage Items
Ivanhoe Estate
Frasers Property Aus

Figure 5 – Historical Heritage Items in the vicinity of the subject area

3. ABORIGINAL CULTURAL HERITAGE

3.1. ARCHAEOLOGICAL CONTEXT

A summary of background research for Aboriginal cultural heritage resources within and around the subject area is provided below, including search results from the Aboriginal Heritage Information Management System (AHIMS) and consideration of previous archaeological investigations pertinent to the subject area.

3.1.1. Past Aboriginal Land Use

Due to the absence of written records, it is difficult to infer what Aboriginal life was like prior to the arrival of European settlers. Much of our understanding of Aboriginal life pre-colonisation is informed by the histories documented in the late 18th and early 19th century by European observers. These histories provide an inherently biased interpretation of Aboriginal life both from the perspective of the observer but also through the act of observation. The social functions, activities and rituals recorded by Europeans may have been impacted by the Observer Effect, also known as the Hawthorne Effect. The Observer/Hawthorne Effect essentially states that individuals will modify their behaviour in response to their awareness of being observed. With this in mind, by comparing/contrasting these early observations with archaeological evidence it is possible to establish a general understanding of the customs, social structure, languages, beliefs and general of the Aboriginal inhabitants of the Sydney Basin (Attenbrow 2010).

The archaeological record provides evidence of the long occupation of Aboriginal people in Australia and the Sydney region. The oldest generally accepted date for a site in the Sydney basin is 17,800 years before present (BP), recorded in a rock shelter at Shaw's Creek (Nanson et al 1987), near Castlereagh (approximately 47km north-west of the subject area). Older occupation sites along the now submerged coastline would have been flooded around 10,000 BP, with subsequent occupation concentrating along the current coastlines and Cumberland Plain (Attenbrow 2010).

Given the early contact with Aboriginal tribes in the Sydney region, more is known about these groups than those that inhabited regional areas. The Aboriginal population in the greater Sydney region is estimated to have been between around 4000 and 8000 people at the time of European contact (Attenbrow 2010). The area around Macquarie Park and the present subject area was occupied by the Wallumettagal (or Wallumedegal) clan (Smith 2005). The lands occupied by the Wallumettagal are believed to have extended from the Lane Cove River west along the north shore of the Parramatta River (Smith 2005).

The archaeological record is limited to materials and objects that were able to withstand degradation and decay. As a result, the most common type of Aboriginal objects remaining in the archaeological record are stone artefacts. Flaked artefacts are typically the most common type encountered of stone artefact, in part due to their long and ubiquitous use, but also due to their short use life and the large amount of waste produced in their manufacture. However, ground edged tools are also known to have been utilised by Aboriginal people in the Sydney region (Tench 1791). Stone technology and raw material utilisation changed over time. Until about 8,500 BP, stone tool technology remained fairly static with unifacial flaking being dominant and a preference for silicified tuff, quartz and some unheated silcrete evident. After about 4,000 BP, bipolar flaking and backed artefacts appear more frequently and ground stone axes are first observed (Attenbrow 2010:102; JMCHM 2006). From about 1,500 BP, there is evidence of a decline in stone tool manufacture, possibly due to an increase in the use of organic materials, changes in the way tools were made or changes in tool preferences (Attenbrow 2010). After European contact, Aboriginal people of the Sydney region continued to manufacture tools, sometimes with new materials such as bottle glass or ceramics (e.g. Ngara Consulting 2003).

Other materials, such as shell and bone, also survive in the archaeological record under certain conditions. The 'Wallumattagal' is likely derived from the word 'wallumai', the local name for the snapper fish (*Pagrus auratus*), which were abundant in Sydney's waterways (Smith 2005). There is significant evidence of reliance on river resources in the form of shell middens in the lands occupied by the Wallumettagal clan (see Section 3.1.3 below).

Based on the above background, it is possible that similar evidence of Aboriginal occupation is present within original and/or intact topsoils within the present subject area.

3.1.2. Previous Archaeological Investigations

Previous archaeological investigations may provide invaluable information on the spatial distribution, nature and extent of archaeological resources in a given area. Summaries of the most pertinent reports to the subject area are provided below.

3.1.2.1. Archaeological Reports from Subject Area

The following archaeological report relating directly to the subject area has been identified.

EcoLogical, 2017. Ivanhoe Estate, Macquarie Park NSW. Aboriginal and Historical Heritage Assessment

Eco Logical Australia was engaged by Citta Property Group to conduct an Aboriginal heritage due diligence assessment for the proposed Ivanhoe Estate Redevelopment within the portion of the subject area west of Shrimptons Creek (Lot 100 in DP1262209). A site inspection as part of the assessment confirmed that the study area is highly developed. The site inspection did not identify any Aboriginal objects or places within the subject area. Ground disturbance observed during the site inspection included cut and fill landscape modification across the site. It was further observed that none of the trees in the subject area appear old enough to be culturally modified, with most vegetation post-dating construction of the buildings. Based on the level of ground disturbance, it was determined that the subject area has low to nil archaeological potential. The report recommended that no further archaeological assessment within the study area was required.

3.1.2.2. Archaeological Reports from Local Area

Numerous archaeological reports have been produced relating to the broader area around the present subject area and the Sydney region in general. The most relevant to the specific conditions of the present subject area are summarised below.

Artefact Heritage, 2014. North Ryde Station Precinct, M2 site, State Significant Development Archaeological Assessment, Excavation and Monitoring Methodology

The report presents the results of historical and Aboriginal archaeological assessment for the M2 Site at North Ryde, part of the North Ryde Station Precinct, located approximately 1.5km south-east of the present subject area. The study area was assessed as having nil to low archaeological potential and low Aboriginal archaeological significance. It was determined that the majority of the study area had been subject to high levels of ground disturbance and therefore has no Aboriginal archaeological potential. The northern section of the study area was determined to have been subjected to low-moderate ground disturbance but was assessed as having a low archaeological potential due to its skeletal soils. The report illustrates that while high levels of ground disturbance significantly reduce archaeological potential, low to moderate ground disturbance may also reduce archaeological potential in areas with shallow soil profiles.

Mary Dallas Consulting Archaeologists, 2012. Due Diligence Aboriginal Heritage Assessment for Macquarie University, North Ryde.

The report presents the results of a Preliminary Due Diligence Aboriginal Heritage Assessment for the entire Macquarie University site, located approximately 300m north of the subject area on the opposite side of Herring Road. The report identifies three areas within the study area that have been subject to historical cut and fill activities: the University Village, the western open green and new car park and the Macquarie Lake and eastern open green. Despite each area including an archaeologically sensitive landscape feature (i.e. a tributary of the Lane Cove River), each was assessed as being devoid of archaeological potential where large-scale ground disturbance associated with the cut and fill activities had occurred. The report demonstrates that historical cut and fill activities in the immediate vicinity of the subject area destroy or significantly reduce archaeological potential, even near landscape and near archaeologically sensitive landscape features.

HLA-Envirosciences Pty Limited, 2003. Archaeological Subsurface Testing Program: Eden Gardens, Macquarie Park, NSW.

The report presents the results of a sub-surface testing program at Eden Gardens, approximately 1.6km east of the present subject area. The study area is located in a similar landscape to the present subject area, near to the Lane Cove River. The test excavations yielded only a single flaked artefact, which was found in a soil layer above historical materials. It was determined that natural soil profile had been significantly disturbed by historical activities. The report demonstrates that historical activities may significantly reduce archaeological potential within the landscape with which the present subject area is associated.

The archaeological reports summarised above demonstrate that archaeological potential within the context of the area surrounding the subject area may be significantly reduced by historical ground disturbance and shallow soils. However, further consideration of the degree of ground disturbance and soil depth specific to the present subject area is required in assessing archaeological potential.

3.1.3. Aboriginal Heritage Information Management System (AHIMS)

The Aboriginal Heritage Information Management System (AHIMS) database comprises previously registered Aboriginal archaeological objects and cultural heritage places in NSW and it is managed by the Department of Premier and Cabinet (DPC) under Section 90Q of the NPW Act. 'Aboriginal objects' is the official term used in AHIMS for Aboriginal archaeological sites. The terms 'Aboriginal sites', 'AHIMS sites' and 'sites' are used herein to describe the nature and spatial distribution of archaeological resources in relation to the subject area.

It should be noted that the AHIMS register does not represent a comprehensive list of all Aboriginal objects or sites in a specified area as it lists recorded sites only identified during previous archaeological survey effort. The wider surroundings of the subject area and the Concord area in general have been the subject of various levels and intensity of archaeological investigations during the last few decades. Most of the registered sites have been identified through targeted, pre-development surveys for infrastructure and maintenance works, with the restrictions on extent and scope of those developments.

A search of the AHIMS database was carried out on 5 March 2021 (AHIMS Client Service ID: 574117) for an area of approximately 7km by 7km around the subject area.

The AHIMS search identified no Aboriginal object or places within or immediately adjacent to the subject area.

A total of 81 Aboriginal objects were identified in the extensive AHIMS search area. Two registered sites were identified in the AHIMS register as 'not a site', reducing the total number of sites to 79. A summary of the identified Aboriginal sites is provided in Table 3 and the basic and extensive AHIMS search results are included in Appendix A. The distribution of sites identified in the extensive search area and in proximity to the subject area are shown in Figure 7 and Figure 8, respectively.

Table 3 – AHIMS search results (Client Service ID: 574117)

Site Type	Context	Number	Percentage
Art	Open	14	18%
Shelter with Midden	Closed	13	16%
Shelter with Artefact Scatter	Closed	11	14%
Shelter with PAD	Closed	9	11%
Grinding Grooves	Open	8	10%
Shelter with Art	Closed	6	8%
Artefact Scatter	Open	3	4%
Midden	Open	3	4%
Shelter with Art and Midden	Closed	3	4%
Midden with PAD	Open	2	3%
Shelter with Artefact Scatter and Midden	Closed	2	3%
Grinding Grooves with Water Hole	Open	1	1%
Isolated Find	Open	1	1%
Isolated Find with PAD	Open	1	1%

Shelter	Closed	1	1%
Shelter with Isolated Find	Closed	1	1%
Total		79	100%

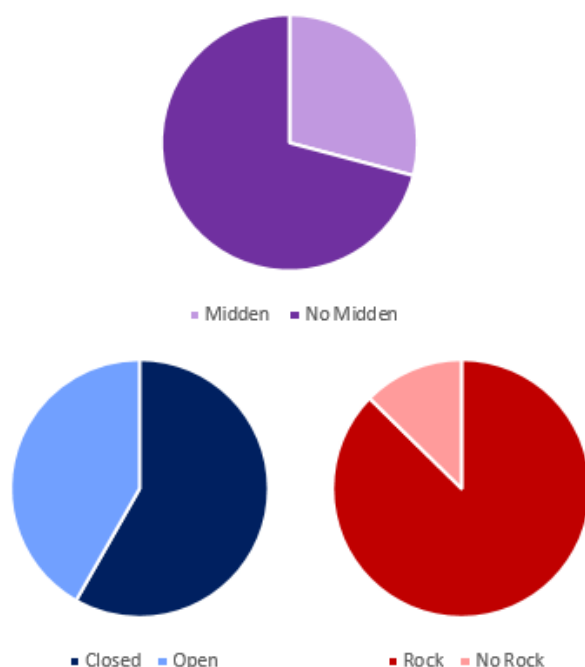
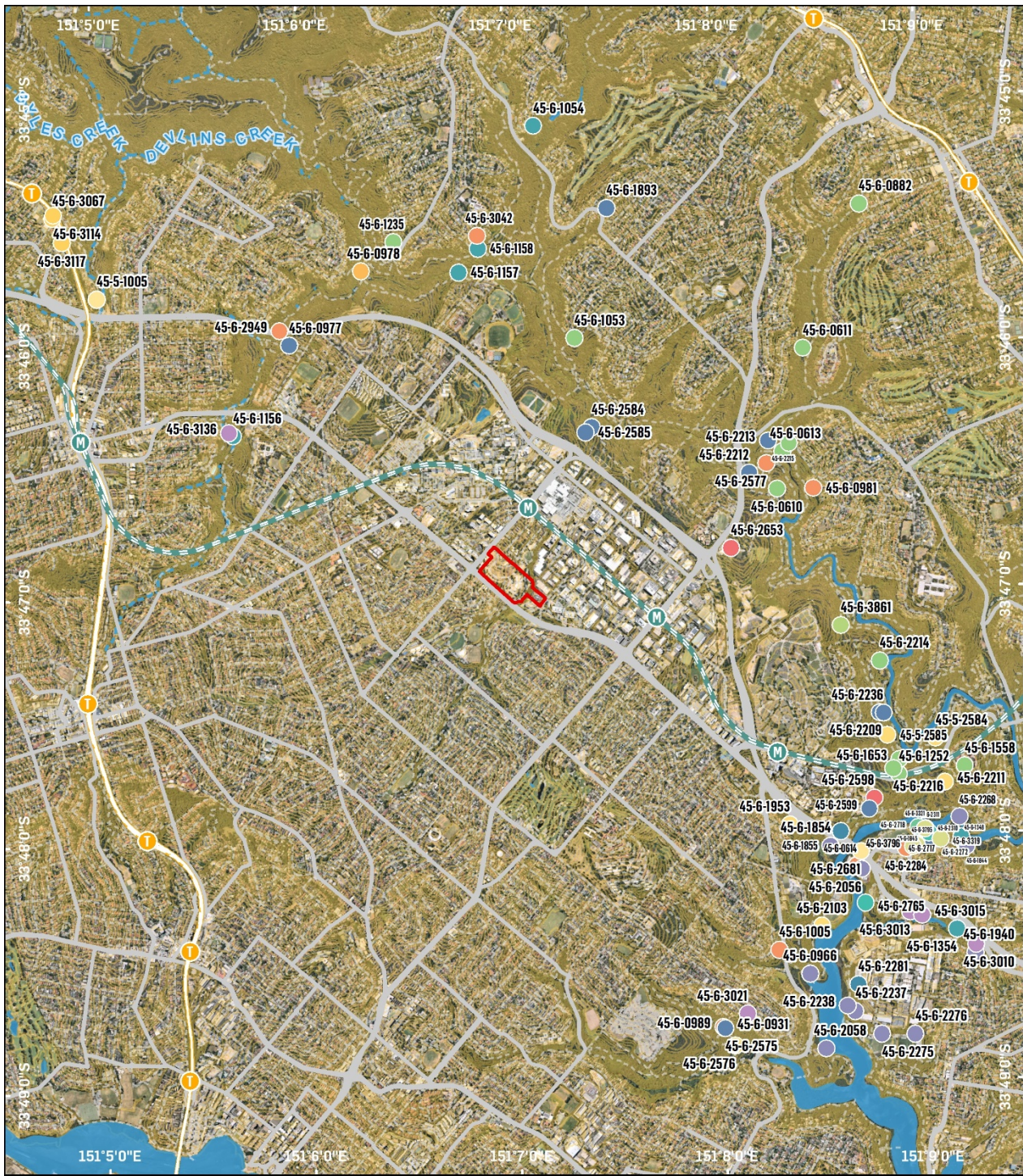


Figure 6 – Analysis of AHIMS search results (Client Service ID: 574117)

The distribution of sites in a landscape may be representative of the interaction between Aboriginal people and their environment. The nearest registered sites to the subject area are AHIMS ID# 45-6-2584 (shelter with artefact scatter), AHIMS ID# 45-6-2585 (shelter with artefact scatter) and AHIMS ID# 45-6-2653 (isolated find with PAD). Each is located approximately 1.4km from the present subject area (Figure 7 and Figure 8) and is associated with either Shrimptons Creek (AHIMS ID# 45-6-2584 and AHIMS ID# 45-6-2585) or Lane Cove River (AHIMS ID# 45-6-2653). More broadly, the Aboriginal sites within the extensive search area are also generally clustered around waterways, particularly the Lane Cove River (Figure 7). The observed clustering of sites around waterways may reflect a reliance of local Aboriginal people on riverine and estuarine resources, such as fish and shellfish. Indeed, the presence of middens in 29% (n=23) of all registered sites within the extensive search area (Figure 6) attests to a subsistence strategy based on utilisation of such resources.

The most common site types identified in the search are rock art sites, which comprise 18% (n=14) of search results. Rock art sites in the search area include either rock engravings or pigment art on rock. Sites involving rock outcrops (shelters, art and grinding groove) represent 87% (n=69) of all registered sites within the extensive search area (Figure 6). The second, third and fourth most common sites are shelters (i.e. 'closed context' sites) with a midden, artefact scatter or potential archaeological deposit (PAD), respectively. Closed sites represent 58% (n=46) of all registered sites within the search area (Figure 6). The high proportion of sites that include shelters or other rock outcrops is consistent with the utilisation of the area around waterways where the geology is more likely to be exposed.

The results of the AHIMS search reflect an environment in which sites are mostly occurring in the vicinity of rock outcrops associated with local waterways. These results reinforce the generic predictive model for the Cumberland Plain, which predicts that Aboriginal objects occur in higher frequency and density within 200m of water or within 20m of a cave, rock shelter, or a cave mouth (see Section 3.2 below).



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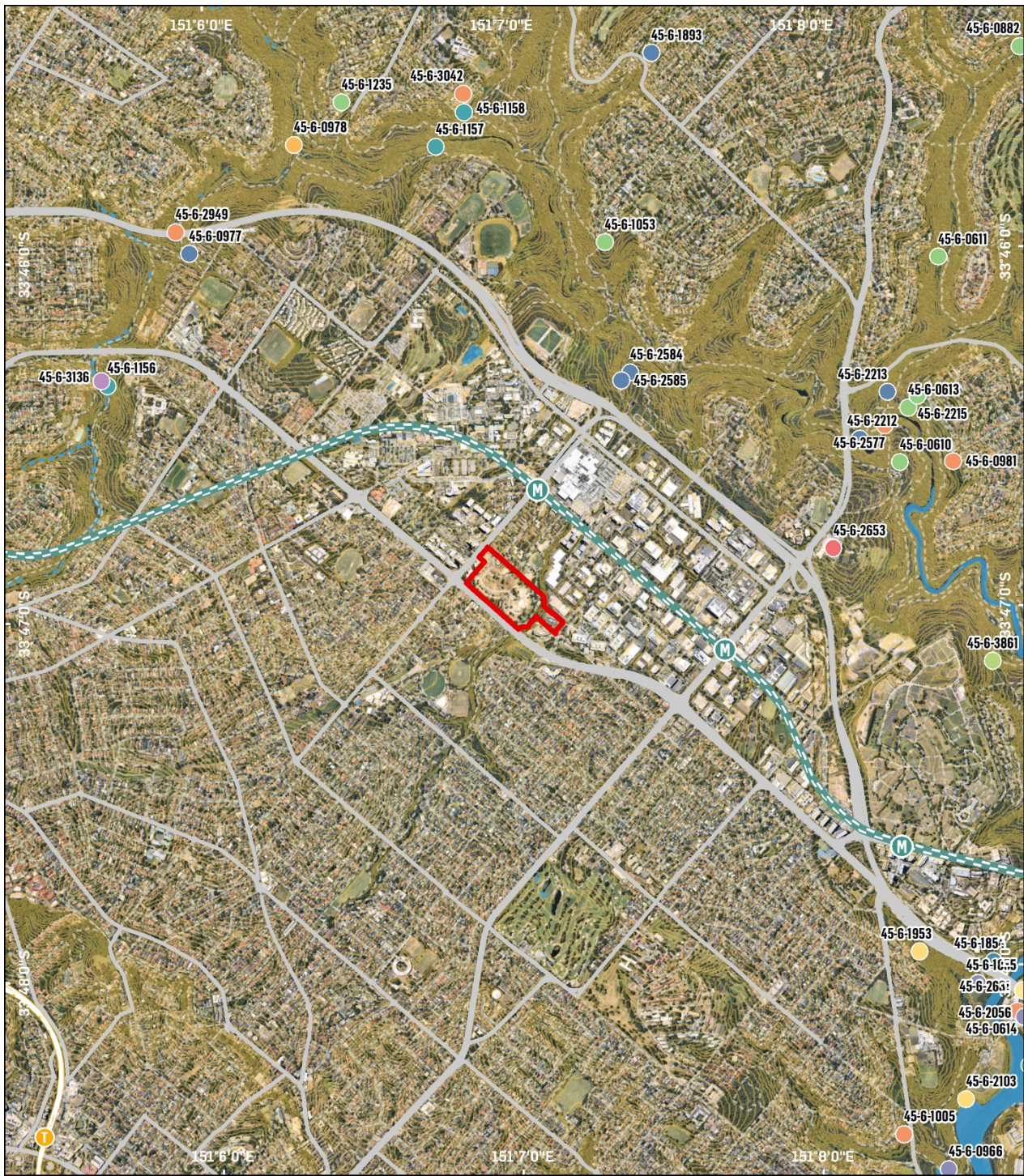
Project Manager: Andrew Crisp

- | | | | | |
|--|---|--|--|---|
| Subject Area | ● Artefact Scatter | ● Midden | ● Rock Engraving | ● Shelter with Art and Midden |
| — Contours | ● Grinding Grooves | ● Not a site | ● Shell Midden | ● Shelter with Artefact |
| — Permanent | ● Grinding Grooves and Water Hole | ● PAD | ● Shelter | ● Shelter with Midden |
| - - Ephemeral | ● Isolated Find | ● Pigment Art | ● Shelter with Art | ● Shelter with PAD |
| — Hydrology | | | | |

AHIMS Sites in Extensive Search area

Ivanhoe Estate
Fraser's Property Aus

Figure 7 – Registered Aboriginal sites in extensive search area



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- | | | | | |
|--|---|--|--|---|
| Subject Area | ● Artefact Scatter | ● Midden | ● Rock Engraving | ● Shelter with Art and Midden |
| — Contours | ● Grinding Grooves | ● Not a site | ● Shelter | ● Shelter with Artefact |
| - - Ephemeral | ● Grinding Grooves and Water Hole | ● Pigment Art | ● Shelter with Art | ● Shelter with Midden |
| ■ Hydrology | | | | ● Shelter with PAD |

AHIMS Sites in proximity Ivanhoe Estate Fraser's Property Aus

Figure 8 – Registered Aboriginal sites within proximity to the subject area

3.1.4. Conclusions Drawn from Archaeological Assessment

The following conclusions are drawn from the above archaeological assessment of the subject area:

- No Aboriginal objects or places are registered within the curtilage of the subject area.
- Within the regional context of the subject area, registered Aboriginal sites tend to be located near waterways.
- Archaeological reports from other sites near the present subject area indicate that archaeological potential may be significantly reduced by historical ground disturbing activity, despite proximity to waterways.
- A due diligence assessment (Eco Logical, 2017) relating directly to the subject area indicates that the portion of the subject area west of Shrimptons Creek is highly disturbed and has low to nil archaeological potential.
- The archaeological assessment indicates that the subject area may retain little archaeological potential due to ground disturbing activities, although the possibility of localised areas of potential warrants further consideration.

3.2. ENVIRONMENTAL CONTEXT

The environmental context of a subject area is relevant to its potential to include Aboriginal objects and places. Aboriginal objects and places may be associated with certain landscape features that played a part in the everyday lives and traditional cultural activities of Aboriginal people. Landscape features that are considered indicative of archaeological potential include rock shelters, sand dunes, waterways, waterholes and wetlands. Conversely, disturbance to the landscape after Aboriginal use may reduce the potential for Aboriginal objects and places. An analysis of the landscape within and near to the subject area is provided below.

3.2.1. Topography

Certain landform elements are associated with greater archaeological potential for Aboriginal objects and places. Areas that are located on a ridge top, ridge line or headland, located within 200m below or above a cliff face or within 20m of or in a cave, rock shelter or cave mouth are considered sensitive areas for Aboriginal objects and places.

The subject area does not include a ridge, headland or cliff, nor does the subject area does include any visible rock outcrops or overhangs. The subject area therefore does not include any topographic features that are indicative of archaeological potential.

3.2.2. Hydrology

Proximity to a body of water is a factor in determining archaeological potential according to the predictive model for the Cumberland Plain. Areas within 200m of freshwater or the high-tide mark of shorelines area considered sensitive areas for Aboriginal objects and places.

The eastern boundary of DP 1262209 Lot 100 and western boundary of DP 1263727 Lot 101 are defined by a lower order stream, Shrimptons Creek (Figure 9). Approximately half of the subject area lies within 200m of Shrimptons Creek, which may have been a viable source of fresh water and food for the local Aboriginal people. The hydrology of the subject area is therefore conducive to prolonged habitation and indicative of archaeological potential.

3.2.3. Geology and Soils

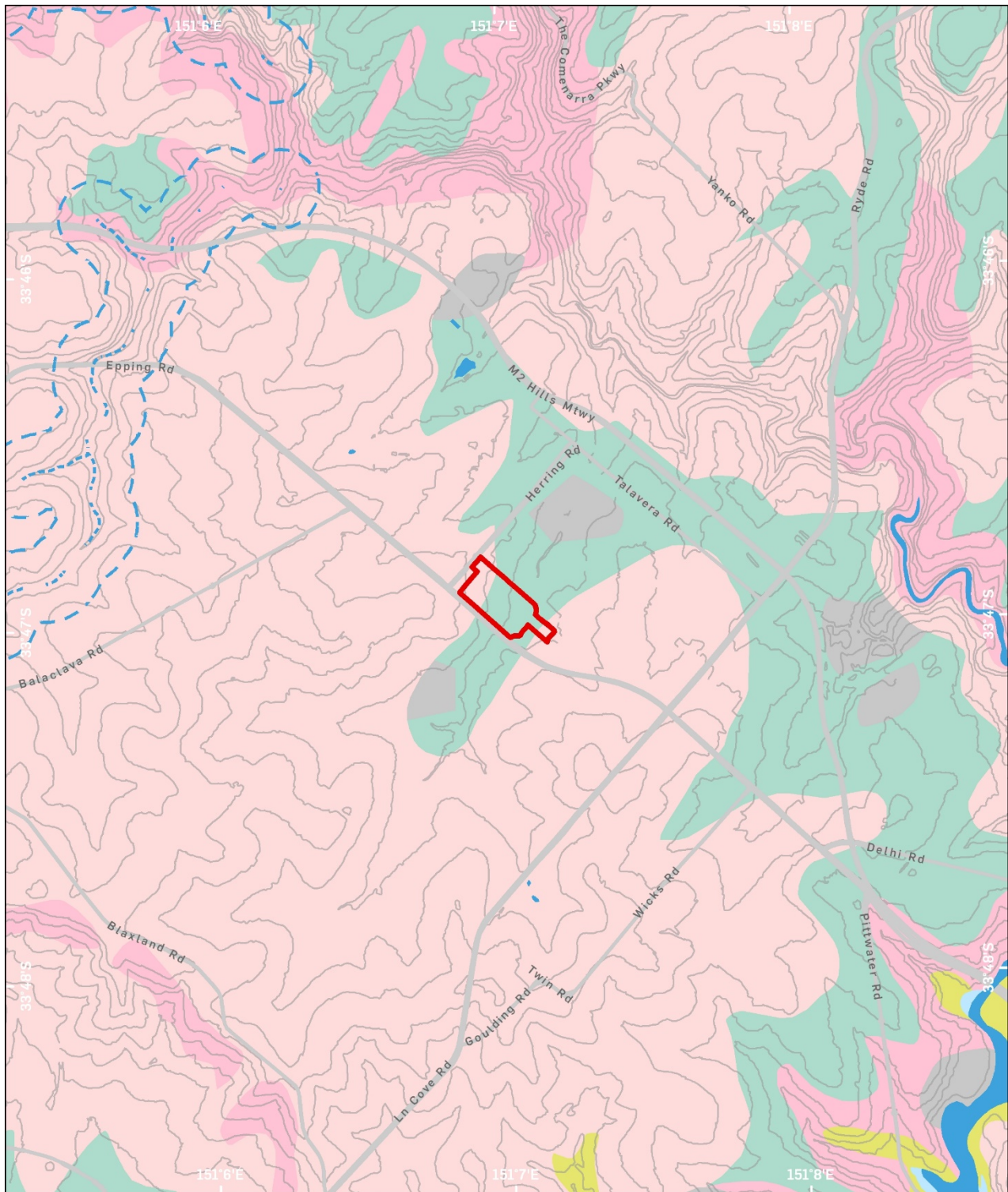
Certain soil landscapes and geological features are associated with greater archaeological potential for Aboriginal objects and places. For example, sand dune systems are associated with the potential presence of burials and sandstone outcrops are associated with the potential presence of grinding grooves and rock art. The depth of natural soils is also relevant to the potential for archaeological materials to be present, especially in areas where disturbance is high. In general, as disturbance level increases, the integrity of any potential archaeological resource decreases. However, disturbance might not remove the archaeological potential even if it decreases integrity of the resources substantially.

3.2.3.1. NSW Soil and Land Information System

The NSW Soil and Land Information System (SALIS) provides information on expected soil landscapes within NSW.

The majority of the subject is identified in SALIS as being located within the Lucas Heights (lh) soil landscape (Figure 9). The Lucas Heights soil landscape is described as residing on gently undulating crests and ridges on plateau surfaces of the Mittagong formation (alternating bands of shale and fine-grained sandstones). Soils are described as moderately deep (50–150 cm) hard-setting Yellow Podzolic Soils and Yellow Soloths (Dy2.41), with Yellow Earths (Gn2.24) on outer edges. Dominant soil materials include loose yellowish-brown sandy loam, bleached stony hard-setting sandy clay loam, earthy yellowish-brown sandy clay loam and pedal yellowish-brown clay.

On the western and eastern boundaries of the subject area, SALIS identifies the Glenorie (gn) soil landscape (Figure 9). The Glenorie soil landscape is described as residing upon undulating to rolling low hills on Wianamatta Group shales. Soils are described as shallow to moderately deep (<100 cm) Red Podzolic Soils (Dr2.11) on crests, with moderately deep (70–150 cm) Red and Brown Podzolic Soils (Dr2.11, Dr2.21, Db1.11, Db1.21) on upper slopes and deep (>200 cm) Yellow Podzolic Soils (Dy5.11) and Gleyed Podzolic Soils (Dg4.11) along drainage lines. Dominant soil materials include friable dark brown loam, hard-setting brown clay loam whole-coloured reddish brown strongly pedal clay, mottled grey plastic clay and brownish-grey plastic silty clay.



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1 KM

Project No: P0032333

Project Manager: Andrew Crisp

Subject Area

Hydrology

Ephemeral

Hydrology 200m Buffer

Alluvial (ALlc)

Colluvial (COha)

Colluvial (COwp)

Disturbed Terrain (DTxx)

Erosional (ERgn)

Erosional (ERgy)

Residual (RElh)

Water

SOIL LANDSCAPES AND HYDROLOGY

Ivanhoe Estate

Frasers Property Aus

Figure 9 – Soil landscapes and hydrology

3.2.3.2. Geotechnical Analysis

Douglas Partners (2017a and 2017b) has undertaken separate geotechnical assessments of the eastern portion and western portion of the subject area at the request of Citta Property Group Pty Limited on behalf of the Proponent.

Douglas Partners, 2017a. Geotechnical Desktop Assessment Proposed Residential Development 2-4 Lyon Park Road, Macquarie Park.

The report presents the results of a desktop geotechnical assessment undertaken by Douglas Partners Pty Ltd for the eastern portion of the present subject area (Lot 101 in DP1263727). The assessment sought to determine the subsurface soil and groundwater conditions and included a review of previous borehole testing of the study area.

Douglas Partners undertook a program of borehole testing in the portion of the subject area east of Shrimptons Creek (Lot 101 in DP1263727) in August 2000, prior to construction of the existing building. Soil samples were obtained from five boreholes, the locations of which are shown in Figure 10. The boreholes were drilled to total depths of between 2m (Borehole 1) and 7.75m (Borehole 5) below the existing ground surface. The borehole logs are annexed hereto as Appendix D.

Poorly compacted filling was present in the boreholes to depths of up to 1.8 m. However, earthworks involved in the construction of the existing building and pavements are likely to have altered this upper profile, potentially removing some or all of the unsuitable filling and/or the placement of new, possibly engineered filling. The natural soils underlying the filling generally comprised soft, firm and firm to stiff silty, sandy clay, sometimes with ironstone gravel. Sandstone was identified underlying the natural soils at Bores 2 to 5, at levels falling from RL 45 at Bore 5 to RL 42.9 at Bore 2. The sandstone ranged from extremely low strength, improving to high strength, with strength generally improving with depth.

These findings are consistent with the SALIS prediction that the subject area is located within the Lucas Heights and Glenorie Landscapes.

Douglas Partners, 2017b. Report on Geotechnical Desktop Assessment Proposed Residential Development Ivanhoe, Macquarie Park.

The report presents the results of a desktop geotechnical assessment undertaken by Douglas Partners Pty Ltd for the western portion of the present subject area (Lot 100 in DP1262209). The assessment sought to determine the subsurface soil and groundwater conditions and included a review of existing information relating to the subject area and a brief visit to the subject area to assess site conditions and make observations. The observations from the walkover are summarised in Figure 11.

The report notes that construction of the existing residential buildings has included cut and fill activities, which have cut into the bedrock. Exposed rock was visible in several locations at the rear of residences west of Ivanhoe Place, at the locations shown in Figure 11. It is apparent from the observations reported by Douglas Partners (2017b) that the intact natural soil will not be present across much of the western portion of the subject area due to historical cut and fill activities. Intact natural soil may remain along the southern and western boundaries of the subject area, which have not been subjected to cut and fill activities, and in the vicinity of Shrimptons Creek.

The report further notes that natural soils in the area are relatively shallow, despite the SALIS prediction of moderately deep soils. This assessment is consistent with observations of skeletal soils in the Lucas Heights soil landscape 1.5km south-east of the subject area (Artefact Heritage, 2014). Although the SALIS prediction that the subject area is located in the Lucas Heights and Glenorie Landscapes may be accurate, it appears likely that the soil depth is shallower than expected.

The shallow soils that are likely to be naturally occurring within the subject area would exacerbate the deleterious impact of ground disturbance on archaeological potential.

A single sandstone outcrop was also observed at the southern corner of the site, near Shrimptons Creek (Figure 11). Numerous sandstone boulders were also observed in association with Shrimptons Creek (Figure 11), which were likely to have been used for stabilisation of the slope against erosion and as headwalls. There is no evidence that the subject area includes any rocky outcrops or other sources of stone useful for the production of tools.

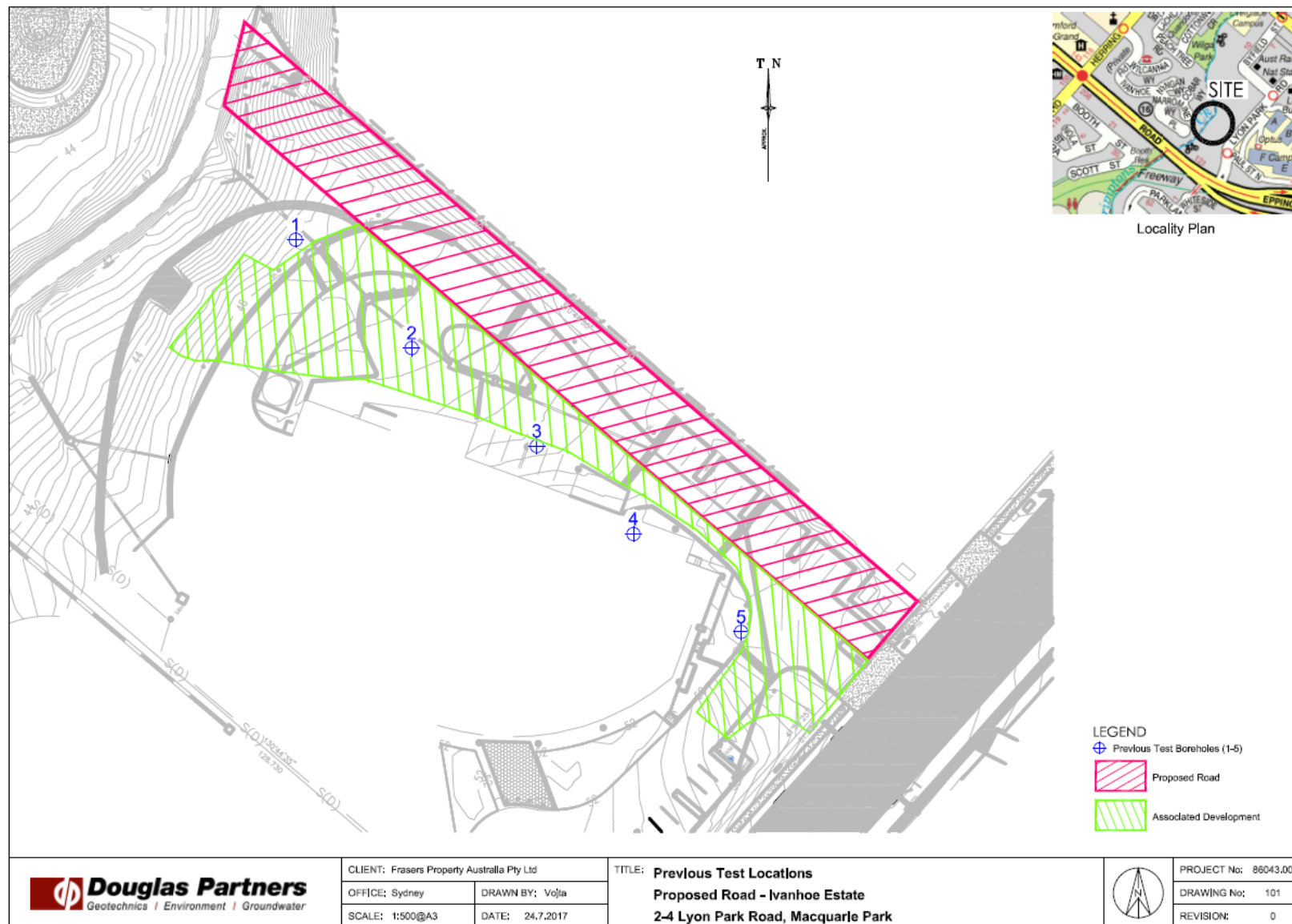


Figure 10 – Borehole locations
Source: Douglas Partners

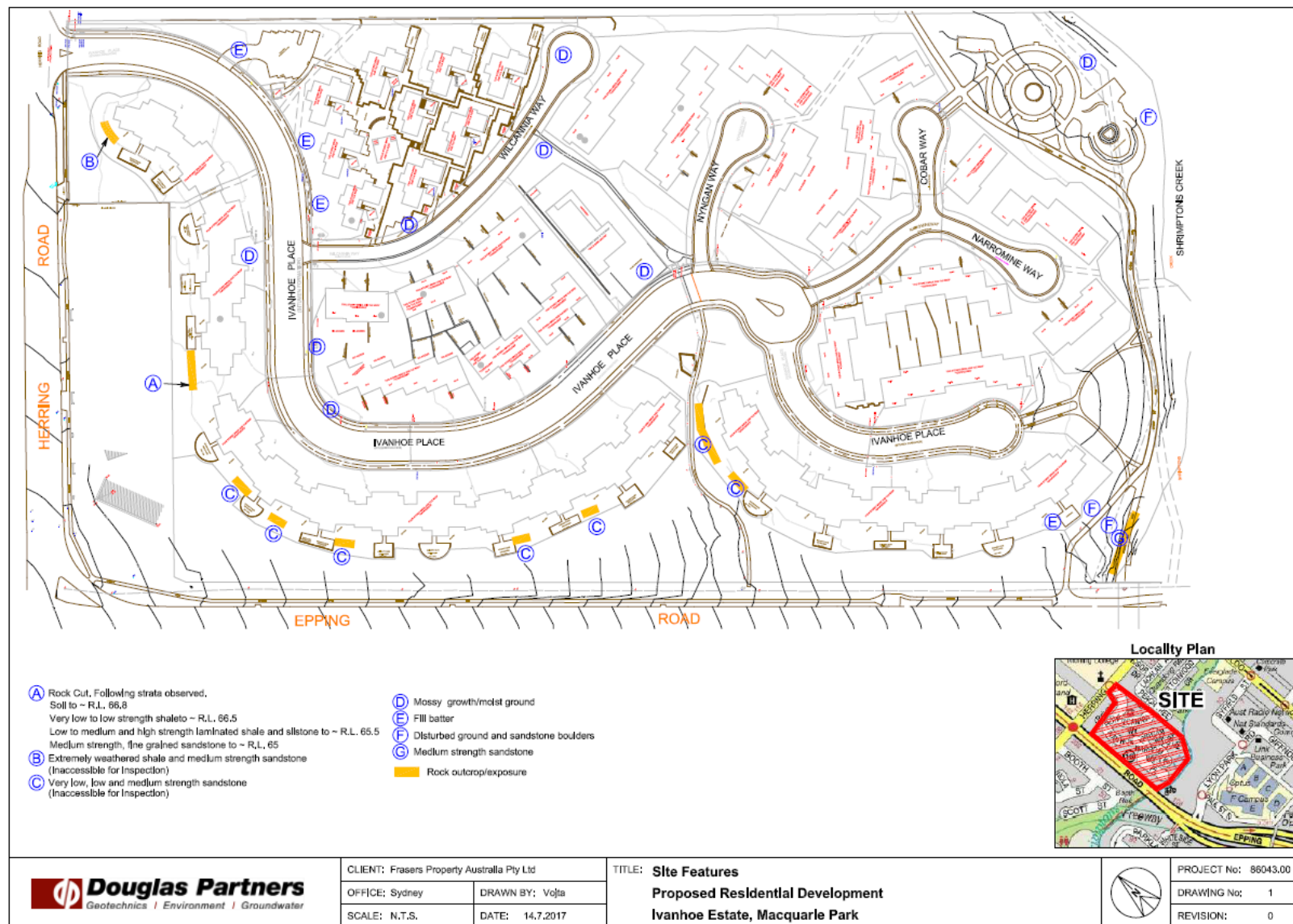


Figure 11 – Subject area features
Source: Douglas Partners

3.2.4. Vegetation

The presence of certain types of vegetation within an area may be indicative of archaeological potential for certain site types, such as modified trees, or more generally of the habitability of an area for Aboriginal people.

Although the subject area includes numerous mature trees, it appears unlikely that the subject area currently includes any remnant vegetation due to historical land clearance (see Section 3.2.4 below). This is confirmed by a field survey conducted as part of the due diligence assessment for the western portion of the subject area (EcoLogical, 2017).

The vegetation associated with the Lucas Heights soil landscape would have originally comprised low, eucalypt open-forest and low eucalypt woodland with a sclerophyll shrub understorey. Dominant tree species would have included turpentine *Syncarpia glomulifera*, smooth-barked apple *Angophora costata*, red bloodwood *Eucalyptus gummifera*, thinleaved stringybark *E. eugenoides* and scribbly gum *E. haemastoma*. The Glenorie soil landscape would have been associated with tall open forest (wet sclerophyll forest). Dominant tree species would have included Sydney blue gum *E. saligna* and blackbutt *E. pilularis*. Other species would have included turpentine *Syncarpia glomulifera*, grey ironbark *E. paniculata*, white stringybark *E. globoidea* and rough-barked apple *Angophora floribunda*. Understorey species would have included Pittosporum *Pittosporum undulatum* and coffee bush *Breynia oblongifolia* are common understorey species.

The variety of floral and faunal species in the subject area could have been utilised by Aboriginal people for medicinal, ceremonial and subsistence purposes.

3.2.5. Historical Ground Disturbance

Historical ground disturbance, either through human activity (e.g. soil ploughing, construction of buildings and clearing of vegetation) or natural processes (e.g. erosion), can reduce the archaeological potential of a site. Ground disturbance may reduce the spatial and vertical integrity of archaeological resources and expose sub-surface deposits.

Development of the Ryde area began as early as 1792, when ex-marines were granted land on the northern banks of the Paramatta River (Dictionary of Sydney, 'Marsfield'). By 1802, land grants in the area were numerous and used grazing horses, cattle, sheep and goats (Campbell, 1927). In 1803, William Kent, Junior was granted 570 acres of land, which included the present subject area (Figure 12). Kent's grant was offered for sale in 1835 as "Tudor's Farm" (Ironsides Advertiser and Sydney Price Current, 1835). By 1912, Ken's designated as "Tudor" in the parish map of Hunters Hill (Figure 12).

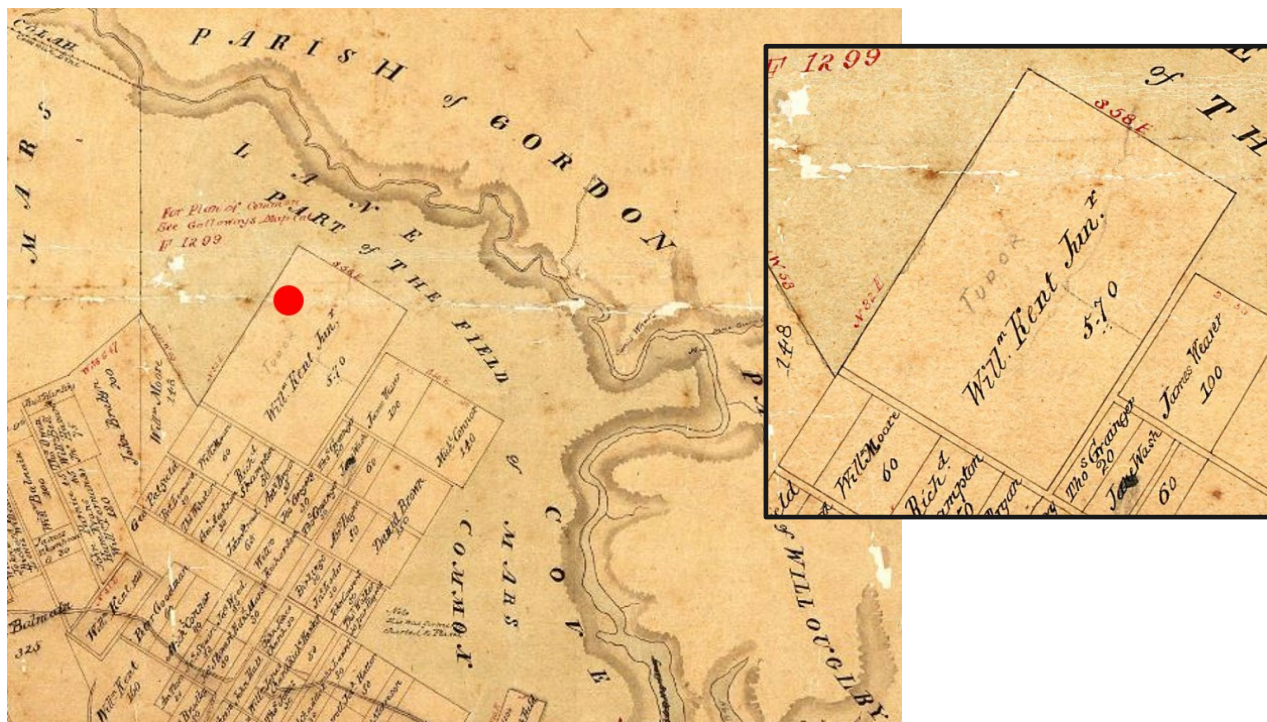


Figure 12 – Parish map of Hunters Hill, c. 1860s; red dot indicates approximate location of subject area in "Tudor" farm
Source: NSWLRS

It is apparent that the subject area was utilised for agricultural purposes or remained undeveloped prior to the mid-twentieth century.

Aerial photographs from 1943, 1986, 2009 and 2021 (see Figure 13) were analysed to develop an understanding of the level of historical ground disturbance within the subject area from the mid-20th century onwards. The analysis of the aerial photographs is provided in Table 4 below.

Table 4 – Analysis of historical aerial photographs

Year	Observation
1943	Approximately two-thirds of the subject area has been cleared of vegetation by this stage. A strip of remnant trees remains in the southern portion of the subject area and some more along Shrimptons Creek. The northern portion of the subject area is primarily utilised for farming on the western side of Shrimptons Creek. Several residential buildings are visible in the north-western corner of the subject area, associated with the farmed portion of the area.
1986	The subject area has been cleared of most remnant vegetation, except for a small number of trees along Shrimptons Creek. Regrowth of new trees is evident along Epping Road. The majority of the subject area has been cleared in preparation for construction of residential buildings, with some construction having commenced. The earlier residential buildings in the north-western corner have been demolished. The roads of Ivanhoe Estate (Ivanhoe Place, Wilcannia Way, Nyngan Way, Narromine Way and Cobar Way) are all visible. The portion of the subject area east of Shrimptons Creek is little changed.
2009	The remnant vegetation along Shrimptons Creek remains, while new vegetation growth is evident across the subject area. Building construction has occurred across the subject area, with low to medium rise residential buildings now occupying much of the western portion of the subject area. A large, multi-story building has been constructed on the portion of the subject area east of Shrimptons Creek.
2021	All previous buildings in the western portion of the subject area have now been demolished, except for a single residential building along the northern boundary. The previous road surfaces have also been removed. A new building with associated parking facilities has been constructed in the north-western portion of the subject area, along the northern boundary. The multi-story building east of Shrimptons Creek remains.

It is apparent from the historic aerial imagery that prior to the mid-twentieth century, the subject area was subjected to low to moderate ground disturbance associated with land clearance, farming and construction of small buildings. From the 1980s onwards, the majority of the subject area was subject to a high level of ground disturbance associated with cut and fill earthworks and construction of larger buildings. Localised portions of the subject area along Epping Road and Shrimptons Creek have been subjected to low to moderate ground disturbance.

The majority of subject area is therefore highly disturbed, consistent with the findings of the geotechnical assessments discussed in Section 3.2.3.2 above, significantly reduce archaeological potential. The shallow natural soil profile in areas of low to moderate ground disturbance would also reduce archaeological potential in those areas.



GDA 1994 MGA Zone 56



Project No: P0032333

Project Manager: Andrew Crisp

Subject Area

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HISTORICAL AERIAL PHOTOGRAPHS

Ivanhoe Estate

Fraser's Property Aus

Figure 13 – Historical aerial photographs

3.2.6. Conclusions Drawn from Environmental Context Analysis

The following conclusions are drawn from the above assessment of the environmental context of the subject area:

- The subject area does not include any topographic features that are indicative of archaeological potential.
- The proximity of the subject area to a natural water course is indicative of an archaeologically sensitive landscape.
- Vegetation in the subject area would have been conducive to Aboriginal occupation.
- The majority of subject area has been subjected to a high degree of ground disturbance, which is likely to significantly reduce archaeological potential.
- The shallow natural soil profile in areas of low to moderate ground disturbance would reduce archaeological potential in those areas.
- The review of the environmental context indicates that, despite the presence of archaeologically sensitive landscapes, archaeological potential is reduced across much of the subject area due to historical ground disturbance.

3.3. FIELD SURVEY

A field survey of the subject area was undertaken on Friday 25th June 2021 by Urbis Senior Archaeologist Andrew Crisp and Kamilaroi-Yankuntjatjara Working Group (KYWG) site officer Ralph Hampton in attendance. Representatives are listed in Table 5 below.

Invitation was extended to Metropolitan Local Aboriginal Land Council numerous times in the weeks prior to the survey, however, they were unable to attend.

Table 5 – RAP survey attendees

Group	Representative
Urbis	Andrew Crisp
Kamilaroi-Yankuntjatjara Working Group	Ralph Hampton

The study area was walked on foot with opportunistic inspection of areas of surface exposure. Zero landforms identified as having a potential for containing a subsurface archaeological deposit were identified. The archaeological survey was undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a).

In accordance with the Code of Practice the study area was surveyed according to survey units, landforms, and landscapes. All survey units are shown in Figure 14 and Figure 15.

The field survey was undertaken in generally clear, sunny conditions with some cloud present in the morning. The field survey was undertaken via pedestrian transects with individuals distanced at approximately 5-10m where possible, and archaeologists with GPS trackers on either end of the group.

The coverage of the field survey as shown by GPS data is represented in Figure 14 below.

Generally, visibility was low across the subject area due to grass and vegetation coverage, with visibility limited to areas of exposure resulting from disturbance including paths and tracks, dam embankments and edges, and localised erosion scours at the base of mature trees (caused by cattle movement/impacts).

During the course of the survey disturbance was noted (Figure 16). No previously unidentified sites were recorded as a result of the survey.



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SURVEY TRANSECTS
Ivanhoe Estate
Fraser's Property Australia

0 100 M

Project No: P0032333

Project Manager: Andrew Crisp

Subject Area Track 1 Track 2

Figure 14 – Archaeological Survey Tracks

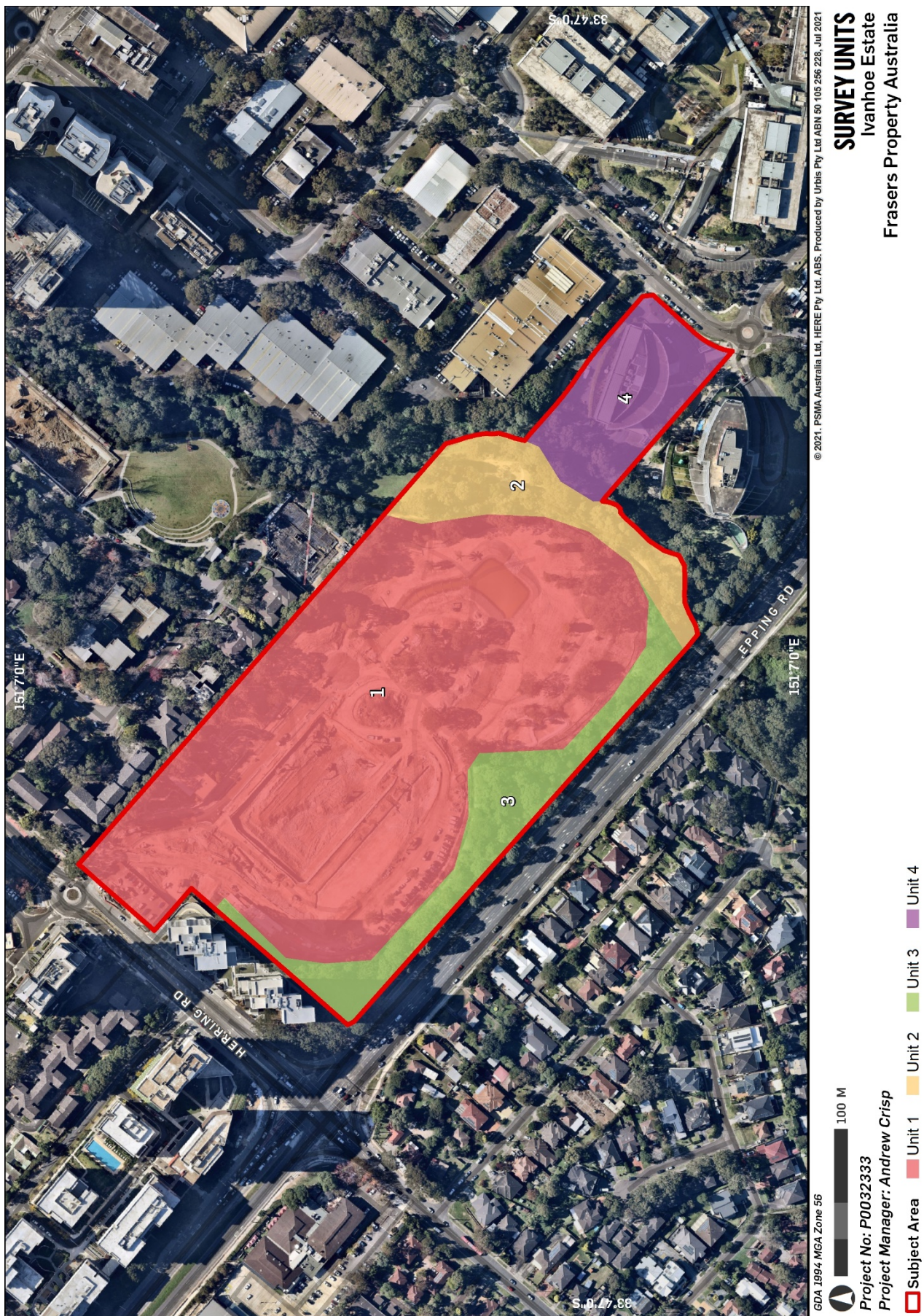


Figure 15 – Archaeological Survey Units

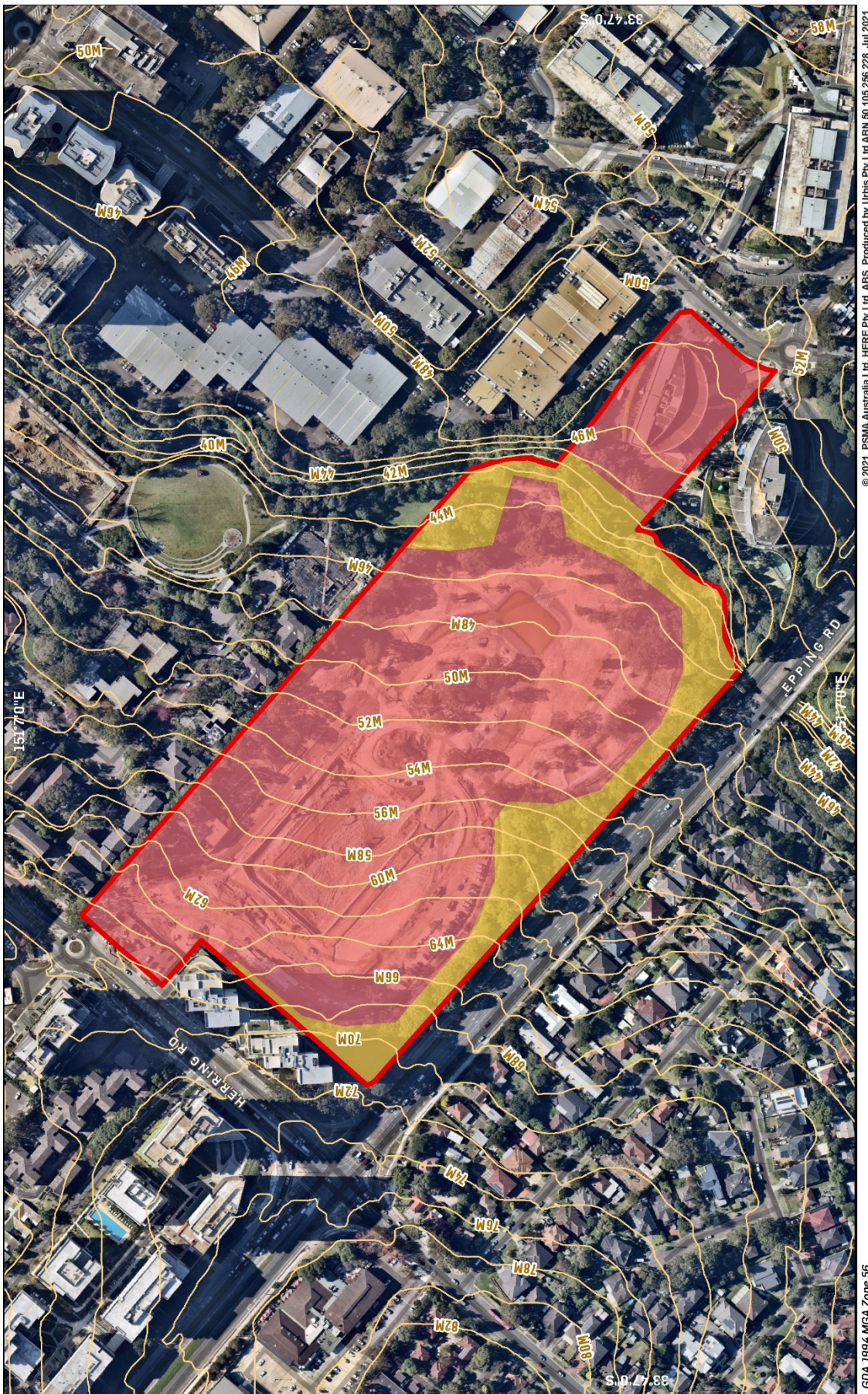


Figure 16 – Disturbance within the Subject Area

3.3.1. Survey Unit 1

Survey Unit 1 (SU1) incorporates the majority of Lot 1 DP 1262209 from Herring Road to the west, property boundary to the north, public pathway and creek alignment in the east and truncated sandstone bedrock to the south.

The entirety of SU1 has been impacted by in the form by bulk earthworks, demolition, construction and piling (Figure 17 to Figure 26) under Consent granted by the Minister for Planning and Public Spaces on 30 April 2020 for the Ivanhoe Estate - Concept Masterplan (SSD-8707) and for the first stage of physical works (SSD-8903) referred to as Stage 1.

The entirety of SU1 is considered to contain nil subsurface archaeological potential. No Aboriginal sites were identified in SU1.



Figure 17 – View from northwest corner of SU1, from Herring Road intersection. Aspect southeast



Figure 18 – Piling underway in northwest corner of SU1. Aspect north



Figure 19 – View southeast across axis of site showing multistorey pit in the centre of SU1 and extensive impact in the immediate surrounds



Figure 20 – Indicative level of impact from bulk earthworks in SU1. Aspect northeast



Figure 21 – Site Officer and client Engineer inspecting truncated and levelled ground in southeastern portion of SU1



Figure 22 – Temporary drainage channel excavated in eastern portion of SU1. Aspect east



Figure 23 – View southeast across axis of site showing multistorey pit in the centre of SU1



Figure 24 – Temporary drainage channel excavated in eastern portion of SU1. Aspect northeast



Figure 25 – Last remaining housing commission dwelling (mid-demolition) from Ivanhoe Estate



Figure 26 – Remnant residential roadway from Ivanhoe Estate in eastern portion of SU1

3.3.2. Survey Unit 2

Survey Unit 2 (SU2) incorporates the eastern most portion of Lot 1 DP 1262209 from Epping Road to the south, creek line to the east, property boundary to the north and boundary of current construction zone to the west.

SU2 contains a highly modified flat and creek line with impacts from subsurface utility alignments (stormwater and sewerage), pedestrian walkways, small concrete skatepark. The creek alignment itself has been significantly impacted within SU2 through attempts to semi-formalise the drainage line through concreting and artificial modifications.

SU2 was heavily grassed with some dense regrowth vegetation/undergrowth. Visibility in SU2 was low, at approximately 2-5%.

The entirety of SU2 is considered to contain nil to low subsurface archaeological potential. No Aboriginal sites were identified in SU2.



Figure 27 – Subsurface utility. Aspect east



Figure 28 – Subsurface utility. Aspect north



Figure 29 – Stormwater outlet from the prior Ivanhoe Estate. Aspect north

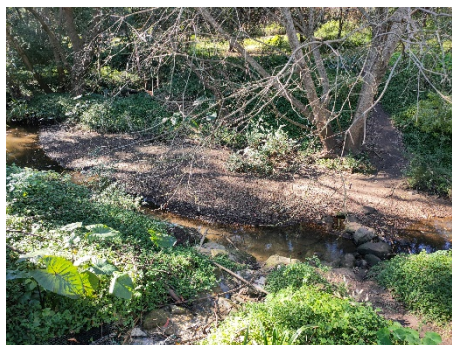


Figure 30 – Impacted and modified creek alignment. Aspect east



Figure 31 – Extant skatepark on northern portion of SU2. Aspect northeast

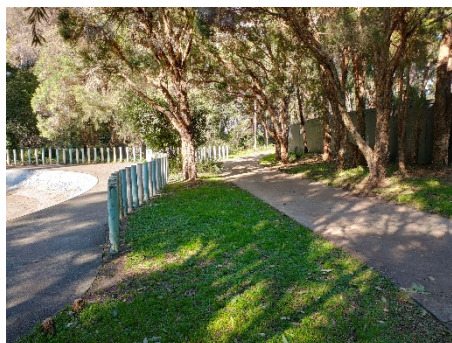


Figure 32 – Skatepark to the north, pedestrian pathway in centre and boundary hoarding between SU1 and SU2 to the south. Aspect east

3.3.3. Survey Unit 3

Survey Unit 3 (SU3) incorporates the southernmost portion of Lot 1 DP 1262209 between the truncated construction zone of SU1 to the north and the Epping Road easement to the south.

SU3 entirely consisted of moderately impacted hillslope landform with skeletal topsoil and small to medium size regrowth vegetation. This portion of the subject area was previously crisscrossed with formal pedestrian pathways, steps, stairways and benches to allow access to the prior Ivanhoe Estate from the Epping Road easement.

SU3 was largely inaccessible due to dense undergrowth. Visibility in SU3 was low, at approximately 5%.

The entirety of SU3 is considered to contain nil to low subsurface archaeological potential. No Aboriginal sites were identified in SU3.



Figure 33 – View south from SU1 at the edge of SU3. Truncation of landform from previous development as well as clear section showing skeletal topsoil onto eroding sandstone bedrock



Figure 34 – View south east from SU1 at the edge of SU3. Truncation of landform from previous development as well as clear section showing skeletal topsoil onto eroding sandstone bedrock



Figure 35 – Survey team accessing SU3



Figure 36 – Indicative shot of dense understorey and low visibility in SU3

3.3.4. Survey Unit 4

Survey Unit 4 (SU4) includes Lot 101 DP 1263727.

Access was restricted during the time of the survey and inspection of the opposite side of the creek line was attempted via SU2.

In consultation with Ralph Hampton (KYWG) during the survey visual inspection of this portion of the subject area (SU4) was determined to be redundant due to the clear and extensive modern impacts from the construction of the multistorey office building with carpark and formal vehicle access road (2-4 Lyonpark Road).

The entirety of SU4 is considered to contain nil subsurface archaeological potential. No Aboriginal sites were identified in SU4.

3.4. ARCHAEOLOGICAL POTENTIAL

3.4.1. Predictive Model

The *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* requires an appropriate predictive model be used to estimate the nature and distribution of evidence of Aboriginal land use in a subject area when undertaking an ACHA. A predictive model should consider variables that may influence the location, distribution and density of sites, features or artefacts within a subject area. Variables typically relate to the environment and topography, such as soils, landscape features, slope, landform and cultural resources.

The general process archaeologists employ to determine the likelihood of any particular site type (artefact scatter, shelter, midden etc) occurring within a given subject area requires the synthesis of information for general distribution of archaeological sites within the wider area including:

- Detailed analysis of previous archaeological investigations within the same region.
- Presence or absence of landscape features that present potential for archaeological resources (human occupation, use) such as raised terraces adjacent to permeant water.
- Analysis of the geology and soil landscape within the subject area which allows for a determination to be made of the type of raw material that would have been available for artefact production (silcrete, tuff, quartz etc) and the potential for the accumulation of archaeological resource within the subject area.
- Investigation of and determination of the level of disturbance/historical land use within the subject area which may impact on or remove entirely any potential archaeological material.

An indicative process of determining the likelihood of a given site occurring within a subject area is provided in Table 6 below.

Table 6 – Indicative process for determining the potential presence of a site

Likelihood	Indicative subject area context	Indicative action
High	Low level of ground disturbance in combination with at least one archaeologically sensitive landscape feature or Aboriginal object (either registered or newly identified) within the subject area.	Detailed archaeological investigation including but not limited to survey, test excavation and potentially (depending on density and/or significance of archaeological deposit) salvage excavation.
Moderate	Moderate level of ground disturbance in combination with at least one archaeologically sensitive landscape feature or Aboriginal object (either registered or newly identified) within the subject area.	Detailed archaeological investigation including but not limited to survey, test excavation and potentially (depending on density and/or significance of archaeological deposit) salvage excavation.
Low	High level of ground disturbance in combination with at least one archaeologically sensitive landscape feature or Aboriginal object (either registered or newly identified) within the subject area.	Employ chance finds procedure and works can continue without further archaeological investigation.
Nil	Complete ground disturbance (i.e. complete removal of natural soil landscape); or no archaeologically sensitive landscape features and no archaeological sites within subject area.	Employ chance finds procedure and works can continue without further archaeological investigation.

3.4.2. Typical Site Types

A range of Aboriginal site types are known to occur within New South Wales. Site types that are typically encountered in the Cumberland Plain are described below.

Art sites: can occur in the form of rock engravings or pigment on sandstone outcrops or within shelters. An engraving is some form of image which has been pecked or carved into a rock surface. Engravings typically vary in size and nature, with small abstract geometric forms as well as anthropomorphic figures and animals also depicted. In the Sydney region engravings tend to be located on the tops of Hawkesbury Sandstone ridges where vistas occur. Pigment art is the result of the application of material to a stone to leave a distinct impression. Pigment types include ochre, charcoal and pipeclay. Pigment art within the Sydney region is usually located in areas associated with habitation and sustenance.

Artefact Scatters/Camp Sites: represent past Aboriginal subsistence and stone knapping activities and include archaeological remains such as stone artefacts and hearths. This site type usually appears as surface scatters of stone artefacts in areas where vegetation is limited, and ground surface visibility increases. Such scatters of artefacts are also often exposed by erosion, agricultural events such as ploughing, and the creation of informal, unsealed vehicle access tracks and walking paths. These types of sites are often located on dry, relatively flat land along or adjacent to rivers and creeks. Camp sites containing surface or subsurface deposit from repeated or continued occupation are more likely to occur on elevated ground near the most permanent, reliable water sources. Flat, open areas associated with creeks and their resource-rich surrounds would have offered ideal camping areas to the Aboriginal inhabitants of the local area.

Bora / Ceremonial Sites: are locations that have spiritual or ceremonial values to Aboriginal people. Aboriginal ceremonial sites may comprise natural landforms and, in some cases, will also have archaeological material. Bora grounds are a ceremonial site type, usually consisting of a cleared area around one or more raised earth circles, and often comprised of two circles of different sizes, connected by a pathway, and accompanied by ground drawings or mouldings of people, animals or deities, and geometrically carved designs on the surrounding trees.

Burials: of the dead often took place relatively close to camp site locations. This is due to the fact that most people tended to die in or close to camp (unless killed in warfare or hunting accidents), and it is difficult to move a body long distance. Soft, sandy soils on, or close to, rivers and creeks allowed for easier movement of earth for burial; and burials may also occur within rock shelters or middens. Aboriginal burial sites may be marked by stone cairns, carved trees or a natural landmark. Burial sites may also be identified through historic records or oral histories.

Contact Sites: are most likely to occur in locations of Aboriginal and settler interaction, such as on the edge of pastoral properties or towns. Artefacts located at such sites may involve the use of introduced materials such as glass or ceramics by Aboriginal people or be sites of Aboriginal occupation in the historical period.

Grinding Grooves: are the physical evidence of tool making or food processing activities undertaken by Aboriginal people. The manual rubbing of stones against other stones creates grooves in the rock; these are usually found on flat areas of abrasive rock such as sandstone. They may be associated with creek beds, or water sources such as rock pools in creek beds and on platforms, as water enables wet-grinding to occur.

Isolated Finds: represent artefactual material in singular, one off occurrences. Isolated finds are generally indicative of stone tool production, although can also include contact sites. Isolated finds may represent a single item discard event or be the result of limited stone knapping activity. The presence of such isolated artefacts may indicate the presence of a more extensive, in situ buried archaeological deposit, or a larger deposit obscured by low ground visibility. Isolated artefacts are likely to be located on landforms associated with past Aboriginal activities, such as ridgelines that would have provided ease of movement through the area, and level areas with access to water, particularly creeks and rivers.

Middens: are indicative of Aboriginal habitation, subsistence and resource extraction. Midden sites are expressed through the occurrence of shell deposits of edible shell species often associated with dark, ashy soil and charcoal. Middens often occur in shelters, or in eroded or collapsed sand dunes. Middens occur along the coast or in proximity to waterways, where edible resources were extracted. Midden may represent a single meal or an accumulation over a long period of time involving many different activities. They are also often associated with other artefact types.

Modified Trees: are evidence of the utilisation of trees by Aboriginal people for various purposes, including the construction of shelters (huts), canoes, paddles, shields, baskets and bowls, fishing lines, cloaks, torches and bedding, as well as being beaten into fibre for string bags or ornaments. The removal of bark exposes the

heart wood of the tree, resulting in a scar. Trees may also have been scarred in order to gain access to food resources (e.g. cutting toeholds so as to climb the tree and catch possums or birds), or to mark locations such as tribal territories. Such scars, when they occur, are typically described as scarred trees. These sites most often occur in areas with mature, remnant native vegetation. The locations of scarred trees often reflect an absence of historical clearance of vegetation rather than the actual pattern of scarred trees. Carved trees are different from scarred trees, and the carved designs may indicate totemic affiliation; they may also have been carved for ceremonial purposes or as grave markers.

Potential Archaeological Deposits (PADs): are areas where there is no surface expression of stone artefacts, but due to a landscape feature there is a strong likelihood that the area will contain buried deposits of stone artefacts. Landscape features which may feature in PADs include proximity to waterways, particularly terraces and flats near third order streams and above; ridge lines, ridge tops and sand dune systems.

Shelters: are places of Aboriginal habitation. They take the form of rock overhangs which provided shelter and safety to Aboriginal people. Suitable overhangs must be large and wide enough to have accommodated people with low flooding risk. Due to the nature of these sites, with generic rock overhangs common particularly in areas with an abundance of sandstone, their use by Aboriginal people is generally confirmed through the correlation of other site types including middens, art, PAD and/or artefactual deposits.

3.4.3. Assessment of Archaeological Potential

The likelihood of the site types described in 3.4.2 above occurring within the present subject area is assessed in Table 7 below.

Table 7 – Predictive Model

Site type	Assessment	Potential
Art	The subject area does not include sandstone resources conducive to art production (see Section 3.2.3).	Nil
Artefact Scatters / Campsites	Part of the subject area is within 200m of Shrimptons Creek (see Section 3.2.2). A high level of ground disturbance across most of the subject area significantly reduces archaeological potential (see Section 3.2.5). Shallow soils in areas of low to moderate ground disturbance also reduces archaeological potential (see Section 3.2.5).	Nil – Low
Bora / Ceremonial	A high level of ground disturbance across most of the subject area significantly reduces archaeological potential (see Section 3.2.5). Shallow soils in areas of low to moderate ground disturbance also reduces archaeological potential (see Section 3.2.5).	Nil
Burial	The subject area does not include soft sandy soil (see Section 3.2.3). A high level of ground disturbance significantly reduces archaeological potential across most of the subject area (see Section 3.2.5). Shallow soils in areas of low to moderate ground disturbance also reduces archaeological potential (see Section 3.2.5).	Nil – Low

Site type	Assessment	Potential
Contact site	The subject area is at the margins of early European settlement where contact was likely (see Section 3.2.5). A high level of ground disturbance across most of the subject area significantly reduces archaeological potential (see Section 3.2.4). Shallow soils in areas of low to moderate ground disturbance also reduces archaeological potential (see Section 3.2.5).	Nil
Grinding Grooves	The subject area does not include sandstone resources conducive to grinding groove production (see Section 3.2.3).	Nil
Isolated Finds	Part of the subject area is within 200m of Shrimptons Creek (see Section 3.2.2). A high level of ground disturbance across most of the subject area significantly reduces archaeological potential (see Section 3.2.5). Shallow soils in areas of low to moderate ground disturbance also reduces archaeological potential (see Section 3.2.5).	Nil – Low
Midden	Part of the subject area is within 200m of Shrimptons Creek (see Section 3.2.2). A high level of ground disturbance across most of the subject area significantly reduces archaeological potential (see Section 3.2.4). Shallow soils in areas of low to moderate ground disturbance also reduces archaeological potential (see Section 3.2.5).	Nil
Modified Trees	The subject area does not appear to include any trees of sufficient age to have been culturally modified (see Section 3.2.4).	Nil
PAD	Part of the subject area is within 200m of Shrimptons Creek (see Section 3.2.2). A high level of ground disturbance across most of the subject area significantly reduces archaeological potential (see Section 3.2.5). Shallow soils in areas of low to moderate ground disturbance also reduces archaeological potential (see Section 3.2.5).	Nil – Low
Shelters	The subject area does not include any visible overhanging stone outcrops (see Section 3.2.1).	Nil

3.5. SUMMARY

The archaeological, landscape and historical ground disturbance assessments of the subject area are summarised as follows:

- No Aboriginal objects or places are registered within the curtilage of the subject area.
- Within the regional context of the subject area, registered Aboriginal sites tend to be located near waterways.
- Archaeological reports from other sites near the present subject area indicate that archaeological potential may be significantly reduced by historical ground disturbing activity, despite proximity to waterways.

- A due diligence assessment (EcoLogical, 2017) relating directly to the subject area indicates that the portion of the subject area west of Shrimptons Creek is highly disturbed and has low to nil archaeological potential.
- The subject area does not include any topographic features that are indicative of archaeological potential.
- The majority of subject area has been subjected to a high degree of ground disturbance, which is likely to significantly reduce archaeological potential.
- The shallow natural soil profile in areas of moderate ground disturbance (SU3) would reduce archaeological potential in those areas.
- The entirety of SU1 is considered to contain nil subsurface archaeological potential. No Aboriginal sites were identified in SU1.
- The entirety of SU2 is considered to contain nil to low subsurface archaeological potential. No Aboriginal sites were identified in SU2.
- The entirety of SU3 is considered to contain nil to low subsurface archaeological potential. No Aboriginal sites were identified in SU3.
- The entirety of SU4 is considered to contain nil subsurface archaeological potential. No Aboriginal sites were identified in SU4.
- Based on the above considerations, the archaeological potential of the subject area is determined to be nil to low.

4. ABORIGINAL COMMUNITY CONSULTATION

In administering its statutory functions under Part 6 of the *NSW National Parks and Wildlife Act 1974*, the Department of Premier and Cabinet (DPC) requires that Proponent consult with Aboriginal people about the Aboriginal cultural heritage values (cultural significance) of Aboriginal objects and/or places within any given development area in accordance with Clause 80c of the *NSW National Parks and Wildlife Regulation, 2009*.

The DPC maintains that the objective of consultation with Aboriginal communities about the cultural heritage values of Aboriginal objects and places is to ensure that Aboriginal people have the opportunity to improve ACHA outcomes by (DECCW 2010a):

- Providing relevant information about the cultural significance and values of Aboriginal objects and/or places.
- Influencing the design of the method to assess cultural and scientific significance of Aboriginal objects and/or places.
- Actively contributing to the development of cultural heritage management options and recommendations for any Aboriginal objects and/or places within the proposed subject area.
- Commenting on draft assessment reports before they are submitted by the Proponent to the DPC.

Consultation in line with the Consultation Requirements (DECCW 2010) is a formal requirement where a Proponent is aware that their development activity has the potential to harm Aboriginal objects or places. The DPC also recommends that these requirements be used when the certainty of harm is not yet established but a proponent has, through some formal development mechanism, been required to undertake a cultural heritage assessment to establish the potential harm their proposal may have on Aboriginal objects and places.

The Consultation Requirements outline a four-stage consultation process that includes the following:

- Stage 1 – Notification of project proposal and registration of interest.
- Stage 2 – Presentation of information about the proposed project.
- Stage 3 – Gathering information about the cultural significance.
- Stage 4 – Review of draft cultural heritage assessment report.

The document also outlines the roles and responsibilities of the DPC, Registered Aboriginal Parties (RAPs) including Local and State Aboriginal Land Councils, and proponents throughout the consultation process.

To meet the requirements of consultation it is expected that proponents will:

- Bring the RAPs, or their nominated representatives, together and be responsible for ensuring appropriate administration and management of the consultation process.
- Consider the cultural perspectives, views, knowledge and advice of the RAPs involved in the consultation process in assessing cultural significance and developing any heritage management outcomes for Aboriginal objects(s) and/or places(s).
- Provide evidence to the DPC of consultation by including information relevant to the cultural perspectives, views, knowledge and advice provided by the RAPs.
- Accurately record and clearly articulate all consultation findings in the final cultural heritage assessment report.
- Provide copies of the cultural heritage assessment report to the RAPs who have been consulted.

The consultation process undertaken to seek active involvement from relevant Aboriginal representatives for the project followed the current NSW statutory guideline, namely, the Consultation Requirements. Section 1.3 of the Consultation Requirements describes the guiding principles of the document. The principles have been derived directly from the principles section of the *Australian Heritage Commission's Ask First: A guide to respecting Indigenous heritage places and values* (Australian Heritage Commission 2002).

The following outlines the process and results of the consultation conducted during this assessment to ascertain and reflect the Aboriginal cultural heritage values of the subject area.

4.1. STAGE 1: NOTIFICATION OF PROJECT PROPOSAL AND REGISTRATION OF INTEREST

The aim of Stage 1 is to identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the subject area.

4.1.1. Government Organisation Contact

A search of the National Native Title Tribunal (NNTT) register was undertaken on 5 March 2021. The search identified no registered Native Title or Native Title claims within the subject area. The NNTT was also contacted by email on 5 March 2021 to request a formal search of the NNTT Register. A reply was received on 9 March 2021 indicating that there are no Native Title Determination Applications, Determinations of Native Title, or Indigenous Land Use Agreements over the subject area.

To identify Aboriginal people who may be interested in registering as Aboriginal parties for the project, the organisations stipulated in Section 4.1.2 of the Consultation Guidelines were contacted (refer to Table 8). The template for the emails sent to each organisation is included in Appendix C. A total of 45 Aboriginal groups and individuals with an interest in the subject area were identified following this stage. These groups were contacted, with further information presented at Section 4.1.2 below.

Table 8 – Contacted organisations

Organisation	Date Notification Sent	Date Response Received
Office of the Registrar, Aboriginal Land Rights Act 1983	12 March 2021	n/a
Heritage NSW, Department of Premier and Cabinet	12 March 2021	19 March 2021
NTS Corp	12 March 2021	n/a
Metropolitan Local Aboriginal Land Council	12 March 2021	n/a
Local Land Services, Greater Sydney	12 March 2021	n/a
City of Ryde Council	12 March 2021	n/a

4.1.2. Notification of Project

In accordance with Section 4.1.3 of the Consultation Guidelines, letters were sent to the 45 Aboriginal groups and individuals via email or post (depending on the method identified by each group) to notify them of the proposed project. A total of 41 were sent via email on 22 March 2021, with four sent by express post on 1 April 2021. The letters included a brief introduction to the project and the project location and set a deadline for response of 21 April 2021, providing more than the 14 days to register an interest required by the Consultation Requirements. A copy of the letter template is included in Appendix C.

In addition, an advertisement was placed in one local newspaper, The Koori Mail, also in accordance with Section 4.1.3 of the Consultation Guidelines. The advertisement was published in the 7 April 2021 edition, and registration was open until 21 April 2021, providing 14 days to register an interest in accordance with the Consultation Requirements. A copy of the advertisement is included in Appendix C.

4.1.3. Registration of Interest

A total of nine groups were registered for the project as a result of this phase (Table 9). Six groups registered by the deadline of 21 April 2021 and a further two (A1 Indigenous Heritage and Butucarbin Aboriginal Corporation) registered after the deadline. Acknowledgement emails or telephone calls were made by Urbis to all respondents to confirm registration had been received. The Metropolitan Local Aboriginal Land Council was registered for the project despite no response being received.

In accordance with Section 4.1.6 of the Consultation Guidelines, the list of Registered Aboriginal Parties (RAPs) was provided to the DPC and the Metropolitan Local Aboriginal Land Council on 7 May 2021 (see Appendix C).

Table 9 – Stage 1 Consultation – Registration of Interest

Organisation/Individual	Contact Person
Metropolitan Local Aboriginal Land Council	Nathan Moran
A1 Indigenous Services	Carolyn Hickey
Butucarbin Aboriginal Corporation	Lowanna Gibson
Darug Custodian Aboriginal Corporation	Justine Coplin
Didge Ngunawal Clan	Lilly Carroll & Paul Boyd
Gulaga	Wendy Smith
Kamilaroi Yankuntjatjara Working Group	Phil Khan
Ngambaa Cultural Connections	Kaarina Slater
Tocomwall	Danny Franks

4.2. STAGE 2: PRESENTATION OF INFORMATION ABOUT THE PROJECT

The aim of Stage 2 is to provide registered Aboriginal parties with information about the scope of the proposed project, and the proposed cultural heritage assessment process. A Stage 2/3 information pack was sent to registered Aboriginal parties via email on 7 May 2021. The information pack was prepared as a combination of Stage 2 and 3 of the Consultation Guidelines, and included the following information:

- Project overview, location and purpose.
- Proposed works.
- Project history.
- Brief archaeological and environmental background.
- Protocol of gathering information on cultural heritage significance.
- Request for comment on methodology and recommendations for site investigation, and request for any cultural information the respondent wished to share.

A response to the Stage 2/3 information pack was requested by 4 June 2021, being 28 days from the date of the communication.

Each of the above communications are included in Appendix C of this report.

4.3. STAGE 3: GATHERING INFORMATION ABOUT THE PROPOSED PROJECT

Stage 3 is concerned with gathering feedback on a project, proposed methodologies, and obtaining any cultural information that registered Aboriginal parties wish to share. This may include ethno-historical information, or identification of significant sites or places in the local area.

4.3.1. Site inspection and meeting

An inspection of the subject area and meeting with RAP was held on Friday 25th June 2021. The site inspection and meeting was conducted by Andrew Crisp (Urbis Senior Consultant, Archaeology). The RAP present at the site inspection and meeting are listed in Table 10. Invitation was extended to Metropolitan Local Aboriginal Land Council numerous times in the weeks prior to the survey, however, they were unable to attend.

Table 10 – RAPs in attendance at site inspection and meeting

Group	Representative
KYWG	Ralph Hampton

The purpose of the site inspection and meeting was to conduct a thorough briefing with the RAP about the proposed development and to discuss the proposed works, to conduct a walkover of the subject area, to discuss the information provided in the Stage 2/3 document provided on 7th May 2021 and to discuss potential archaeological mitigation strategies. Refer to Section 3.3 for survey results.

RAPs were provided the opportunity to provide verbal feedback on site and also to submit written information via email.

4.3.2. RAP Responses

Two responses were received to the Stage 2 and 3 information pack. These responses are included in Appendix C and addressed in Table 11 below.

Table 11 – RAP responses to the Stage 2/3 Information Pack

RAP	Response	Urbis Response
Gulaga	<i>"Thank you for providing this information. Gulaga supports the methodology and makes no comment at this stage"</i>	Acknowledged and included in consultation log.
Kamilaroi Yankuntjatjara Working Group	<i>"Thank you for your ACHA for Ivanhoe Estate stage 2/3. The study area is highly significant to the Aboriginal people. The study area is important to us Aboriginal people and as a last chance we should excavate the study area. We as Aboriginal people hold a deep connection to the land & we follow a lore that is known to us. The Aboriginal people have looked after this land for tens of thousands of years and continue to do so. In saying that we would like to agree to your recommendations and we support your ACHA. I would also like to take the time to mention Aboriginal Cultural interpretation for the development or within the building. Some examples are native gardens, artefact display, artwork, and signage, please do not hesitate to contact us about interpretation plan. We should also always be mindful of burials as we do not know where they are located."</i>	Acknowledged and included in consultation log. Fraser have engaged with The Fulcrum Agency to address the Designing with Country aspect of the project. RAP details for the ACHAR have been provided for ongoing input. Given the nil-low archaeological potential across the subject area the Unexpected Finds Protocols will be followed during all proposed works.

4.4. STAGE 4: REVIEW OF DRAFT ACHAR

The aim of Stage 4 is to prepare and finalise an ACHAR with input from registered Aboriginal Parties.

A draft of the present ACHAR was sent to RAPs via email on the 9th July 2021 with comment on the Draft ACHAR requested prior to close of business 6th August 2021. It is noted that the time allowed for comment should reflect the size and complexity of the project.

A single response was received to the Stage 4 Draft ACHAR. This response is included in Appendix C and addressed in Table 12 below.

Table 12 – RAP responses to the Stage 4 Draft ACHAR

RAP	Response	Urbis Response
Kamilaroi Yankuntjatjara Working Group (KYWG)	<p><i>Thank you for your ACHAR for proposed site Ivanhoe Estate. KYWG aim to conserve and protect cultural heritage.</i></p> <p><i>We look to the sky for guidance and follow the stories that it holds. We live off the land and we respect our mother earth as she provides for us, we follow the water ways to drink from. Not so long ago we hunted and lived off the land, we camped close by to water and carried out daily activities. We lived a peaceful life with lora and kinship and order, one with mother earth and our environment. We are connected to all types of life; we follow the seasons and move accordingly. We were colonized and assimilated to the white man's way, yet our culture survived and lived the Aboriginal way of life still to this day.</i></p> <p><i>The study area is highly significant due to it being in close proximity to water ways, for this reason we would like to push for monitoring of the any works, done by an Aboriginal person as we don't believe that the construction works can identify Aboriginal objects.</i></p> <p><i>One induction is not enough train and they may not have the time to be aware of Aboriginal finds.</i></p> <p><i>We also should be mindful of our burials as they hold deep meaning to us and we have been striped of the location of them.</i></p>	<p>Acknowledged and included in consultation log.</p> <p>Given the nil-low archaeological potential across the subject area archaeological monitoring is not warranted and the Unexpected Finds Protocols will be followed during all proposed works.</p>

4.5. SUMMARY

The outcomes of the consultation process with RAPs are summarised as follows:

- There was limited RAP feedback received during the ACHA process
- Kamilaroi Yankuntjatjara Working Group (KYWG) consider the subject area culturally significant due to landscape features such as proximity to water and connection to Country.
- KYWG recommend that Aboriginal cultural interpretation for the development be implemented such as native gardens, artwork and signage.
- KYWG have pushed for monitoring during the proposed works, however, due to the nil-low archaeological potential across the subject area archaeological monitoring is not warranted and the Unexpected Finds Protocols will be followed during all proposed works

5. CULTURAL HERITAGE VALUES AND STATEMENT OF SIGNIFICANCE

The following is an assessment and discussion of the cultural significance of the subject area, made in consultation with the RAPs. The assessment follows principles and procedures outlined in the Burra Charter the Assessment Guidelines.

5.1. ASSESSMENT FRAMEWORK FOR HERITAGE SIGNIFICANCE

The Burra Charter defines cultural significance as being derived from the following values: social or cultural value, historic value, scientific value and aesthetic value. Aesthetic, historic, scientific and social values are commonly interrelated. All assessments of heritage values occur within a social and historic context. Therefore, all potential heritage values will have a social component.

Assessment of each value should be graded in terms that allow the significance to be described and compared (e.g. high, moderate, or low). In applying these criteria, consideration should be given to:

- Research potential: *does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?*
- Representativeness: *how much variability (outside and/or inside the subject area) exists, what is already conserved, how much connectivity is there?*
- Rarity: *is the subject area important in demonstrating a distinctive way of life, custom, process, land-use, function or design no longer practised? Is it in danger of being lost or of exceptional interest?*
- Education potential: *does the subject area contain teaching sites or sites that might have teaching potential?*

Heritage significance is assessed by considering each cultural or archaeological site against the significance criteria set out in the Assessment Guidelines. The Assessment Guidelines require that the assessment and justification in a statement of significance includes a discussion of whether any value meets the following criteria:

- Does the subject area have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons? – social value.
- Is the subject area important to the cultural or natural history of the local area and/or region and/or state? – historic value.
- Does the subject area have potential to yield information that will contribute to an understanding of the cultural or natural history of the local area and/or region and/or state? – scientific (archaeological) value.
- Is the subject area important in demonstrating aesthetic characteristics in the local area and/or region and/or state? – aesthetic value.

5.2. ASSESSMENT OF HERITAGE VALUES

The following assessment of the social or cultural, historic, scientific and aesthetic values of the subject area has been prepared in accordance with the Assessment Guidelines.

In acknowledgment that the Aboriginal community themselves are in the best position to identify heritage values, the assessment is informed by consultation with the Aboriginal community. Consultation with Aboriginal people should provide insight into past events. The RAPs were invited to provide comment and input into this ACHAR and to the assessment of cultural heritage values for the subject area, as documented in this report. Any culturally sensitive values identified have not been explicitly included in the report or made publicly available. Any such values would be documented and lodged with the knowledge holder providing the information.

5.2.1. Social or cultural value

Social or cultural value encompasses the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment for Aboriginal people. Social or cultural value is how people express their connection with a place and the meaning that place has for them. Places of social or cultural value have

associations with contemporary community identity. These places can have associations with tragic or warmly remembered experiences, periods, or events. Communities can experience a sense of loss should a place of social or cultural value be damaged or destroyed. Social or cultural values can therefore only be identified through consultation with Aboriginal people.

Kamilaroi Yankuntjatjara Working Group (KYWG) consider the subject area culturally significant due to landscape features such as proximity to water and connection to Country. The cultural value of the subject area is considered moderate.

5.2.2. Historic value

Historic value encompasses the history of aesthetics, science and society. A place may have historic value because it is associated with a historic figure, event, phase or activity in an Aboriginal community. The significance of a place 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. Places may also have 'shared' historic values with other (non-Aboriginal) communities.

Places of post-contact Aboriginal history have generally been poorly recognised in investigations of Aboriginal heritage. Consequently, the Aboriginal involvement and contribution to important regional historical themes is often missing from accepted historical narratives. For this reason, it is often necessary to collect oral histories along with archival or documentary research to gain a sufficient understanding of historic values.

The subject area is not considered to represent any element of historic value. The historic value of the subject area is considered nil to low.

5.2.3. Scientific (archaeological) value

Scientific value relates to the importance of a landscape, area, place or object because of its rarity, representativeness and the extent to which it may contribute to further understanding and information (ICOMOS, 1988). Information about scientific value will be gathered through any archaeological investigation undertaken. Archaeological investigations must be carried out according to the Code of Practice.

Zero Aboriginal Sites or areas of archaeological potential have been identified within the subject area. The scientific value of the subject area is considered nil to low.

5.2.4. Aesthetic value

Aesthetic value of a place relates to the sensory, scenic, architectural and creative aspects of a place. It may include visual aspects, such as form, scale, colour, texture and material of the fabric, and the smells and sounds associated with the place and its use (ICOMOS, 1988).

It is evident that the subject area is highly disturbed due to land clearance, agriculture, construction of buildings and, in particular, cut and fill earthworks. The present visual appearance and other sensory aspects of the subject area are unlikely to resemble those of the landscape of the local area as it existed prior to European contact. It is therefore considered that the subject area has low aesthetic value insofar as it relates to Aboriginal cultural heritage.

5.3. ASSESSMENT OF CULTURAL HERITAGE SIGNIFICANCE AND VALUES

An assessment of cultural heritage significance and values incorporates a range of values which may vary for different individual groups and may relate to both the natural and cultural characteristics of places or sites. Cultural significance and Aboriginal cultural views can only be determined by the Aboriginal community using their own knowledge of the area and any sites present, and their own value system. All Aboriginal heritage evidence tends to have some contemporary significance to Aboriginal people, because it represents an important tangible link to their past and to the landscape.

Consultation with members of the local Aboriginal community (project RAPs) was undertaken to identify the level of spiritual/cultural significance of the subject area and its components. In acknowledgment that the Aboriginal community themselves are in the best position to identify levels of cultural significance, the project RAPs were invited to provide comment and input into this ACHAR and to the assessment of cultural heritage significance and values presented therein.

Kamilaroi Yankuntjatjara Working Group (KYWG) consider the subject area culturally significant due to landscape features such as proximity to water and connection to Country. The cultural value of the subject area is considered moderate.

No further specific cultural heritage significance associated with the subject was identified by the RAPs for this project.

5.4. ASSESSMENT OF SCIENTIFIC (ARCHAEOLOGICAL) SIGNIFICANCE

In accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, and in consultation with representatives of the local Aboriginal community, the following assessment of the scientific (archaeological) significance of identified sites within the subject area has been prepared.

This assessment has determined that there are no Aboriginal objects or places within or proximity to the subject area. Furthermore, as a result of the high level of disturbance there is nil to low potential for subsurface archaeological material to remain within the subject area.

The subject area is considered to contain low scientific (archaeological) significance.

The subject area is considered to contain moderate cultural significance.

6. IMPACT ASSESSMENT

The following is an assessment of the impact of the proposed development on the significance of the Aboriginal heritage values within the subject area.

6.1. POTENTIAL HARM

The potential harm to cultural heritage arising from the proposal may relate to the demolition, excavation and construction phases. Harm can be direct or indirect, defined by the Assessment Guidelines as:

- Direct harm – may occur as the result of any activity which disturbs the ground including, but not limited to, site preparation activities, installation of services and infrastructure, roadworks, excavation, flood mitigation measures.
- Indirect harm – may affect sites or features located immediately beyond or within the area of the proposed activity. Examples include, but are not limited to, increased impact on art in a shelter from increased visitation, destruction from increased erosion and changes in access to wild food resources.

This assessment has established that the current subject area has nil to low potential to contain Aboriginal archaeological objects or sites due to the extent to which it has been disturbed and the absence of particular landforms such as suitable rock overhangs (i.e. rock shelters) or platforms (that may indicate the presence of rock art, engravings, or grinding grooves).

No Aboriginal archaeological objects or places are recorded in the subject area.

6.2. LIKELY IMPACTED VALUES

The ACHA has identified that zero Aboriginal heritage sites will be harmed by the proposed development. No archaeological mitigation measures are required.

6.3. CONSIDERATION OF INTER-GENERATIONAL EQUITY

The principle of inter-generational equity (IGE) holds that the present generation should make every effort to ensure the health, diversity and productivity of the environment – which includes cultural heritage – is available for the benefit of future generations.

Cumulative impact of any development on Aboriginal sites assesses the extent of the proposed impact on the site and how this will affect both the proportion of this type of Aboriginal site in the area and the impact this destruction will have on Aboriginal cultural heritage values generally in the area. For example, if an artefact scatter is destroyed in the course of a proposed development, how many artefact scatters are likely to remain in that area and how will the destruction of that site affect the overall archaeological evidence remaining in that area? If a site type that was once common in an area becomes rare, the loss of that site (and site type) will affect our ability to understand past Aboriginal land uses, will result in an incomplete archaeological record and will negatively affect intergenerational equity.

This assessment has established that the subject area does not contain any previously identified Aboriginal sites and contains nil-low archaeological potential. As such it has been determined that there will be no discernible impact in regard to IGE.

7. AVOIDING AND MINIMISING HARM

The nature and complexity of mitigation measures to avoid and/or minimise harm to any Aboriginal objects and archaeological resources that might be identified will be provided in context of the nature, extent and significance of those resources.

The ACHA has identified that zero Aboriginal heritage sites will be harmed by the proposed development. No archaeological mitigation measures are required.

8. CONCLUSIONS

The ACHA that informed the current report concluded that:

- No Aboriginal objects or places are registered within the curtilage of the subject area.
- Within the regional context of the subject area, registered Aboriginal sites tend to be located near waterways.
- Archaeological reports from other sites near the present subject area indicate that archaeological potential may be significantly reduced by historical ground disturbing activity, despite proximity to waterways.
- A due diligence assessment (EcoLogical, 2017) relating directly to the subject area indicates that the portion of the subject area west of Shrimptons Creek is highly disturbed and has low to nil archaeological potential.
- The subject area does not include any topographic features that are indicative of archaeological potential.
- The majority of subject area has been subjected to a high degree of ground disturbance, which is likely to significantly reduce archaeological potential.
- The shallow natural soil profile in areas of moderate ground disturbance (SU3) would reduce archaeological potential in those areas.
- The entirety of SU1 is considered to contain nil subsurface archaeological potential. No Aboriginal sites were identified in SU1.
- The entirety of SU2 is considered to contain nil to low subsurface archaeological potential. No Aboriginal sites were identified in SU2.
- The entirety of SU3 is considered to contain nil to low subsurface archaeological potential. No Aboriginal sites were identified in SU3.
- The entirety of SU4 is considered to contain nil subsurface archaeological potential. No Aboriginal sites were identified in SU4.
- Based on the above considerations, the archaeological potential of the subject area is determined to be nil to low.
- Kamilaroi Yankuntjatjara Working Group (KYWG) consider the subject area culturally significant due to landscape features such as proximity to water and connection to Country. The cultural value of the subject area is considered moderate.

9. RECOMMENDATIONS

Based on the conclusions of this assessment there is no further investigation warranted and the proposed activity can proceed under the following recommendations:

Recommendation 1 – Aboriginal Cultural Heritage Induction

It is recommended that induction materials be prepared for inclusion in site inductions for any contractors working at the subject area. The induction material should include an overview of the types of sites to be aware of (i.e. artefact scatters or concentrations of shells that could be middens), obligations under the NPW Act, and the requirements of an archaeological finds' procedure (refer below). This should be prepared for the project and included in any site management plans.

The induction material may be paper based, included in any hard copy site management documents; or electronic, such as "PowerPoint" for any face to face site inductions.

Recommendation 2 – Archaeological Chance Find Procedure

Although considered highly unlikely, should any archaeological deposits be uncovered during any site works, a procedure must be implemented. The following steps must be carried out:

1. All works stop in the vicinity of the find. The find must not be moved 'out of the way' without assessment.
2. Site supervisor, or another nominated site representative must contact either the project archaeologist (if relevant) or DPC to contact a suitably qualified archaeologist.
3. The nominated archaeologist examines the find, provides a preliminary assessment of significance, records the item and decides on appropriate management, in conjunction with the RAPs for the project. Such management may require further consultation with DPC, preparation of a research design and archaeological investigation/salvage methodology and preparation of AHIMS Site Card.
4. Depending on the significance of the find, reassessment of the archaeological potential of the subject area may be required, and further archaeological investigation undertaken.
5. Reporting may need to be prepared regarding the find and approved management strategies. Any such documentation should be appended to this ACHAR and revised accordingly.
6. Works in the vicinity of the find can only recommence upon relevant approvals from DPC.

Recommendation 3 – Human Remains Procedure

In the unlikely event that human remains are uncovered during any site works, the following must be undertaken:

1. All works within the vicinity of the find immediately stop.
2. Site supervisor or other nominated manager must notify the NSW Police and DPC.
3. The find must be assessed by the NSW Police, and may include the assistance of a qualified forensic anthropologist.
4. Management recommendations are to be formulated by the Police, DPIE and site representatives.
5. Works are not to recommence until the find has been appropriately managed.

Recommendation 4 – RAP consultation

A copy of the final ACHAR must be provided to all RAPs. Ongoing consultation with RAPs should occur as the project progresses, to ensure ongoing communication about the project and key milestones, and to ensure the consultation process does not lapse, particularly with regard to consultation should the CFP be enacted.

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DISCLAIMER

This report is dated 6 August 2021 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of FRASERS PROPERTY AUSTRALIA (**Instructing Party**) for the purpose of an Aboriginal Cultural Heritage Assessment (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

In preparing this report, Urbis may rely on or refer to documents in a language other than English, which Urbis may arrange to be translated. Urbis is not responsible for the accuracy or completeness of such translations and disclaims any liability for any statement or opinion made in this report being inaccurate or incomplete arising from such translations.

Whilst Urbis has made all reasonable inquiries it believes necessary in preparing this report, it is not responsible for determining the completeness or accuracy of information provided to it. Urbis (including its officers and personnel) is not liable for any errors or omissions, including in information provided by the Instructing Party or another person or upon which Urbis relies, provided that such errors or omissions are not made by Urbis recklessly or in bad faith.

This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

APPENDIX A

BASIC AND EXTENSIVE AHIMS SEARCH RESULTS

Urbis Pty Ltd - Angel Place L8 123 Pitt Street

Date: 05 March 2021

Level 8 123 Angel Street
Sydney New South Wales 2000

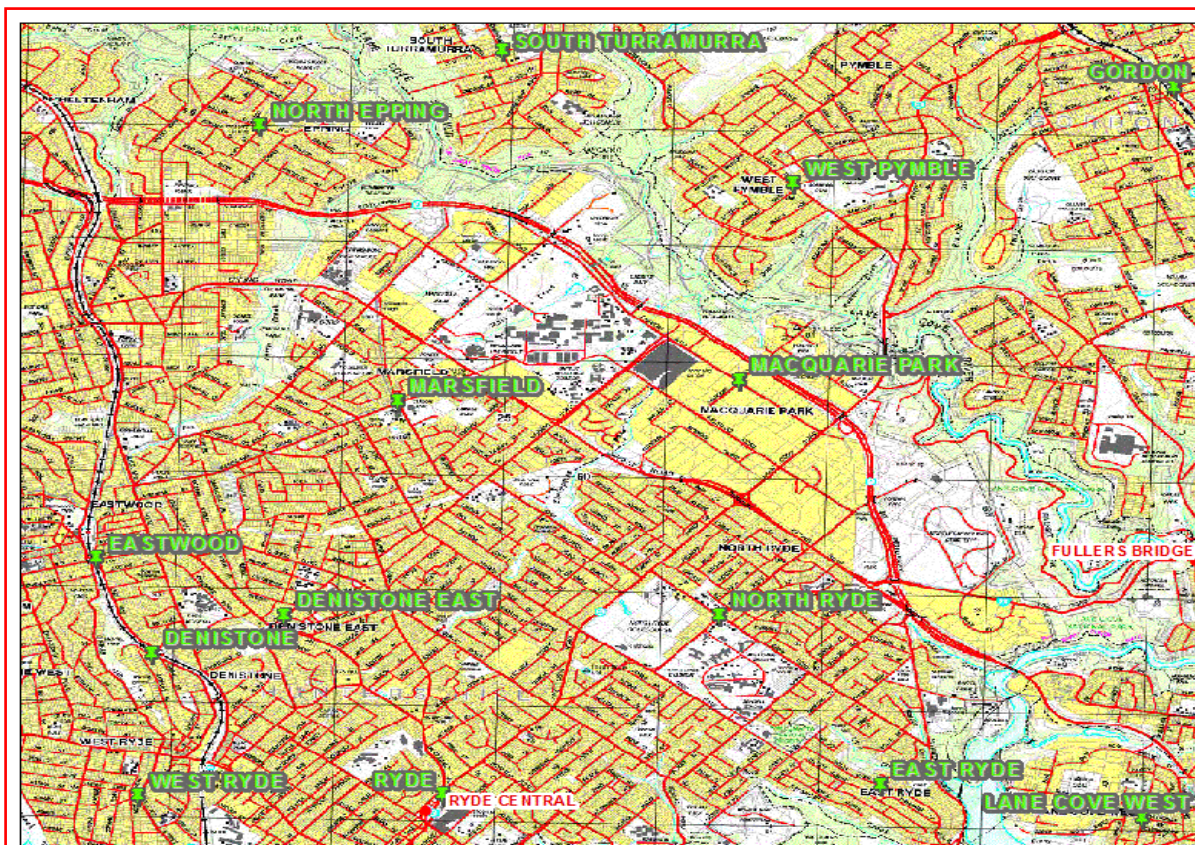
Attention: Meggan Walker

Email: mwalker@urbis.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 322157 - 329157, Northings : 6256858 - 6263858 with a Buffer of 0 meters, conducted by Meggan Walker on 05 March 2021.

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



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

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

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

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

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2584	Shrimptons Creek 1;Macquarie Park (Lane Cove NP); RYDE 005	GDA	56	326234	6261520	Closed site	Valid	Artefact : -	Shelter with Deposit	98744,102489
	<u>Contact</u>	<u>Recorders</u>	Michael Guider,Aboriginal Heritage Office					<u>Permits</u>		
45-6-2585	Shrimpton's Creek 2;Macquarie Park (Lane Cove NP); RYDE 006	GDA	56	326189	6261480	Closed site	Valid	Artefact : -	Shelter with Deposit	98744,102489
	<u>Contact</u>	<u>Recorders</u>	Michael Guider,Aboriginal Heritage Office					<u>Permits</u>		
45-6-2598	CSIRO 3 (CSIRO North Ryde) RYDE 010	GDA	56	328354	6258740	Open site	Valid	Artefact : -	Open Camp Site	4157,102489
	<u>Contact</u>	<u>Recorders</u>	Aboriginal Heritage Office,Ms.Tessa Corkill					<u>Permits</u>		
45-6-2599	CSIRO 2 (CSIRO North Ryde) RYDE 011	GDA	56	328319	6258660	Closed site	Valid	Artefact : -	Shelter with Deposit	4157,102489
	<u>Contact</u>	<u>Recorders</u>	Aboriginal Heritage Office,Ms.Tessa Corkill					<u>Permits</u>		
45-6-2236	Blue Gum Cave;	AGD	56	328320	6259190	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2237	Blackman Park 4;	AGD	56	328110	6256950	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2238	Blackman Park 5;	AGD	56	328050	6256990	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2275	Blackman Park 1;	AGD	56	328310	6256780	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2276	Blackman Park 2;	AGD	56	328560	6256780	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2281	Mars Rd Cave;Lane Cove West;	AGD	56	328130	6257150	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2284	Athletics Fields;Lane Cove West;	AGD	56	328490	6258170	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2310	Hand Hold Cave;	GDA	56	328738	6258512	Open site	Valid	Artefact : -	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2311	Rope Swing Cave;	GDA	56	328735	6258502	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2216	Lane_Cove_#1	GDA	56	328497	6258962	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899
	<u>Contact</u>	<u>Recorders</u>	Ms.Bronwyn Conyers,DPIE,Ms.Elise McCarthy							
45-6-2653	Eden Gardens PAD RYDE 007	GDA	56	327279	6260615	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : -		102489
	<u>Contact</u>	<u>Recorders</u>	Aboriginal Heritage Office,Ms.Norma Richardson							
45-6-2681	PAD B	AGD	56	328150	6258150	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -	1613,1685	
	<u>Contact</u>	<u>Recorders</u>	Mrs.Robynne Mills							
45-6-2272	Mowbray Park 5;	GDA	56	329010	6258450	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							
45-6-0989	Gladesville;Ryde 018	GDA	56	327224	6257020	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102489
	<u>Contact</u>	<u>Recorders</u>	Mr.R Taplin,Aboriginal Heritage Office							
45-5-2584	LC NPM 1	AGD	56	328710	6259000	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Bobbie Oakley							
45-5-2585	LCNPM 2	AGD	56	328350	6259020	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Bobbie Oakley							
45-6-1558	Delhi Road;North Ryde; RYDE 009	GDA	56	329034	6258982	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	102489
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff,Aboriginal Heritage Office							
45-6-2056	Footbridge Cave;	GDA	56	328261	6258205	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1809
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							
45-6-2058	Sugarloaf 2	AGD	56	327890	6256670	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1809
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							
45-6-0610	Lane Cove River De Burgh's Bridge	AGD	56	327518	6260868	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899,98744
	<u>Contact</u>	<u>Recorders</u>	Unknown Author							
45-6-0611	Lane Cove River West Pymble	AGD	56	327715	6261925	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899,98744
	<u>Contact</u>	<u>Recorders</u>	Charles.D Power							
45-6-0613	Lane Cove River Terrace Road Bradfield	AGD	56	327560	6261150	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899,98744
	<u>Contact</u>	<u>Recorders</u>	Ms.Bronwyn Conyers							

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-0614	North Ryde;Delhi Rd;	AGD	56	328121	6258045	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-1893	KP.1;	AGD	56	326239	6262975	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-5-1005	IFCH1	AGD	56	322415	6262289	Open site	Not a Site	Artefact : -	Isolated Find	
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2209	Carters creek.	AGD	56	328290	6259190	Closed site	Valid	Artefact : -	Shelter with Deposit	1899
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2211	Lane Cove 3	AGD	56	328780	6258670	Open site	Valid	Shell : -, Artefact : -	Midden	1899
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2212	Blue Hole	AGD	56	327310	6260990	Closed site	Valid	Artefact : -	Shelter with Deposit	1899,98744
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2215	Terrace Road #2	AGD	56	327610	6261210	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899,98744
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2103	Magdala park; RYDE 014	GDA	56	327964	6257780	Open site	Valid	Shell : -, Artefact : -	Midden,Open Camp Site	102489
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-1235	Epping;Lane Cove River;	AGD	56	324644	6262720	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2575	Strangers Creek; RYDE 020	GDA	56	327239	6257010	Closed site	Valid	Artefact : -	Shelter with Deposit	102489
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2576	Field of Mars; RYDE 021	GDA	56	327314	6256880	Open site	Valid	Shell : -, Artefact : -	Midden	102489
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2577	River Bend;	AGD	56	327440	6261060	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	98744
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-1156	Epping;Terrys Creek Cave; RYDE 002	GDA	56	323544	6261450	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	102489
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-1157	Brown;Cut Inside Cave; RYDE 003	GDA	56	325234	6262680	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	102489
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-1158	Brown Two Ceiling Domes Cave RYDE 004	AGD	56	325274	6262670	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	102489
	<u>Contact</u>	<u>Recorders</u>	Mr.R Taplin,Aboriginal Heritage Office							<u>Permits</u>
45-6-2268	Big River Cave;	AGD	56	328890	6258410	Closed site	Valid	Shell :-, Artefact :-	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							<u>Permits</u>
45-6-1348	Mowbray Park;Lane Cove West;Mowbray Park 1.;Chatswood West;	GDA	56	329030	6258405	Closed site	Valid	Shell :-, Artefact :-, Art (Pigment or Engraved) :-	Shelter with Art,Shelter with Midden	1497
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow,Michael Guider							<u>Permits</u>
45-6-1354	Sewer Pipe Cave;Stringybark Creek;	GDA	56	328974	6257760	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	
	<u>Contact</u>	<u>Recorders</u>	Ms.Tessa Corkill							<u>Permits</u>
45-6-1252	LC#4 Chatswood	AGD	56	328435	6258730	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	1899
	<u>Contact</u>	<u>Recorders</u>	P Clark,Ms.Bronwyn Conyers							<u>Permits</u>
45-6-1940	Stringy Bark Creek Cave 1;	AGD	56	329010	6257390	Closed site	Valid	Shell :-, Artefact :-	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							<u>Permits</u>
45-6-0931	Boronia Park, Ryde 019	GDA	56	327234	6257010	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	102489
	<u>Contact</u>	<u>Recorders</u>	Charles.D Power,Aboriginal Heritage Office							<u>Permits</u>
45-6-1653	Ironbarks	AGD	56	328440	6258840	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	J Wyeth							<u>Permits</u>
45-6-0882	Lane Cove River;Gordon;	AGD	56	328134	6263010	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	Charles.D Power							<u>Permits</u>
45-6-1953	Pages Creek Cave;	GDA	56	327724	6258540	Open site	Valid	Shell :-, Artefact :-	Midden	102489
	<u>Contact</u>	<u>Recorders</u>	Michael Guider,Aboriginal Heritage Office							<u>Permits</u>
45-6-1053	Lane Cove River;	AGD	56	326000	6262000	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	98744
	<u>Contact</u>	<u>Recorders</u>	Mr.R Taplin							<u>Permits</u>
45-6-1054	Lane Cove;Man Goanna Cave;	AGD	56	325690	6263590	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	
	<u>Contact</u>	<u>Recorders</u>	ASRSYS							<u>Permits</u>
45-6-0966	Kitty's Creek;Lane Cove SRA; RYDE 016	GDA	56	327874	6257420	Closed site	Valid	Shell :-, Artefact :-	Shelter with Midden	1809,102489
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow,Alice Gorman,Aboriginal Heritage Office							<u>Permits</u>

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-1844	Mowbray Park 2, Chatswood west.;Chatswood West;	GDA	56	329050	6258380	Closed site	Valid	Artefact : -, Shell : -	Shelter with Deposit,Shelter with Midden	1497
	Contact	Recorders	Val Attenbrow,Michael Guider					Permits		
45-6-1845	Mowbray Park 3, Chatswood west.;	AGD	56	328670	6258230	Closed site	Valid	Artefact : -	Shelter with Deposit	1497
	Contact	Recorders	Val Attenbrow					Permits		
45-6-1854	L C/2 Lanecove 2 Epping Road Bridge RYDE 012	GDA	56	328104	6258490	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Midden	2383,102489
	Contact	Recorders	Val Attenbrow,Alice Gorman,K Cutmore,Ms.Laila Haglund,Aboriginal Heritage Offic					Permits		
45-6-1855	L C/1 Lanecove 1	AGD	56	327920	6258190	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	Ms.Laila Haglund					Permits		
45-6-0977	Epping;Lane Cove River; Little bloodwood stump cave RYDE 001	GDA	56	323964	6262130	Closed site	Valid	Artefact : -	Shelter with Deposit	2047,102489
	Contact	Recorders	Val Attenbrow,Aboriginal Heritage Office,Mr.Rick Bullers					Permits		
45-6-0978	Lane Cove River: KUR-050	GDA	56	324504	6262690	Open site	Valid	Grinding Groove : -, Water Hole : -	Axe Grinding Groove,Water Hole/Well	
	Contact	Recorders	Mr.Phil Hunt,Mr.R Taplin					Permits		
45-6-0981	Lane Cove River	AGD	56	327792	6260874	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	1899,98744
	Contact	Recorders	Mr.R Taplin					Permits		
45-6-1005	Martins Creek;Lane Cove SRA; RYDE 015	GDA	56	327644	6257600	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102489
	Contact	Recorders	Michael Guider,J.A Hatfield,Aboriginal Heritage Office					Permits		
45-6-2717	Will-144 Mowbray Park	AGD	56	328660	6258290	Closed site	Valid	Habitation Structure : -		
	Contact	Recorders	David Watts					Permits		
45-6-2718	Will-145 - Mowbray Park	AGD	56	328580	6258330	Open site	Valid	Shell : -		
	Contact	Recorders	David Watts					Permits		
45-6-2213	DeBurghs Bridge	AGD	56	327454	6261230	Closed site	Valid	Artefact : -	Shelter with Deposit	1899
	Contact	Recorders	Ms.Bronwyn Conyers					Permits		
45-6-2214	Commandment Rock(LC#2)	AGD	56	328290	6259580	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899
	Contact	Recorders	P Clark,Ms.Bronwyn Conyers,D Brown					Permits		

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-3010	Stringybark Creek PAD Shelter 7 - LCC085	GDA	56	329119	6257645	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Aboriginal Heritage Office							
45-6-3013	Stringybark Creek PAD Shelter 8 - LCC 086	GDA	56	328624	6257885	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Aboriginal Heritage Office							
45-6-3021	Field of Mars RYDE 026	GDA	56	327404	6257120	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Aboriginal Heritage Office							
45-6-3015	Stringybark Creek PAD Shelter 9 LCC 087	GDA	56	328714	6257860	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Aboriginal Heritage Office							
45-6-3067	Crescent 1	GDA	56	322187	6263082	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd							
45-6-3042	Eden Ave Groove 1 KUR 052	GDA	56	325374	6262955	Open site	Valid	Grinding Groove : 1		
	Contact	Recorders	Aboriginal Heritage Office							
45-6-3861	Riverside Drive Charcoal Art	GDA	56	328101	6260036	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	DPIE,Ms.Elise McCarthy							
45-6-2765	LCC 077 Pumphouse Shelter	AGD	56	328185	6257765	Open site	Valid	Habitation Structure : 1		
	Contact	Recorders	Mr.Phil Hunt							
45-6-2949	M2A1	GDA	56	323895	6262241	Open site	Valid	Grinding Groove : 1		
	Contact	Recorders	Mr.Rick Bullers							
45-6-3114	Epping to Thornleigh Third Track Unexpected Find 1	GDA	56	322194	6263106	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr.Josh Symons							
45-6-3136	Terrys Creek Shelter PAD1	GDA	56	323515	6261475	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Mr.Phil Hunt							
45-6-3117	Crescent 2 (C2)	GDA	56	322259	6262900	Open site	Valid	Artefact : 1		
	Contact	Recorders	Matthew Kelleher							
45-6-3319	Mowbray Park PAD4 WILL214	GDA	56	328850	6258435	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		

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Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	Mr.Phil Hunt,Aboriginal Heritage Office					<u>Permits</u>		
45-6-3321	Mowbray Park PAD3 WILL213	GDA	56	328735	6258510	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Phil Hunt,Aboriginal Heritage Office					<u>Permits</u>		
45-6-3795	Avian Cres PAD 1 WILL181	GDA	56	328675	6258385	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Phil Hunt					<u>Permits</u>		
45-6-3796	Avian Cres PAD 2 WILL182	GDA	56	328645	6258375	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Phil Hunt					<u>Permits</u>		

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APPENDIX B

REGISTERED ABORIGINAL PARTY CONSULTATION LOG

Date	Time	Type	Contacted	Contacted Individual	Contacted by	Contacted by Individual	Subject	Message	Follow-up needed?	Person actioned	Comment	Included in App. C
Stage 1 Agency notice												
5/03/2021 2:25pm	email	NNTT	n/a	Urbis	Meggan Walker (MW)		Stage 1.1 NNTT Search	Request for information	N	AO	n/a	Y
9/03/2021 1:20pm	email	Urbis	MW	NNTT	n/a		Stage 1.1 RESPONSE	No overlap, no relevant entries	N	AO	n/a	Y
12/03/2021 3:20pm	email	Metropolitan LALC	n/a	Urbis	Aaron Olsen (AO)		Stage 1.2 Agency Notice	Request for information	N	AO	n/a	
12/03/2021 3:20pm	email	DPC	n/a	Urbis	AO		Stage 1.2 Agency Notice	Request for information	N	AO	n/a	
12/03/2021 3:20pm	email	GSLLS	n/a	Urbis	AO		Stage 1.2 Agency Notice	Request for information	N	AO	n/a	Y
12/03/2021 3:20pm	email	ORALRA	n/a	Urbis	AO		Stage 1.2 Agency Notice	Request for information	N	AO	n/a	
12/03/2021 3:20pm	email	City of Ryde Council	n/a	Urbis	AO		Stage 1.2 Agency Notice	Request for information	N	AO	n/a	
12/03/2021 3:20pm	email	NTSCorp	n/a	Urbis	AO		Stage 1.2 Agency Notice	Request for information	N	AO	n/a	
19/03/2021 10:00am	email	Urbis	Andrew Crisp (AC)	DPC	Paul Houston		Stage 1.2 RESPONSE	RAP List provided	N	AO	n/a	Y
Stage 1 RAP notice/advertisement												
22/03/2021 10:28am	email	DPC Contact List	n/a	Urbis	AO		Stage 1.3 Invitation	Invitation to Register	N	AO	n/a	Y
22/03/2021 10:33am	email	Urbis	AO	Tocomwall	Danny Franks		Stage 1.3 RESPONSE	Registering Interest	N	AO	n/a	Y
22/03/2021 11:04am	email	Urbis	AO	Kamilaroi Yankuntjatjara Working Group (KYWG)	Phil Khan		Stage 1.3 RESPONSE	Registering Interest	N	AO	n/a	Y
22/03/2021 4:08pm	email	Urbis	AO	Gulaga	Wendy Smith		Stage 1.3 RESPONSE	Registering Interest	N	AO	n/a	Y
23/03/2021 12:02pm	email	Urbis	AO	Darug Custodian Aboriginal Corp	Justine Coplin		Stage 1.3 RESPONSE	Registering Interest	N	AO	n/a	Y
24/03/2021 3:28pm	email	Urbis	AO	Ngambaa Cultural Connections	Kaarina Slater		Stage 1.3 RESPONSE	Registering Interest	N	AO	n/a	Y
8/04/2021 5:48pm	email	Urbis	AC	Didge Ngunawal Clan (DNC)	Lilly Carroll / Paul Boyd		Stage 1.3 RESPONSE	Registering Interest	N	AO	n/a	Y
22/04/2021 1:37am	email	Urbis	AO	Butucarbin Heritage	Lowanna Gibson		Stage 1.3 RESPONSE	Registering Interest	N	AO	n/a	Y
26/04/2021 9:41am	email	Urbis	AO	A1 Indigenous Services (A1)	Carolyn Hickey		Stage 1.3 RESPONSE	Registering Interest	N	AO	n/a	Y
7/05/2021 11:15am	email	DPC	n/a	Urbis	AO		Stage 1.6 Notice	Provision of RAP List	N	AO	n/a	Y
7/05/2021 11:17am	email	MLALC	Nathan Moran	Urbis	AO		Stage 1.6 Notice	Provision of RAP List	N	AO	n/a	Y
Stage 2 and 3												
7/05/2021 11:36am	email	All RAPs	n/a	Urbis	AO		Stage 2/3 Letter	Provision of project information. Deadline for response: 4 June 2021	N	AO	n/a	Y
7/05/2021 2:51pm	email	Urbis	AO	Gulaga	Wendy Smith		Stage 2/3 RESPONSE	Thank you for providing this information. Gulaga supports the methodology and makes no comment at this stage.	N	AO	n/a	Y
19/05/2021 9:52am	email	Urbis	AO	KYWG	Kadibulla Khan		Stage 2/3 RESPONSE	Thank you for your ACHA for Ivanhoe Estate stage 2/3. The study area is highly significant to the Aboriginal people. The study area is important to us Aboriginal people and as a last chance we should excavate the study area. We as Aboriginal people hold a deep connection to the land & we follow a lore that is known to us. the Aboriginal people have looked after this land for tens of thousands of years and continue to do so. In saying that we would like to agree to your recommendations and we support your ACHA. I would also like to take the time to mention Aboriginal Cultural Interpretation for the development or within the building. Some examples are native gardens, artefact display, artwork, and signage, please do not hesitate to contact us about interpretation plan. We should also always be mindful of burials as we do not know where they are located.	N	AO	n/a	Y
Stage 4												
9/07/2021 9:43am	email	All RAPs	n/a	Urbis	AO		Stage 4 Draft ACHAR	Provision of draft ACHAR for review. Deadline for response: 6 August 2021	N	AO	n/a	Y
16/07/2021 11:16am	email	Urbis	AAO	KYWG	Kadibulla Khan		Stage 4 RESPONSE	The study area is highly significant due to it being in close proximity to water ways, for this reason we would like to push for monitoring of the any works, done by an Aboriginal person as we don't believe that the construction works can identify Aboriginal objects. One induction is not enough train and they may not have the time to be aware of Aboriginal finds. We also should be mindful of our burials as they hold deep meaning to us and we have been striped of the location of them.	N	AO	n/a	Y

APPENDIX C

REGISTERED ABORIGINAL PARTY CONSULTATION DOCUMENTATION

Meggan Walker

From: Meggan Walker
Sent: Friday, 5 March 2021 2:25 PM
To: 'GeospatialSearch@nntt.gov.au'
Cc: Andrew Crisp
Subject: Ivanhoe Estate - NNTT Search - P0032333
Attachments: Search Form_Request for Search of Tribunal Registers 2021_filled in.pdf; Search Form_Request for Search of Tribunal Registers 2021_filled in.docx

Hi all,

Please see attached form for the Native Title Tribunal for Ivanhoe Estate, Lot 100 DP1262209 and Lot 101 DP1263727.

Kind regards,

MEGGAN WALKER
CONSULTANT

D +61 2 8233 7626
T +61 2 8233 9900
E mwalker@urbis.com.au

**SHAPING
CITIES AND
COMMUNITIES**



ANGEL PLACE, LEVEL 8, 123 PITT STREET
SYDNEY, NSW 2000, AUSTRALIA

Urbis recognises the traditional owners of the land on which we work.
Learn more about our [Reconciliation Action Plan](#).

This email and any files transmitted are for the intended recipient's use only. It contains information which may be confidential and/or protected by copyright. Any personal information in this email must be handled in accordance with the *Privacy Act 1988 (Cth)*. If you have received this email by mistake, please notify the sender and permanently delete the email. Any confidentiality or copyright is not waived or lost because this email has been sent to you by mistake.

Request for Search of Tribunal Registers

Search for overlapping interests i.e.: Is there a native title claim, determination or land use agreement over this land?

Please note: the NNTT cannot search over freehold land.

For further information on freehold land: [Click Here](#) (NNTT website)

1. Your details

NAME:	Meggan Walker
POSITION:	Consultant
COMPANY/ORGANISATION:	Urbis
POSTAL ADDRESS:	Level 8, 123 Pitt Street, Sydney, NSW, 2000
TELEPHONE:	0 82337626
EMAIL:	mwalker@urbis.com.au
YOUR REFERENCE:	P0032333
DATE OF REQUEST:	5/03/2021

2. Reason for your request

Are you a party to a native title proceeding?

☐ Yes ☒ No

Please provide Federal Court/Tribunal file number/or application name:

OR

Do you need to identify existing- native title interests to comply with the *Native Title Act 1993* (Cth) or other State/Territory legislation?

☒ Yes ☐ No

Please provide brief details of these obligations here:

Archaeological assessment

3. Identify the area to be searched

If there is insufficient room below, please send more information on a Word or Excel document.

Mining tenure

State/Territory:

Tenement ref/s:

OR

Crown land / non-freehold tenure

Tenure type:

☒ Lease ☐ Reserve or other Crown land

State/Territory:

New South Wales

Lot and plan details:

Lot 100 DP1262209 and Lot 101 DP1263727

Pastoral Lease number or name:

Other details: (Town/County/Parish/
Section/Hundred/Portion):

Macquarie Park/ Cumberland/Hunters Hill

Email completed form to: GeospatialSearch@nntt.gov.au

Meggan Walker

From: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>
Sent: Tuesday, 9 March 2021 1:20 PM
To: Meggan Walker
Cc: Andrew Crisp
Subject: RE: SR21/363 - Ivanhoe Estate - NNTT Search - P0032333

Follow Up Flag: Follow up
Flag Status: Flagged

UNCLASSIFIED

Native title search – NSW Parcels – Lot 100 on DP1262209 and Lot 101 on DP1263727
Your ref: P0032333 - **Our ref:** SR21/363

Dear Meggan Walker,

Thank you for your search request received on 05 March 2021 in relation to the above area. Based on the records held by the National Native Title Tribunal as at 08 March 2021 it would appear that there are no Native Title Determination Applications, Determinations of Native Title, or Indigenous Land Use Agreements over the identified area.

Search Results

The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

- Schedule of Native Title Determination Applications
- Register of Native Title Claims
- Native Title Determinations
- Indigenous Land Use Agreements (Registered and notified)

At the time this search was carried out, there were **no relevant entries** in the above databases.

Cadastral data as at: 01/02/2021

Parcel ID	Feature Area SqKm	Tenure	NNTT file number	Name	Category
100//DP1262209	0.0826	NSW GOVERNMENT	No overlap		
101//DP1263727	0.0088	FREEHOLD	No overlap		

For more information about the Tribunal's registers or to search the registers yourself and obtain copies of relevant register extracts, please visit our [website](#).

Information on native title claims and freehold land can also be found on the Tribunal's website here: [Native title claims and freehold land](#).

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

The search results are based on analysis against external boundaries of applications only. Native title applications commonly contain exclusions clauses which remove areas from within the external boundary. To determine whether the areas described are in fact subject to claim, you need to refer to the "Area covered by claim" section of the relevant Register Extract or Schedule Extract and any maps attached.

Search results and the existence of native title

Please note that the enclosed information from the Register of Native Title Claims and/or the Schedule of Applications is **not** confirmation of the existence of native title in this area. This cannot be confirmed until the Federal Court makes a determination that native title does or does not exist in relation to the area. Such determinations are registered on the National Native Title Register.

The Tribunal accepts no liability for reliance placed on enclosed information

The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact us via GeospatialSearch@NNTT.gov.au

Regards,

Geospatial Searches

National Native Title Tribunal | Perth

Email: GeospatialSearch@nntt.gov.au | www.nntt.gov.au

From: Meggan Walker <mwalker@urbis.com.au>
Sent: Friday, 5 March 2021 11:25 AM
To: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>
Cc: Andrew Crisp <acrisp@urbis.com.au>
Subject: SR21/363 - Ivanhoe Estate - NNTT Search - P0032333

Caution: This is an external email. DO NOT click links or open attachments unless you recognise the sender and know the content is safe.

Hi all,

Please see attached form for the Native Title Tribunal for Ivanhoe Estate, Lot 100 DP1262209 and Lot 101 DP1263727.

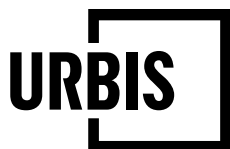
Kind regards,

MEGGAN WALKER
CONSULTANT

D +61 2 8233 7626
T +61 2 8233 9900
E mwalker@urbis.com.au

**SHAPING
CITIES AND
COMMUNITIES**





12 March 2021

**ANGEL PLACE
LEVEL 8, 123 PITT STREET
SYDNEY NSW 2000**

URBIS.COM.AU
Urbis Pty Ltd
ABN 50 105 256 228

To whom it may concern,

P0032333 - IVANHOE ESTATE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT - ABORIGINAL COMMUNITY CONSULTATION - AGENCY NOTICE STAGE 1.2

Urbis has been commissioned by Frasers Property Australia (FPA) (the proponent) to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed redevelopment of the Ivanhoe Estate (hereafter referred to as the subject area) (see attached figures). The ACHA Report (ACHAR) will form part of the Environmental Impact Statement (EIS) which will accompany the State Significant Development Applications for the development of the subject area. The ACHAR will assess the impacts of the development on the Aboriginal archaeological and cultural heritage values of the site, as required under Condition C2 of the Concept Approval consent.

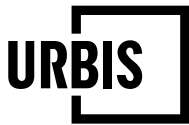
The ACHA is to be carried out in accordance with relevant guidelines under the *National Parks and Wildlife Act 1974* (NPW Act), including the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011). The assessment would detail any potential Aboriginal cultural heritage resources within the subject area and provide recommendations regarding management of those resources.

Ivanhoe Estate (Figure 1 and Figure 2) is located within the suburb of Macquarie Park at the northeast of the intersection of Herring Road and Epping Road, within the Ryde Local Government Area (LGA). It is located on the southern fringe of Macquarie Park, and is within approximately 500 metres of both Macquarie Shopping Centre and Macquarie University. The surrounding area is characterised by a mix of commercial and education uses, as well as student accommodation and residential dwellings.

The site is approximately 8.2 hectares (ha) and irregular in shape. The site previously accommodated 259 social housing dwellings comprising a mix of townhouse and apartment buildings set around a cul-de-sac street layout, with all dwellings now demolished (Figure 2).

The site is in the process of being redeveloped as part of the NSW Government's 'Communities Plus' program which seeks to deliver new communities with good access to transport, employment, improved facilities, and open space through leveraging the expertise and capacity of the private and non-government sectors. Development delivered under Communities Plus is mixed-tenure – that is, a mix of both social and market housing. This mix serves two purposes: to offset the cost of delivering new social housing, and to provide well-integrated communities. Mission Australia Housing will manage the site's social housing portfolio and is a national Tier 1 Community Housing Provider (CHP).

Consent was granted by the Minister for Planning and Public Spaces on 30 April 2020 for the Ivanhoe Estate - Concept Masterplan (SSD-8707) and for the first stage of physical works (SSD-8903) referred to as Stage 1. FPA and NSW Land and Housing Corporation (LAHC) are now seeking to pursue the



next stage of planning approvals for the detailed design, construction, and operation of Stage 2 of the Ivanhoe Estate Concept Masterplan. Stage 2 comprises the Village Green and Community Centre (C2), and residential buildings C3 and C4 (Figure 3, Figure 4 and Figure 5).

Following the consolidation of previous allotments as part of the SSD-8903, the Ivanhoe Estate site is now legally described as Lot 100 in DP1262209 except for a portion of Shrimptons Creek and neighbouring land at 2-4 Lyon Park Road, known as Lot 1 DP 859537. 2-4 Lyonpark Road is owned by LIF Pty Ltd as trustee for Local Government Super, while the Ivanhoe Estate lot is owned and managed by LAHC.

The proponent can be contacted via:

Scott Clohessy
Senior Development Manager
Frasers Property Australia
Suite 11 Lumiere Commercial
Level 12, 1010 Bathurst Street
Sydney NSW 2000
E: Scott.Clohessy@frasersproperty.com.au

In accordance with the *Aboriginal cultural heritage consultation requirements for proponents (DEECW 2010)* (the Consultation Requirements) and Clause 80C of the NSW National Parks and Wildlife Regulation 2009, the Proponent will conduct a community consultation process with registered Aboriginal people. The community consultation will include:

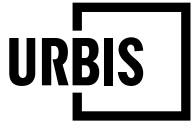
- Identifying and describing the Aboriginal cultural heritage values that exist across the subject area in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW* (OEH (2010)), and documenting these in an Aboriginal Cultural Heritage Assessment Report (ACHAR) which may include the need for surface survey and test excavation.
- Undertaking consultation with Aboriginal people and document in accordance with *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW).
- The preparation of the ACHA Report (ACHAR) to support the SSDA, demonstrating attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts; and
- Recording of any Aboriginal objects in line with the requirements of the Department of Premier and Cabinet's Aboriginal Heritage Information Management System (AHIMS) that may be identified within the subject area.

In accordance with Section 4.1.2 of the Consultation Requirements, Urbis proposes to compile a list of Aboriginal people and organisations who may hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places that may exist within the subject area.

Should you be aware of any Aboriginal persons and/or organisations that may hold an interest in the project, please provide their details at your earliest convenience and preferably by **24th March 2021** in writing to:

Andrew Crisp
Senior Archaeologist
Urbis
Level 8 123 Pitt Street,
Sydney, NSW, 2000
E: acrisp@urbis.com.au

Urbis, on behalf of the proponent, will write to each Aboriginal person or group whose details are provided to notify them of the proposed project and invite them to register an interest in the community consultation process.



Please be advised that, as per the Consultation Requirements, the proponent is required to forward the names of Aboriginal persons and groups who register an interest (Registered Aboriginal Parties) to the Metropolitan Local Aboriginal Land Council and Heritage NSW/Department of Premier and Cabinet unless the person or group specifies that they do not want their details released.

Please do not hesitate to contact us should you have any queries in relation to the provided information.

Kind regards,

A handwritten signature in black ink, appearing to read "Andrew Crisp". The signature is written in a cursive style and is underlined with a single horizontal line.

Andrew Crisp
Senior Consultant
+61 2 8233 7642
acrisp@urbis.com.au

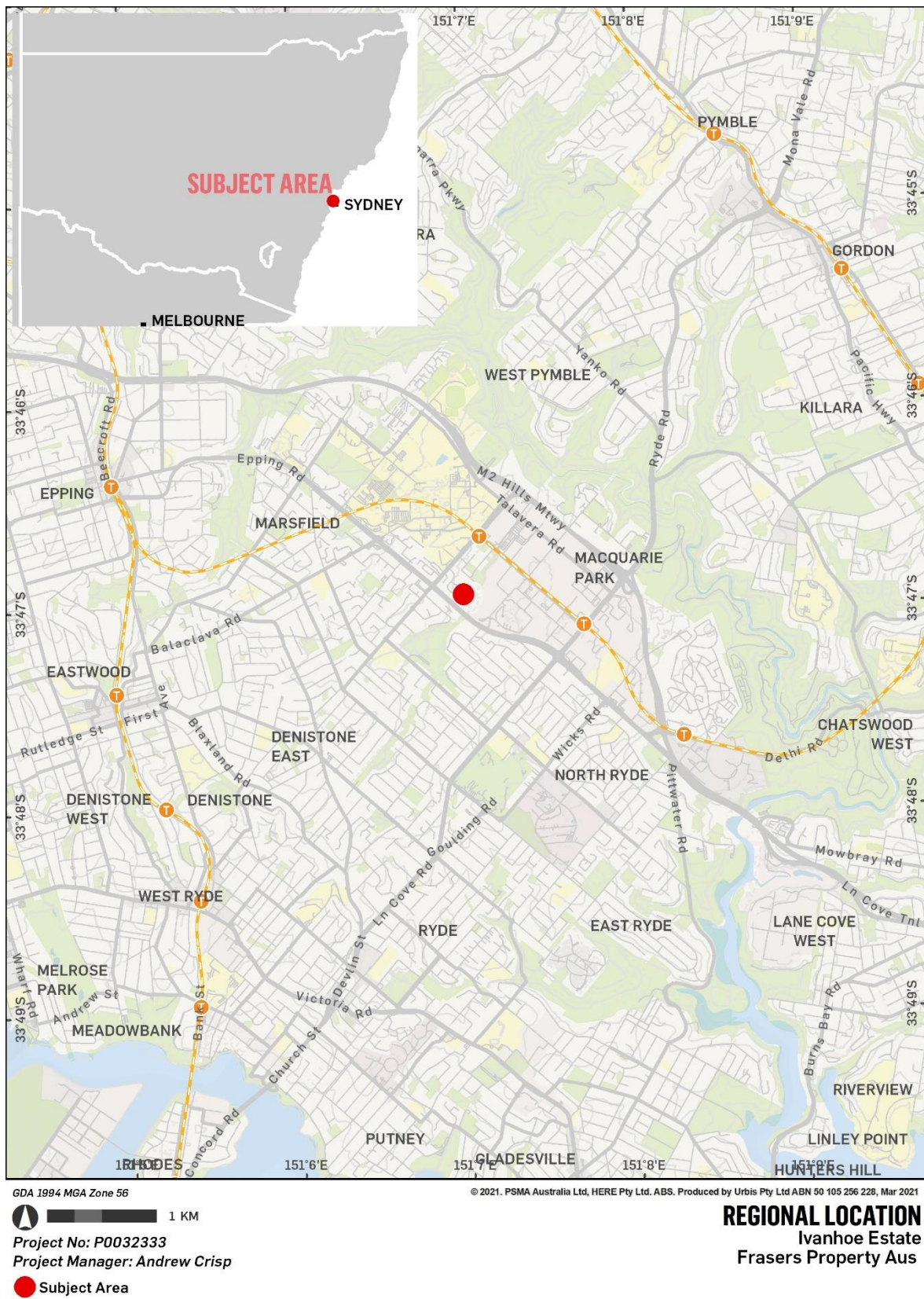
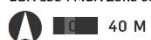


Figure 1 – Regional location



GDA 1994 MGA Zone 56

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Project No: P0032333

Project Manager: Andrew Crisp

Subject Area — Contours

Location of the Subject Area
 Ivanhoe Estate
 Frasers Property Aus

Figure 2 – Location of the subject area



Figure 3 - Ivanhoe Estate Concept Masterplan

Source: Ethos Urban

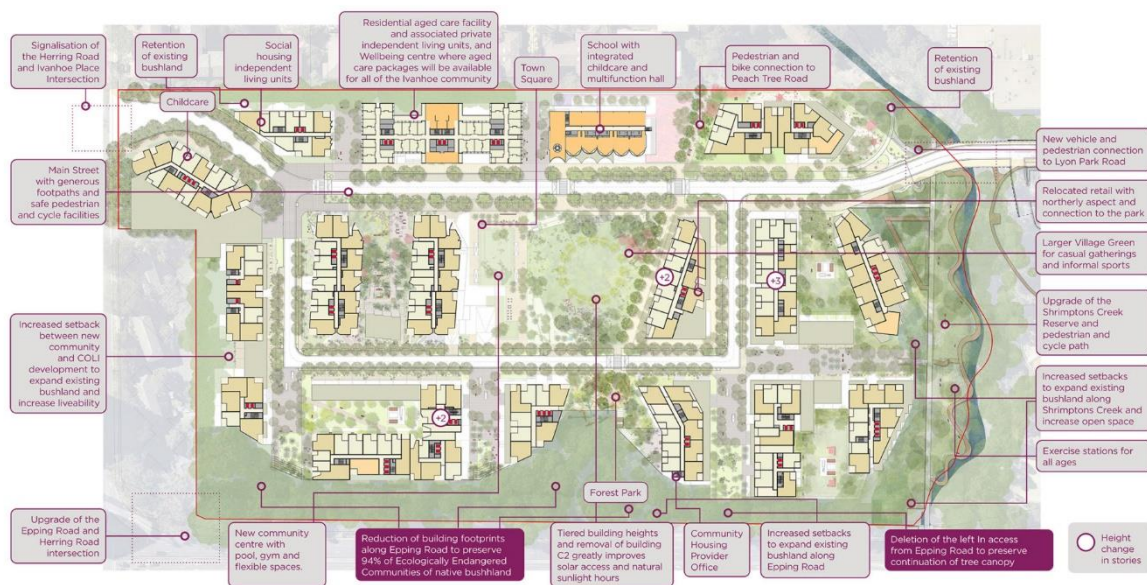


Figure 4 – Ivanhoe Estate Concept Masterplan - details

Source: Ethos Urban

From: [Paul Houston](#)
To: [Andrew Crisp](#)
Cc: [Aaron Olsen](#)
Subject: Rap letter for the proposed "Redevelopment of the Ivanhoe Estate Macquarie Park, NSW Ryde LGA."
Date: Friday, 19 March 2021 10:00:59 AM
Attachments: [DOC21-199535-1Redevelopment of the Ivanhoe Estate, Macquarie Park, NSW.pdf](#)
Importance: High

Andrew

Please see attached RAP letter for the proposed "Redevelopment of the Ivanhoe Estate Macquarie Park, NSW Ryde LGA.

If you have any questions please contact me.

Thanxs
Paul

Paul Houston, Aboriginal Heritage Planning Officer
Heritage NSW, Community Engagement, Department of Premier and Cabinet
142 Brisbane St, Dubbo NSW 2830
T: 02 68835361, M: 0427832205 | Paul.Houston@environment.nsw.gov.au

Please lodge all Applications to Heritagemailbox@environment.nsw.gov.au

I acknowledge and respect the traditional custodians and ancestors of the lands I work across. Heritage NSW and coronavirus (COVID-19)
Heritage NSW has taken steps to protect the safety, health and wellbeing of our staff, communities and customers. Whilst our offices remain open, we have put in place flexible working arrangements for our teams across NSW and continue to adapt our working arrangements as necessary. Face-to-face meetings and field work/site visits with our customers are subject to rules on gatherings and social distancing measures. We thank you for your patience and understanding at this time.

This email is intended for the addressee(s) named and may contain confidential and/or privileged information.

If you are not the intended recipient, please notify the sender and then delete it immediately.

Any views expressed in this email are those of the individual sender except where the sender expressly and with authority states them to be the views of the NSW Office of Environment and Heritage.

PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL

Andrew Crisp
Urbis
Level 8 123 Pitt Street
SYDNEY NSW 2000
acrisp@urbis.com.au

**RE: Request for information on Aboriginal stakeholders for an Aboriginal cultural heritage assessment for proposed
“Redevelopment of the Ivanhoe Estate, Macquarie Park, NSW”**

Dear Andrew,

Thank you for your letter of 12 March 2021 about Aboriginal cultural heritage consultation for the proposed “Redevelopment of the Ivanhoe Estate, Macquarie Park, NSW”, within the Ryde local government area. I appreciate the opportunity to provide input.

Please find enclosed a list of known Aboriginal parties for the Ryde local government area (Attachment 1) that we consider likely to have an interest in the proposal. Note this is not an exhaustive list of all interested Aboriginal parties. Receipt of this list does not remove the requirement for a proponent/consultant to advertise the proposal in the local print media and contact other bodies and community groups seeking interested Aboriginal parties, in accordance with the ‘*Aboriginal cultural heritage consultation requirements for proponents 2010*’ (the CRs).

We would also like to take this opportunity to remind the proponent and consultant to:

- Ensure that consultation is fair, equitable and transparent. If the Aboriginal parties express concern or are opposed to parts of or the entire project, we expect that evidence will be provided to demonstrate the efforts made to find common ground between the opponents and the proponent.

If you have any questions about this advice, please do not hesitate to contact me via paul.houston@environment.nsw.gov.au or 02 68835361.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Paul Houston', with a stylized flourish at the end.

Paul Houston
Aboriginal Heritage Planning Officer
Aboriginal Cultural Heritage Regulation - Northern
Heritage NSW
Department of Premier and Cabinet
19 March 2021

ATTACHMENT A

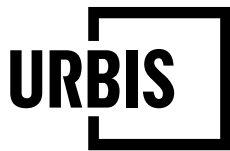
Table 1: List of Aboriginal stakeholder groups within the Ryde LGA. - that may have an interest in the project; provided as per the “OEH Aboriginal cultural heritage requirement for proponents 2010”.

Ryde Local Government Area

Organisation/ Individual	Contact Name	Email Address/ Fax / Phone	Postal Address	Additional information
Metropolitan Local Aboriginal Land Council	Nathan Moran	(02) 83949666 officeadmin@metrolalc.org.au	PO Box 1103 Strawberry Hills NSW 2016	
Darug Aboriginal Cultural Heritage Assessments	Gordon Morton	02 9410 3665 or 0422 865 831	Unit 9, 6 Chapman Avenue, Chatswood, NSW 2067	
Darug Land Observations	Jamie Workman and Anna Workman	0418 494 951 0413 687 279 daruglandobservations@gmail.com	PO Box 173, Ulladulla, NSW 2539	
A1 Indigenous Services	Carolyn Hickey	0411 650 057 cazadirect@live.com	10 Marie Pitt Place Glenmore Park 2745 NSW.	
Eric Keidge	Eric Keidge	04311 66423	11 Olsson Close Hornsby Heights NSW 2077	
Kamilaroi Yankuntjatjara Working Group	Phil Khan	0434 545 982 philipkhan.acn@live.com.au	78 Forbes Street, Emu Plains, NSW 2750	
Tocomwall	Scott Franks	0404 171 544	PO Box 76, Caringbah NSW 1495	
Amanda Hickey Cultural Services	Amanda Hickey	0434 480 588 amandahickey@live.com.au	57 Gough st emu plains 2750	
Dhinawan Culture & Heritage Pty Ltd	Stephen Fields	0411232285 dhinawan.ch@gmail.com		
Gunyu	Kylie Ann Bell	gunyuuchts@gmail.com		
Walbunja	Hika Te Kowhai	0402 730 612 walbunja@gmail.com		
Badu	Karia Lea Bond	0476 381 207	11 Jeffery Place, Moruya, NSW 2537	
Goobah Developments	Basil Smith	0405 995 725 goobahchts@gmail.com	66 Grantham Road, Batehaven NSW, 2536	
Wullung	Lee-Roy James Boota	0403 703 942	54 Blackwood Street, Gerringong, NSW, 2534	
Yerramurra	Robert Parson	yerramurra@gmail.com		
Nundagurri	Newton Carriage	nundagurri@gmail.com		
Murrumbul	Mark Henry	murrumbul@gmail.com		

Jerringong	Joanne Anne Stewart	0422 800 184 jerringong@gmail.com		
Pemulwuy CHTS	Pemulwuy Johnson	0425 066 100 pemulwuyd@gmail.com	14 Top Place, Mt Annan	
Bilinga	Simalene Carriage	bilingachts@gmail.com		
Munyunga	Kaya Dawn Bell	munyangchts@gmail.com		
Wingikara	Hayley Bell	wingikarachts@gmail.com		
Minnamunnung	Aaron Broad	0402 526 888	1 Waratah Avenue, Albion Park Rail NSW 2527	
Walgalu	Ronald Stewart	walgaluchts@gmail.com		
Thauaira	Shane Carriage	thauairachts@gmail.com		
Dharug	Andrew Bond	dharugchts@gmail.com		
Gulaga	Wendy Smith	gulagachts@gmail.com		
Callendulla	Corey Smith	cullendullachts@gmail.com		
Murramarang	Roxanne Smith	murramarangchts@gmail.com		
DJMD Consultancy	Darren Duncan	darrenjohnduncan@gmail.com		
Butucarbin Aboriginal Corporation	Jennifer Beale	(02)9832 7167 butuheritage@gmail.com	PO Box E18, Emerton, NSW 2770	
Didge Ngunawal Clan	Lillie Carroll Paul Boyd	0426 823 944 didgengunawalclan@yahoo.com.au	33 Carlyle Crescent Cambridge Gardens NSW 2747	
Ginninderra Aboriginal Corporation	Steven Johnson and Krystle Carroll	0406991221 Ginninderra.corp@gmail.com	PO BOX 3143 Grose Vale NSW 2754	
Wailwan Aboriginal Group	Philip Boney	0436 483 210 waarlan12@outlook.com		
Barking Owl Aboriginal Corporation	Mrs Jody Kulakowski (Director)	0426 242 015 barkingowlcorp@gmail.com	2-65/69 Wehlow St. Mt Druitt	
Thoorga Nura	John Carriage (Chief Executive Officer)	0401 641 299 thoorganura@gmail.com	50B Hilltop Crescent, Surf Beach, 2536, NSW	
Darug Boorooberongal Elders Aboriginal Corporation	Paul Hand (chairperson)	0456786738 paulhand1967@gmail.com	PO.Box 14 Doonside NSW 2767	
B.H. Heritage Consultants	Ralph Hampton Nola Hampton	0435 785 138 0401 662 531	184 Captain Cook Drive Willmot 2770 NSW 95 Mount Ettalong Road Umina	

		hamptonralph46@gmail.com kinghampton@77gmail.com	Beach 2257 NSW	
Ngambaa Cultural Connections	Kaarina Slater	0422 729 117 ngambaaculturalconnections@hotmail.com	6 Natchez Cresent, Greenfield Park NSW 2176	
Goodradigbee Cultural & Heritage Aboriginal Corporation,	Caine Carroll	0410974236 goodradigbee1@outlook.com	1 Morilla Road, East Kurrajong NSW 2758	
Mura Indigenous Corporation,	Phillip Carroll	0448824188 mura.indigenous@bigpond.com	11 Nargal Street Flinders NSW 2529	
Aragung Aboriginal Cultural Heritage Site Assessments	Jamie Eastwood	0427793334 0298323732 James.eastwood@y7mail.com	33 Bulolo Drive Whalan NSW 2770	
Waawaar Awaa Aboriginal Corporation	Rodney Gunther	0410580962 Waawaar.awaa@gmail.com	15 Bungonia Street Prestons NSW 2170	
Wori Woilywa	Daniel Chalker	worivoilywa@gmail.com 0409006216	261 Mockingbird Rd Pheasants Nest NSW 2574	
Darug Custodian Aboriginal Corporation	Justine Coplin	0414 962 766 justinecoplin@optusnet.com.au	PO Box 81, Windsor NSW 2756	



**ANGEL PLACE
LEVEL 8, 123 PITT STREET
SYDNEY NSW 2000**

URBIS.COM.AU
Urbis Pty Ltd
ABN 50 105 256 228

22 March 2021

To whom it may concern,

IVANHOE ESTATE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1.3 – INVITATION TO REGISTER

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW, 2010) ('the Consultation Requirements') as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

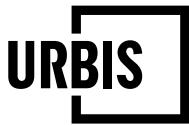
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The ACHA is to be carried out in accordance with relevant guidelines under the *National Parks and Wildlife Act 1974* (NPW Act), including the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011). The assessment would detail any potential Aboriginal cultural heritage resources within the subject area and provide recommendations regarding management of those resources.

Ivanhoe Estate is located within the suburb of Macquarie Park at the northeast of the intersection of Herring Road and Epping Road, within the Ryde Local Government Area (LGA) (see Figure 1 and Figure 2). It is located on the southern fringe of Macquarie Park, and is within approximately 500 metres of both Macquarie Shopping Centre and Macquarie University. The surrounding area is characterised by a mix of commercial and education uses, as well as student accommodation and residential dwellings. The site is approximately 8.2 hectares (ha) and irregular in shape. It previously accommodated 259 social housing dwellings comprising a mix of townhouse and apartment buildings set around a cul-de-sac street layout, with all dwellings now demolished (Figure 2).

The site is in the process of being redeveloped as part of the NSW Government's 'Communities Plus' program which seeks to deliver new communities with good access to transport, employment, improved facilities, and open space through leveraging the expertise and capacity of the private and non-government sectors. Development delivered under Communities Plus is mixed-tenure – that is, a mix of both social and market housing. This mix serves two purposes: to offset the cost of delivering new social housing, and to provide well-integrated communities. Mission Australia Housing will manage the site's social housing portfolio and is a national Tier 1 Community Housing Provider (CHP).



Consent was granted by the Minister for Planning and Public Spaces on 30 April 2020 for the Ivanhoe Estate - Concept Masterplan (SSD-8707) and for the first stage of physical works (SSD-8903) referred to as Stage 1. FPA and NSW Land and Housing Corporation (LAHC) are now seeking to pursue the next stage of planning approvals for the detailed design, construction, and operation of Stage 2 of the Ivanhoe Estate Concept Masterplan. Stage 2 comprises the Village Green and Community Centre (C2), and residential buildings C3 and C4.

Following the consolidation of previous allotments as part of the SSD-8903, the Ivanhoe Estate site is now legally described as Lot 100 in DP1262209 except for a portion of Shrimptons Creek and neighbouring land at 2-4 Lyon Park Road, known as Lot 1 DP 859537. 2-4 Lyonpark Road is owned by LIF Pty Ltd as trustee for Local Government Super, while the Ivanhoe Estate lot is owned and managed by LAHC.

The proponent can be contacted via:

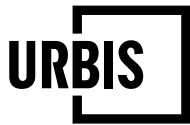
Scott Clohessy
Senior Development Manager
Frasers Property Australia
Suite 11 Lumiere Commercial
Level 12, 1010 Bathurst Street
Sydney NSW 2000
E: Scott.Clohessy@frasersproperty.com.au

In accordance with the *Aboriginal cultural heritage consultation requirements for proponents (DEECW 2010)* (the Consultation Requirements) and Clause 80C of the NSW National Parks and Wildlife Regulation 2009, the Proponent will conduct a community consultation process with registered Aboriginal people. The community consultation will include:

- Identifying and describing the Aboriginal cultural heritage values that exist across the subject area in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW OEH* (2010), and documenting these in an Aboriginal Cultural Heritage Assessment Report (ACHAR) which may include the need for surface survey and test excavation.
- Undertaking consultation with Aboriginal people and document in accordance with *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW).
- The preparation of the ACHAR to support the AHIP application and demonstrating attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts.
- Recording of any Aboriginal objects in line with the requirements of the OEH's Aboriginal Heritage Information Management System (AHIMS) that may be identified within the subject area.

Should you wish to register your interest in this project, please respond in writing by clearly stating your interest and nominating a contact person by **21 April 2021**. Please send responses to the following:

Andrew Crisp
Senior Archaeologist
Urbis
Level 8 123 Pitt Street,
Sydney, NSW, 2000
E: acrisp@urbis.com.au



Please be advised that, as per the Consultation Requirements, the Proponent is required to forward the names of Aboriginal persons and groups who register an interest (Registered Aboriginal Parties) to the Metropolitan Local Aboriginal Land Council and Aboriginal Cultural Heritage Regulation Branch of the DPC unless the person or group specifies that they do not want their details released.

Please be further advised that in accordance with Section 3.4 of the Consultation Requirements, inclusion in the consultation process does not automatically result in paid site assessment. The decision on who is engaged for delivering particular services is made by the Proponent and will be based on a range of considerations including skills, relevant experience, and providing necessary certificates of currency.

If you have any queries in relation to the provided information, please do not hesitate to contact us.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Andrew Crisp", written over a horizontal line.

Andrew Crisp
Senior Consultant
+61 2 8233 7642
acrisp@urbis.com.au

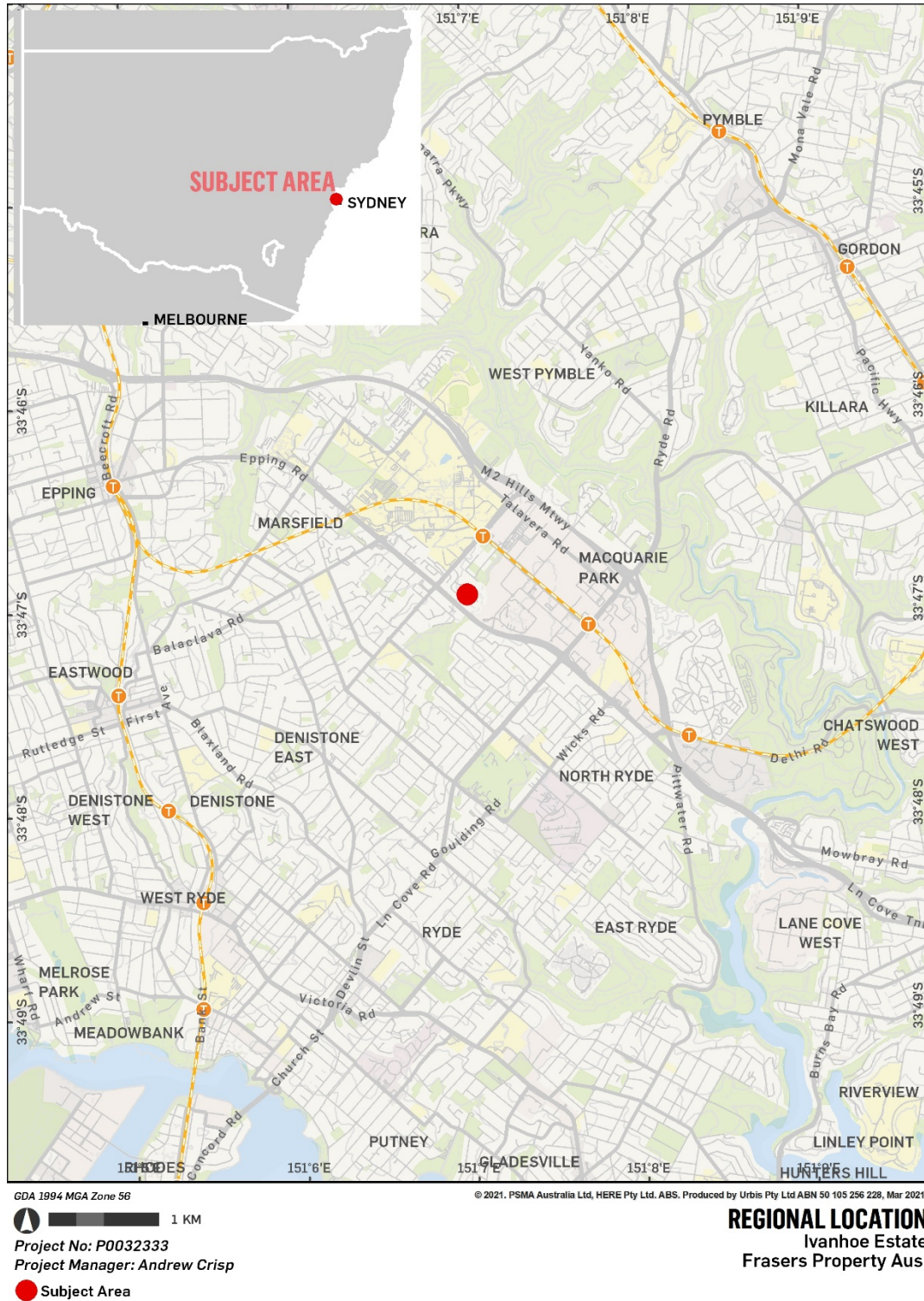
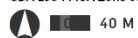


Figure 1 – Regional Location of the subject area



GDA 1994 MGA Zone 56

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Project No: P0032333

Project Manager: Andrew Crisp

■ Subject Area — Contours

Location of the Subject Area

Ivanhoe Estate
Fraser's Property Aus

Figure 2 – Location of the subject area



**Ivanhoe Estate/Macquarie Park NSW
Aboriginal Cultural Heritage Assessment – Community Consultation Stage 1**

Urbis has been commissioned by Frasers Property Australia (FPA) ('the Proponent') to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed redevelopment of the Ivanhoe Estate, Macquarie Park ('the subject area').

The ACHA Report (ACHAR) will form part of the Environmental Impact Statement (EIS) which will accompany a State Significant Development Applications for the development of the subject area. The ACHAR will assess the impacts of the development on the Aboriginal archaeological and cultural heritage values of the site, as required under Condition C2 of the Concept Approval consent

The proponent can be contacted via:

Scott Clohessy
Senior Development Manager
Frasers Property Australia
Suite 11 Lumiere Commercial
Level 12, 1010 Bathurst Street
Sydney NSW 2000
E: Scott.Clohessy@frasersproperty.com.au

In accordance with Section 4.1.3 of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)* and Clause 80C of the *NSW National Parks and Wildlife Regulation 2009*, the Proponent is seeking the registration of Aboriginal persons or groups who may hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) that may be present in the subject area.

Please register your interest in writing to the contact details provided below by 5.00pm 21 April 2021.

Andrew Crisp
Senior Consultant
Urbis Pty Ltd
Level 8 123 Pitt Street
Sydney NSW 2000
E: acrisp@urbis.com.au

Please be advised that the Proponent is required to forward the names of Aboriginal persons and groups who register an interest to the Department of Premier & Cabinet and the Metropolitan Local Aboriginal Land Council; unless the person or group specifies that they do not want their details released.

From: [Danny Franks](#)
To: [Aaron Olsen](#)
Cc: [Andrew Crisp](#)
Subject: Re: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 1.3 - Invitation to Register
Date: Monday, 22 March 2021 10:32:44 AM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Good Morning Andrew,

I hope you and the team are keeping safe and dry.

Please register tocomwall on this project.

Have a nice day

Regards,

Danny franks

Heritage manager
M: 0415226275

Get [Outlook for iOS](#)

From: Aaron Olsen <aolsen@urbis.com.au>
Sent: Monday, March 22, 2021 10:28:29 AM
Cc: Andrew Crisp <acrisp@urbis.com.au>
Subject: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 1.3 - Invitation to Register

Good morning

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) ('the Consultation Requirements') as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

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Ivanhoe Estate is located within the suburb of Macquarie Park at the northeast of the intersection of

From: [philip.khan](#)
To: [Aaron.Olsen](#)
Subject: RE: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 1.3 - Invitation to Register
Date: Monday, 22 March 2021 11:03:50 AM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[0C9119E969D348FA999F6AD55D272970.png](#)
[Public Liability Kamilaroi 2021 to 2022.pdf](#)
[ICARE workers comp. insurance Kamilaroi Yankuntjatjara Working Group 2021.pdf](#)

Hi Aaron,

Thank you for informing us that **Urbis** will be involved in an Aboriginal Cultural Heritage Assessment at **Ivanhoe Estate** &, that you are inviting Aboriginal organisations to register, if they wish too be involved in the community consultation process.

As a senior Aboriginal person for the past 50yrs, I actively participate in the protection of the Aboriginal Cultural Heritage throughout the Sydney Basin, & particularly throughout Western Sydney, on behalf of Kamilaroi Yankuntjatjara Working Group I wish to provide to you my organisation's registration of interest.

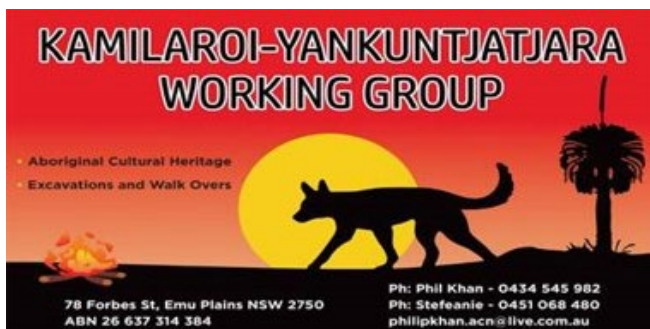
I wish to be involved & participate in all levels of consultation/project involvement. I wish to attend all meetings, participate in available field work & receive a copy of the report.

I have attached a copy of Kamilaroi Yankuntjatjara Working group's Public Liability Insurance & Workers Compensation certificate.

Our RAPS have up to 15yrs Cultural Heritage experience in – field work which involves manual excavation (digging), sieving, identifying artefacts, setting up transits, setting up equipment, packing equipment, site surveys & attending meetings.

Should you wish me to provide further information, please do not hesitate to contact me on 0434545982 or Stefeanie on 0451068480.

Kind Regards
Phil Khan



Sent from [Mail](#) for Windows 10

From: Aaron Olsen <aolsen@urbis.com.au>
Sent: Monday, March 22, 2021 10:28:29 AM
Cc: Andrew Crisp <acrisp@urbis.com.au>
Subject: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 1.3 - Invitation to Register

Good morning

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From: [Gulaga](#)
To: [Aaron Olsen](#)
Subject: Re: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 1.3 - Invitation to Register
Date: Monday, 22 March 2021 4:08:09 PM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Hi Aaron,

Can you please register Gulaga's interest in this project as I hold cultural interests and cultural knowledge for this area.

Kind Regards
Wendy Smith
Cultural Heritage Officer
Gulaga
0401 808 988

This email may contain privileged information. Privilege is not waived if it has been sent to you in error, or if you are not the intended recipient. Please immediately notify me and delete the email if you have received this in error.

On Mon, Mar 22, 2021 at 10:29 AM Aaron Olsen <aolsen@urbis.com.au> wrote:

Good morning

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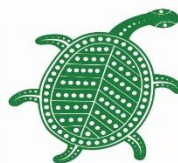
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DARUG CUSTODIAN

ABORIGINAL CORPORATION



DARUG CUSTODIAN
ABORIGINAL
CORPORATION

PO BOX 81 WINDSOR 2756
PHONE: 0245775181 FAX: 0245775098
MOBILE: 0414962766 Justine Coplin
EMAIL: justinecoplin@optusnet.com.au

Attention Urbis

Date: 23/03/21

Subject: Ivanhoe Estate

Dear: Andrew

Our group is a non- profit organisation that has been active for over forty years in Western Sydney, we are a Darug community group with over three hundred members. The main aim in our constitution is the care of Darug sites, places, wildlife and to promote our culture and provide education on the Darug history.

This is an area that our group has a vast knowledge of, we have worked and lived in for many years, this area is significant to the Darug people due to the connection of sites and the continued occupation. Our group has been involved in all previous assessments and works in this area as a traditional owner Darug group for the past 40 plus years.

Therefore, we would like to register our interest for full consultation and involvement in the above project area.

Please contact us with all further enquiries on the above contacts.

Regards

Justine Coplin

We acknowledge and pay respect to the Darug people, the traditional Aboriginal custodians of this land.

From: [Kaarina Slater](#)
To: [Aaron Olsen](#)
Subject: Re: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 1.3 - Invitation to Register
Date: Wednesday, 24 March 2021 3:27:59 PM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Hi Aaron

Ngambaa Cultural Connections would like to register our expression of interest for the project.

Regards,

Kaarina Slater
Director
Ngambaa Cultural Connections
0422 729 117

From: Aaron Olsen <aolsen@urbis.com.au>
Sent: Monday, 22 March 2021 7:28 AM
Cc: Andrew Crisp <acrisp@urbis.com.au>
Subject: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 1.3 - Invitation to Register

Good morning

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From: lilly carroll <didgengunawalclan@yahoo.com.au>

Sent: Thursday, 8 April 2021 5:48 PM

To: Andrew Crisp <acrisp@urbis.com.au>

Subject: EOI

Hi Andrew

DNC would like to register an interest into Ivanhoe estate /Macquarie Park subject subject area

Kind regards

Paul Boyd & Lilly Carroll

Directors DNC

0426823944

[Sent from Yahoo Mail for iPhone](#)

From: [Butucarbin Heritage](#)
To: [Aaron Olsen](#)
Subject: Re: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 1.3 - Invitation to Register
Date: Thursday, 22 April 2021 1:37:21 AM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)

Hi Aaron,
On behalf of Butucarbin, I would like to register interest in relation to the Ivanhoe Estate project.

kind regards,

On Mon, Mar 22, 2021 at 10:29 AM Aaron Olsen <aolsen@urbis.com.au> wrote:

Good morning

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) ('the Consultation Requirements') as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

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AARON OLSEN

CONSULTANT

D +61 2 8233 9957

T +61 2 8233 9900

E aolsen@urbis.com.au

**SHAPING
CITIES AND
COMMUNITIES**



ANGEL PLACE, LEVEL 8, 123 PITT STREET
SYDNEY, NSW 2000, AUSTRALIA

Our highest priority is the health and wellbeing of our people, clients and community. [Click here to read Urbis' response to COVID-19.](#)

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--

Lowanna Gibson

Project Manager for Butucarbin Cultural Heritage Assessments

B.A Archaeology/Anthropology USYD

Juris Doctor UTS

From: [Carolyn .H](#)
To: [Aaron Olsen](#)
Subject: Re: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 1.3 - Invitation to Register
Date: Monday, 26 April 2021 9:41:50 AM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[A1.PL2022.pdf](#)
[A1.WC2022.pdf](#)



Contact: Carolyn Hickey

M: 0411650057

E: Cazadirect@live.com

A: 10 Marie Pitt Place, Glenmore Park, NSW 2745

ACN: 639 868 876

ABN: 31 639 868 876

Hi,

Thank you for your email, I would like to register in being involved in all levels of consultation for this project, such as, Meetings, Reports, Sharing Cultural Information, and available Field Work.

I've had many years' experience in helping preserve Aboriginal cultural heritage on projects, I hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and values that exist in the project area.

I have attached A1 Indigenous Services Insurances.

Please feel free to contact me on details supplied

Kind Regards,

Carolyn Hickey

From: Aaron Olsen <aolsen@urbis.com.au>

Sent: Monday, 22 March 2021 10:28 AM

Cc: Andrew Crisp <acrisp@urbis.com.au>

Subject: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 1.3 - Invitation to Register

Good morning

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the Aboriginal cultural heritage consultation requirements for proponents (DECCW, 2010) ('the Consultation Requirements') as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

7 May 2021

Department of Premier and Cabinet
Heritage NSW
Aboriginal Branch
heritagemailbox@environment.nsw.gov.au

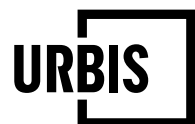
To whom it may concern

STAGE 1.6 – ABORIGINAL CULTURAL HERITAGE ASSESSMENT – IVANHOE ESTATE – LIST OF REGISTERED ABORIGINAL PARTIES AND NOTIFICATION LETTER

In accordance with Section 4.1.6 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010) please find below the compiled list of Registered Aboriginal Parties (RAPs) and notification letter under Section 4.1.3 for the abovementioned project.

Table 1 – List of Registered Aboriginal Parties

Name	Contact
Metropolitan Local Aboriginal Land Council	Nathan Moran
A1 Indigenous Services	Carolyn Hickey
Butucarbin Aboriginal Corporation	Lowanna Gibson
Darug Custodian Aboriginal Corporation	Justine Coplin
Didge Ngunawal Clan	Paul Boyd & Lilly Carroll
Gulaga	Wendy Smith
Kamilaroi Yankuntjatjara Working Group	Phil Khan
Ngambaa Cultural Connections	Kaarina Slater
Tocomwall	Danny Franks

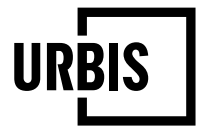


Please do not hesitate to contact us should you have any queries in relation to the provided information.

Yours sincerely,

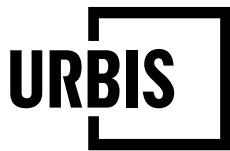
A handwritten signature in dark ink, appearing to read "Andrew Crisp", written over a thin horizontal line.

Andrew Crisp
Senior Consultant
+61 2 8233 7642
acrisp@urbis.com.au



APPENDIX A

NOTIFICATION LETTER



**ANGEL PLACE
LEVEL 8, 123 PITT STREET
SYDNEY NSW 2000**

URBIS.COM.AU
Urbis Pty Ltd
ABN 50 105 256 228

22 March 2021

To whom it may concern,

IVANHOE ESTATE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1.3 – INVITATION TO REGISTER

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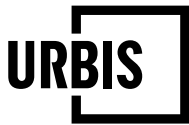
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The site is in the process of being redeveloped as part of the NSW Government's 'Communities Plus' program which seeks to deliver new communities with good access to transport, employment, improved facilities, and open space through leveraging the expertise and capacity of the private and non-government sectors. Development delivered under Communities Plus is mixed-tenure – that is, a mix of both social and market housing. This mix serves two purposes: to offset the cost of delivering new social housing, and to provide well-integrated communities. Mission Australia Housing will manage the site's social housing portfolio and is a national Tier 1 Community Housing Provider (CHP).



Consent was granted by the Minister for Planning and Public Spaces on 30 April 2020 for the Ivanhoe Estate - Concept Masterplan (SSD-8707) and for the first stage of physical works (SSD-8903) referred to as Stage 1. FPA and NSW Land and Housing Corporation (LAHC) are now seeking to pursue the next stage of planning approvals for the detailed design, construction, and operation of Stage 2 of the Ivanhoe Estate Concept Masterplan. Stage 2 comprises the Village Green and Community Centre (C2), and residential buildings C3 and C4.

Following the consolidation of previous allotments as part of the SSD-8903, the Ivanhoe Estate site is now legally described as Lot 100 in DP1262209 except for a portion of Shrimptons Creek and neighbouring land at 2-4 Lyon Park Road, known as Lot 1 DP 859537. 2-4 Lyonpark Road is owned by LIF Pty Ltd as trustee for Local Government Super, while the Ivanhoe Estate lot is owned and managed by LAHC.

The proponent can be contacted via:

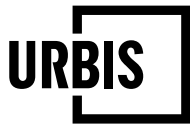
Scott Clohessy
Senior Development Manager
Frasers Property Australia
Suite 11 Lumiere Commercial
Level 12, 1010 Bathurst Street
Sydney NSW 2000
E: Scott.Clohessy@frasersproperty.com.au

In accordance with the *Aboriginal cultural heritage consultation requirements for proponents (DEECW 2010)* (the Consultation Requirements) and Clause 80C of the NSW National Parks and Wildlife Regulation 2009, the Proponent will conduct a community consultation process with registered Aboriginal people. The community consultation will include:

- Identifying and describing the Aboriginal cultural heritage values that exist across the subject area in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW OEH* (2010), and documenting these in an Aboriginal Cultural Heritage Assessment Report (ACHAR) which may include the need for surface survey and test excavation.
- Undertaking consultation with Aboriginal people and document in accordance with *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW).
- The preparation of the ACHAR to support the AHIP application and demonstrating attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts.
- Recording of any Aboriginal objects in line with the requirements of the OEH's Aboriginal Heritage Information Management System (AHIMS) that may be identified within the subject area.

Should you wish to register your interest in this project, please respond in writing by clearly stating your interest and nominating a contact person by **21 April 2021**. Please send responses to the following:

Andrew Crisp
Senior Archaeologist
Urbis
Level 8 123 Pitt Street,
Sydney, NSW, 2000
E: acrisp@urbis.com.au



Please be advised that, as per the Consultation Requirements, the Proponent is required to forward the names of Aboriginal persons and groups who register an interest (Registered Aboriginal Parties) to the Metropolitan Local Aboriginal Land Council and Aboriginal Cultural Heritage Regulation Branch of the DPC unless the person or group specifies that they do not want their details released.

Please be further advised that in accordance with Section 3.4 of the Consultation Requirements, inclusion in the consultation process does not automatically result in paid site assessment. The decision on who is engaged for delivering particular services is made by the Proponent and will be based on a range of considerations including skills, relevant experience, and providing necessary certificates of currency.

If you have any queries in relation to the provided information, please do not hesitate to contact us.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Andrew Crisp", written over a horizontal line.

Andrew Crisp
Senior Consultant
+61 2 8233 7642
acrisp@urbis.com.au

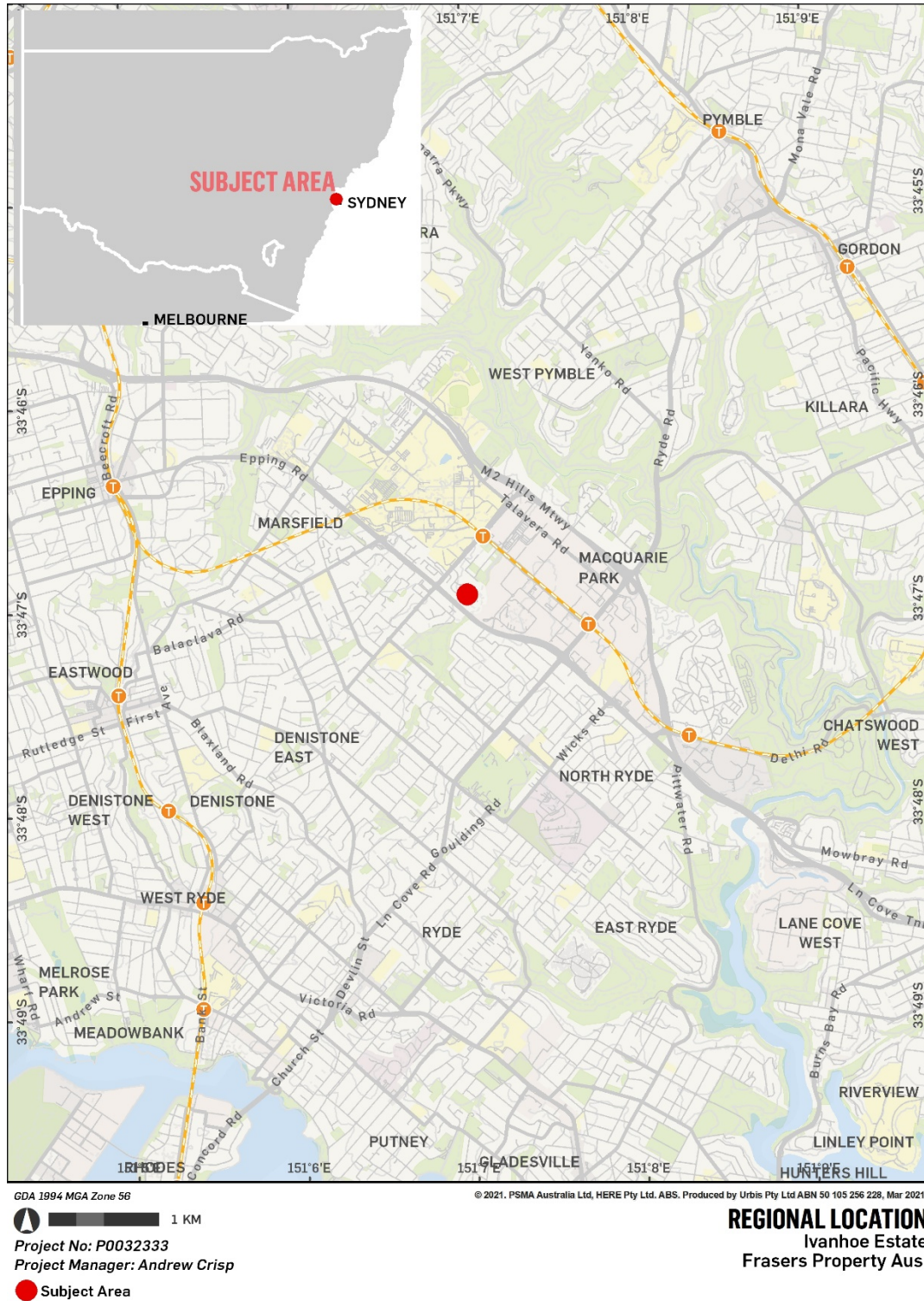
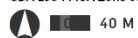


Figure 1 – Regional Location of the subject area



GDA 1994 MGA Zone 56

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Project No: P0032333

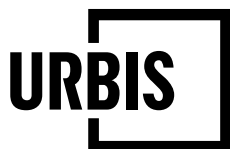
Project Manager: Andrew Crisp

■ Subject Area — Contours

Location of the Subject Area

Ivanhoe Estate
Fraser's Property Aus

Figure 2 – Location of the subject area



**ANGEL PLACE
LEVEL 8, 123 PITT STREET
SYDNEY NSW 2000**

URBIS.COM.AU
Urbis Pty Ltd
ABN 50 105 256 228

7 May 2021

Nathan Moran
Metropolitan Local Aboriginal Land Council
officeadmin@metrolalc.org.au

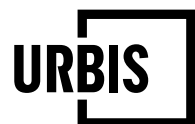
Dear Nathan,

STAGE 1.6 –ABORIGINAL CULTURAL HERITAGE ASSESSMENT – IVANHOE ESTATE – LIST OF REGISTERED ABORIGINAL PARTIES AND NOTIFICATION LETTER

In accordance with Section 4.1.6 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010) please find below the compiled list of Registered Aboriginal Parties (RAPs) and notification letter under Section 4.1.3 for the abovementioned project.

Table 1 – List of Registered Aboriginal Parties

Name	Contact
Metropolitan Local Aboriginal Land Council	Nathan Moran
A1 Indigenous Services	Carolyn Hickey
Butucarbin Aboriginal Corporation	Lowanna Gibson
Darug Custodian Aboriginal Corporation	Justine Coplin
Didge Ngunawal Clan	Paul Boyd & Lilly Carroll
Gulaga	Wendy Smith
Kamilaroi Yankuntjatjara Working Group	Phil Khan
Ngambaa Cultural Connections	Kaarina Slater
Tocomwall	Danny Franks

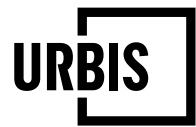


Please do not hesitate to contact us should you have any queries in relation to the provided information.

Yours sincerely,

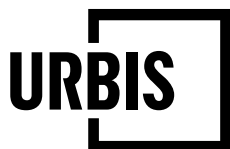
A handwritten signature in black ink, appearing to read "Andrew Crisp". The signature is fluid and cursive, with a horizontal line underneath the name.

Andrew Crisp
Senior Consultant
+61 2 8233 7642
acrisp@urbis.com.au



APPENDIX A

NOTIFICATION LETTER



**ANGEL PLACE
LEVEL 8, 123 PITT STREET
SYDNEY NSW 2000**

URBIS.COM.AU
Urbis Pty Ltd
ABN 50 105 256 228

22 March 2021

To whom it may concern,

IVANHOE ESTATE - ABORIGINAL CULTURAL HERITAGE ASSESSMENT – ABORIGINAL COMMUNITY CONSULTATION STAGE 1.3 – INVITATION TO REGISTER

Please be advised that your contact details have been provided by the Department of Premier and Cabinet (DPC) in accordance with Section 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW, 2010) ('the Consultation Requirements') as a potential Aboriginal stakeholder who may have interest in registering to the abovementioned project.

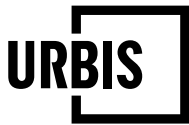
Urbis has been commissioned by Frasers Property Australia (FPA) ('the Proponent') to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed redevelopment of the Ivanhoe Estate ('the subject area') (see Figure 1 and Figure 2).

The ACHA Report (ACHAR) will form part of the Environmental Impact Statement (EIS) which will accompany the State Significant Development Applications for the development of the subject area. The ACHAR will assess the impacts of the development on the Aboriginal archaeological and cultural heritage values of the site, as required under Condition C2 of the Concept Approval consent.

The ACHA is to be carried out in accordance with relevant guidelines under the *National Parks and Wildlife Act 1974* (NPW Act), including the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011). The assessment would detail any potential Aboriginal cultural heritage resources within the subject area and provide recommendations regarding management of those resources.

Ivanhoe Estate is located within the suburb of Macquarie Park at the northeast of the intersection of Herring Road and Epping Road, within the Ryde Local Government Area (LGA) (see Figure 1 and Figure 2). It is located on the southern fringe of Macquarie Park, and is within approximately 500 metres of both Macquarie Shopping Centre and Macquarie University. The surrounding area is characterised by a mix of commercial and education uses, as well as student accommodation and residential dwellings. The site is approximately 8.2 hectares (ha) and irregular in shape. It previously accommodated 259 social housing dwellings comprising a mix of townhouse and apartment buildings set around a cul-de-sac street layout, with all dwellings now demolished (Figure 2).

The site is in the process of being redeveloped as part of the NSW Government's 'Communities Plus' program which seeks to deliver new communities with good access to transport, employment, improved facilities, and open space through leveraging the expertise and capacity of the private and non-government sectors. Development delivered under Communities Plus is mixed-tenure – that is, a mix of both social and market housing. This mix serves two purposes: to offset the cost of delivering new social housing, and to provide well-integrated communities. Mission Australia Housing will manage the site's social housing portfolio and is a national Tier 1 Community Housing Provider (CHP).



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The proponent can be contacted via:

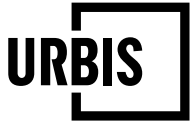
Scott Clohessy
Senior Development Manager
Frasers Property Australia
Suite 11 Lumiere Commercial
Level 12, 1010 Bathurst Street
Sydney NSW 2000
E: Scott.Clohessy@frasersproperty.com.au

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Should you wish to register your interest in this project, please respond in writing by clearly stating your interest and nominating a contact person by **21 April 2021**. Please send responses to the following:

Andrew Crisp
Senior Archaeologist
Urbis
Level 8 123 Pitt Street,
Sydney, NSW, 2000
E: acrisp@urbis.com.au



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Yours sincerely,

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Andrew Crisp
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+61 2 8233 7642
acrisp@urbis.com.au

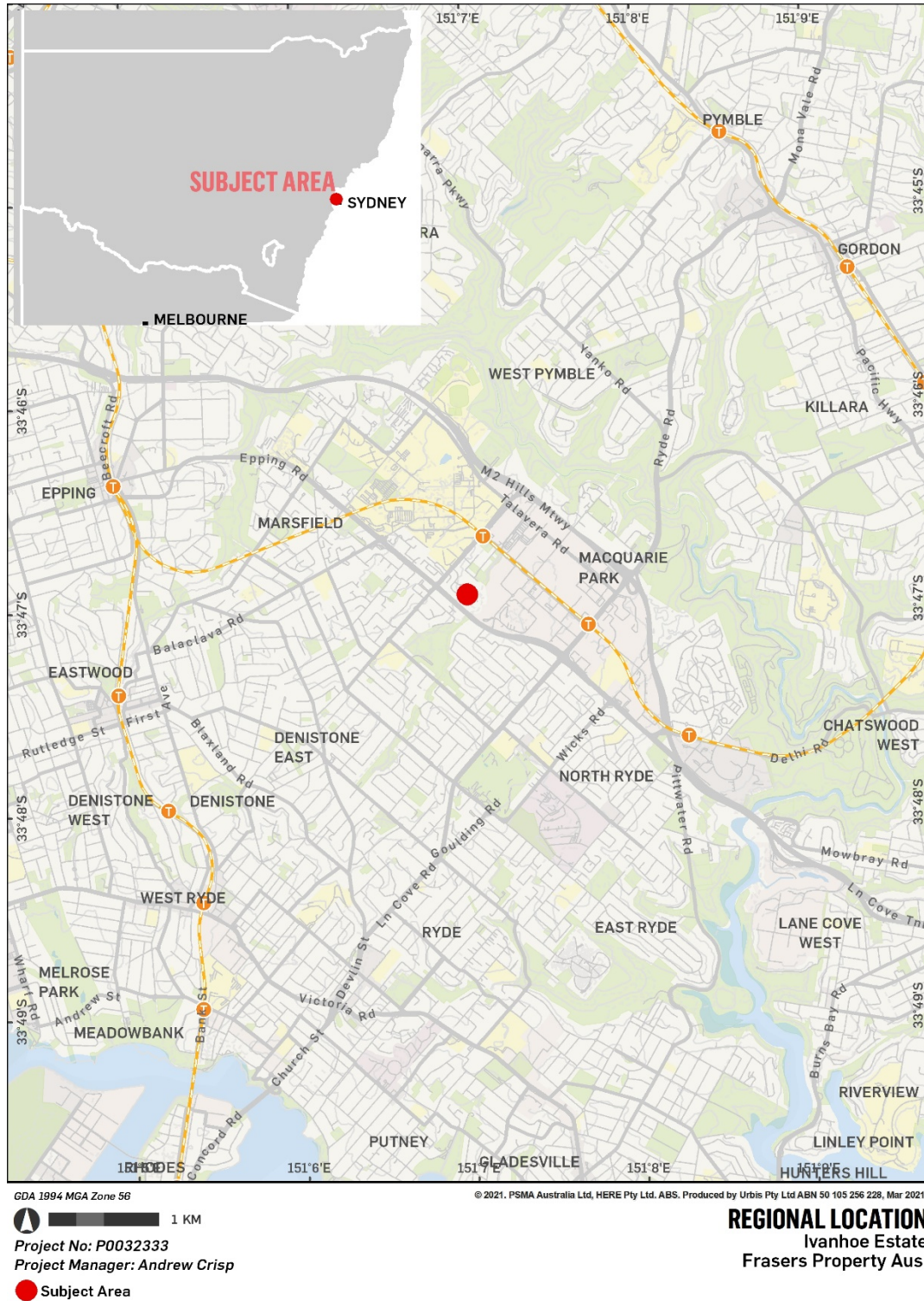
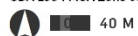


Figure 1 – Regional Location of the subject area



GDA 1994 MGA Zone 56



Project No: P0032333

Project Manager: Andrew Crisp

■ Subject Area — Contours

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Location of the Subject Area

Ivanhoe Estate
Fraser's Property Aus

Figure 2 – Location of the subject area

From: [Aaron Olsen](#)
To: officeadmin@metrolalc.org.au; metrolalc@metrolalc.org.au
Cc: [Andrew Crisp](#)
Subject: Aboriginal Cultural Heritage Assessment – Ivanhoe Estate – Stage 1.6 – List of Registered Aboriginal Parties and Notification Letter (Our Ref: P0032333)
Date: Friday, 7 May 2021 11:17:00 AM
Attachments: [image002.png](#)
[image004.png](#)
[image006.png](#)
[image008.png](#)
[image010.png](#)
[MLALC_Stage1.6_Ivanhoe_F01.pdf](#)

Good morning

In accordance with Section 4.1.6 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010), please find attached a list of Registered Aboriginal Parties (RAPs) and notification letter under Section 4.1.3 for the redevelopment of Ivanhoe Estate at Ivanhoe Place (Lot 100 in DP1262209) and 2-4 Lyon Park Road (Lot 101 in DP 1263727).

If you have any questions, please let us know.

Kind regards

AARON OLSEN
CONSULTANT

D +61 2 8233 9957

T +61 2 8233 9900

E aolsen@urbis.com.au

**SHAPING
CITIES AND
COMMUNITIES**



ANGEL PLACE, LEVEL 8, 123 PITT STREET
SYDNEY, NSW 2000, AUSTRALIA

Our highest priority is the health and wellbeing of our people, clients and community. [Click here to read Urbis' response to COVID-19.](#)

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From: [Aaron Olsen](#)
To: [OEHD Heritage Mailbox](#)
Cc: [Andrew Crisp](#)
Subject: Aboriginal Cultural Heritage Assessment – Ivanhoe Estate – Stage 1.6 – List of Registered Aboriginal Parties and Notification Letter (Our Ref: P0032333)
Date: Friday, 7 May 2021 11:15:00 AM
Attachments: [DPC Stage1.6 Ivanhoe F01.pdf](#)
[image002.png](#)
[image004.png](#)
[image006.png](#)
[image008.png](#)
[image010.png](#)

Good morning

In accordance with Section 4.1.6 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW, 2010), please find attached a list of Registered Aboriginal Parties (RAPs) and notification letter under Section 4.1.3 for the redevelopment of Ivanhoe Estate at Ivanhoe Place (Lot 100 in DP1262209) and 2-4 Lyon Park Road (Lot 101 in DP 1263727).

If you have any questions, please let us know.

Kind regards

AARON OLSEN
CONSULTANT

D +61 2 8233 9957

T +61 2 8233 9900

E aolsen@urbis.com.au

**SHAPING
CITIES AND
COMMUNITIES**



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SYDNEY, NSW 2000, AUSTRALIA

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7 May 2021

To whom it may concern,

ABORIGINAL CULTURAL HERITAGE ASSESSMENT – IVANHOE ESTATE – ABORIGINAL COMMUNITY CONSULTATION STAGE 2 PRESENTATION OF INFORMATION & STAGE 3 GATHERING INFORMATION ABOUT CULTURAL SIGNIFICANCE

Thank you for registering your interest in the above project.

As previously advised, Urbis has been commissioned by Frasers Property Australia (FPA) (the proponent) to conduct an Aboriginal Cultural Heritage Assessment (ACHA) for the proposed redevelopment of the Ivanhoe Estate, Macquarie Park, NSW, 2113 ('the subject area'), which comprises Ivanhoe Place (Lot 100 in DP1262209) and 2-4 Lyon Park Road (Lot 101 in DP 1263727).

The purpose of the community consultation is to assist the Proponent in the preparation of an ACHA Report (ACHAR), which will accompany an Environmental Impact Statement (EIS) in support of State Significant Development Applications for the subject area.

The present communication seeks to provide all registered Aboriginal parties (RAPs) with information about the scope of the proposed project and the proposed ACHA process, in accordance with Section 4.2.1 of the *Aboriginal cultural heritage consultation requirements for proponents 2010* (Department of Environment, Climate Change and Water NSW) ('the Consultation Requirements'). It is further aimed at facilitating a process for RAPs to: (a) contribute to culturally appropriate information gathering and research methodology; (b) provide information that will enable the cultural significance of Aboriginal objects and/or places within or near the proposed project to be determined; and (c) have input into the development of any cultural heritage management options, in accordance with Section 4.2.2 of the Consultation Requirements.

1. PROJECT INFORMATION

The details of the proposed project that are relevant to the nature, scope, methodology and impacts are outlined below, in accordance with Section 4.2.2(a) of the Consultation Requirements.

The subject area is located within the City of Ryde Local Government Area (LGA), approximately 12.5km north-west of the Sydney CBD (Figure 1 and Figure 2). It is located on the southern fringe of Macquarie Park, and is within approximately 500 metres of both Macquarie Shopping Centre and Macquarie University. The surrounding area is characterised by a mix of commercial and education uses, as well as student accommodation and residential dwellings. The subject area is approximately 8.2ha and is irregular in shape. It has frontages on Epping Road to the south, Lyon Park Road to the east and Herring Road to the west. It is further bounded to the west and north by mixed use and lots

and parkland and to the east by commercial lots. The subject area previously accommodated 259 social housing dwellings comprising a mix of townhouse and apartment buildings set around a cul-de-sac street layout, with all dwellings now demolished.

The subject area is being redeveloped as part of the NSW Government's 'Communities Plus' program, which seeks to deliver new communities with good access to transport, employment, improved facilities, and open space through leveraging the expertise and capacity of the private and non-government sectors. Development delivered under Communities Plus is mixed tenure, combining both social and market housing. Consent was granted by the Minister for Planning and Public Spaces on 30 April 2020 for the Ivanhoe Estate - Concept Masterplan (SSD-8707) and for the first stage of physical works (SSD-8903) referred to as Stage 1.

The present ACHAR relates to subsequent State Significant Development Applications (SSDA) for the Ivanhoe Estate redevelopment (including but not limited to Stage 2). These SSDAs will be pursuant to the approved Ivanhoe Estate Concept Masterplan (SSD-8707) and subsequent to the approved Stage 1 works (SSD-8903).

Stage 2 of the proposed redevelopment comprises the Village Green and Community Centre (C2), and residential buildings C3 and C4 (Figure 3 and Figure 4). The Stage 2 application will include the following works, noting site preparation works, roads, servicing and public domain works across the site have already been approved under SSD-8903:

- The detailed design, construction, and operation of:
 - C2 composing the community centre, pool, gym and Village Green central open space area.
 - C3 comprising a 17-storey mixed use building with approximately 170 market housing residential apartments and ground floor retail uses.
 - C4 comprising a 24-storey building with 286 market apartments and a 17-storey building comprising 216 social housing apartments.
- Excavation of basements for Buildings C3 and C4, and detailed earthworks to achieve the required levels for the community centre and Village Green.
- Utilities and services infrastructure to tie-into the detailed requirements of the proposed buildings.
- New driveways and public domain areas to tie-into the approved internal road network and road reserves.
- Stratum subdivision to correspond with the proposed buildings.

The capital investment value of Stage 2 is over \$30 million and is carried out on behalf of the NSW Land and Housing Corporation, as such is classified as State Significant Development (SSD) in accordance with Clause 10, Schedule 2 of State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD).

1.1. ARCHAEOLOGICAL CONTEXT

The Aboriginal Heritage Information Management System (AHIMS) database comprises previously registered Aboriginal archaeological objects and cultural heritage places in NSW and it is managed by the Department of Premier and Cabinet (DPC) under Section 90Q of the NPW Act.

A search of the AHIMS database was carried out on 5 March 2021 (AHIMS Client Service ID: 574117) for an area of approximately 7km by 7km around the subject area. The basic and extensive AHIMS

search results are provided in Appendix A. The AHIMS search identified no Aboriginal object or places within or immediately adjacent to the subject area. A total of 81 Aboriginal objects were identified in the extensive AHIMS search area. Two registered sites were identified in the AHIMS register as 'not a site', reducing the total number of sites to 79. A summary of the identified Aboriginal sites is provided in Table 1 and their spatial distribution is shown in Figure 5.

As part of the ACHA process, the relevance of Aboriginal objects in the extensive search area to the archaeological potential of the subject area will be considered.

Table 1 – AHIMS search results (Client Service ID: 574117)

Site Type	Context	Number	Percentage
Art	Open	14	18%
Shelter with Midden	Closed	13	16%
Shelter with Artefact Scatter	Closed	11	14%
Shelter with PAD	Closed	9	11%
Grinding Grooves	Open	8	10%
Shelter with Art	Closed	6	8%
Artefact Scatter	Open	3	4%
Midden	Open	3	4%
Shelter with Art and Midden	Closed	3	4%
Midden with PAD	Open	2	3%
Shelter with Artefact Scatter and Midden	Closed	2	3%
Grinding Grooves with Water Hole	Open	1	1%
Isolated Find	Open	1	1%
Isolated Find with PAD	Open	1	1%
Shelter	Closed	1	1%
Shelter with Isolated Find	Closed	1	1%
Total		79	100%

1.2. ENVIRONMENTAL CONTEXT

The subject area is located within the Cumberland Plain, which consists of mostly low rolling hills and wide valleys, lying on Triassic shales and sandstones. The NSW Soil and Land Information System (SALIS) identifies the majority of the subject area as being located within the Lucas Heights (lh) soil landscape, with the western corner of the subject area identified as being located within the Glenorie (gn) soil landscape (Figure 6).

The eastern boundary of DP 1262209 Lot 100 and western boundary of DP 1263727 Lot 101 are defined by a lower order stream, Shrimptons Creek (Figure 6). Approximately half of the subject area lies within 200m of Shrimptons Creek.

Although the subject area includes numerous mature trees, it appears unlikely that the subject area currently includes any remnant vegetation due to historical land clearance. Original vegetation may have included low eucalypt open-forest and woodland with a sclerophyll shrub understorey and tall open forest (wet sclerophyll forest).

It is apparent that the topography of the subject area has been modified by historical activities.

As part of the ACHA process, the relevance of the environmental context of the subject area to the archaeological potential of the subject area will be considered.

2. METHODOLOGY

The proposed impact assessment process for the ACHA, including the input points into the investigation and assessment activities for RAPs, is outlined below, in accordance with Section 4.2.2(b) of the Consultation Requirements.

The ACHA will be conducted in accordance with Part 6 of the *National Parks and Wildlife Act 1974* ('NPW Act'), Part 5 of the *National Parks and Wildlife Regulation 2019* ('NPW Reg') and will adhere to the following guidelines:

- The Consultation Requirements.
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (Department of Environment, Climate Change and Water NSW, 2010).
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales* (Office of Environment and Heritage, Department of Premier and Cabinet, 2011).
- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS, 2013).

The ACHA will follow the general methodology described in Table 2 below.

Table 2 – Aboriginal cultural heritage assessment methodology

Process Method	Description
Desktop assessment	Collection and evaluation of background information, including archaeological and historical resources and environmental conditions, to develop a predictive model for archaeological potential.
Consultation with RAPs	Providing information on the project to RAPs and gathering information about the proposed methodology and the Aboriginal cultural heritage values and significance of the subject area.
Site inspection with RAPs	On-site meeting including site inspection of the subject area with the RAPs to allow further opportunity for cultural information to be provided and for the RAPs to familiarise themselves with the subject area and discuss the archaeological approach.
Preparation of draft ACHA report	Synthesis of all information collected during the ACHA process to prepare a draft assessment report and provision of the draft report to the Proponent and the RAPs for comments. The report will include an assessment of significance of any Aboriginal objects or Aboriginal cultural heritage values that may exist within the subject area, an impact assessment and provide management and mitigation measures.
Finalisation of ACHA report	Incorporation of all comments from the Proponent and RAPs into ACHA report and finalisation.

Urbis welcomes input and information from the RAPs at any stage throughout the entire process of the ACHA. Consistent with the Consultation Requirements, the formal input points for the consultation are the following:

- During Stage 2 and 3 – Following review of the current communication, which presents information about the proposed project and ACHA methodology.
- During Stage 2 and 3 – During or following the site visit and meeting.
- During Stage 4 – Following review of the draft ACHA.

The critical timelines for the above stages are provided in Section 3 below.

3. CRITICAL TIMELINES

The critical timelines and milestones for the completion of the ACHA and delivery of reports are presented in Table 3 below, in accordance with Section 4.2.2(c) of the Consultation Requirements. Please note that the presented timeframes are estimates only and are intended as a guided to allow forward planning of personnel and resources.

Table 3 – Critical timelines

Consultation Stage	Timing
Stage 2 and 3: Provision of comments on the provided project information and proposed methodology (this document) by RAPs.	Close of business 4 June 2021 (i.e. within 28 days of the release date of this document).
Stage 2 and 3: Site inspection and meeting.	Date to be confirmed.
Stage 4: Provision of the draft ACHA report (including the proposed management and mitigation measures) to the RAPs.	Anticipated to be provided by 11 June 2021 (date to be confirmed).
Stage 4: Provision of comments on draft ACHA report by RAPs.	Within 28 days of delivery of the draft ACHA report to RAPs (anticipated date of 9 July 2021).
Stage 4: Finalisation of the ACHA report including the consideration of all comments and feedback.	Within one week of the closing of the comment period for the draft ACHA report (anticipated date of 16 July 2021).

4. ROLES, FUNCTIONS AND RESPONSIBILITIES

The roles, functions and responsibilities of the proponent and RAPs are defined below, in accordance with Section 4.2.2(d) of the Consultation Requirements.

The roles, functions and responsibilities of the Proponent, Urbis (acting on behalf of the Proponent), RAPs and any other parties involved in the consultation process are those defined in Section 5 of the Consultation Requirements.

Please note that, in accordance with Section 3.4 of the Consultation Requirements, consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring. Furthermore, there is no obligation on the Proponent to employ Aboriginal people registered for consultation. Aboriginal people may provide services to the Proponent through a contractual arrangement separate to the consultation process. Consultation will continue irrespective of potential or actual employment opportunities for Aboriginal people.

5. GATHERING CULTURAL INFORMATION

Urbis is providing the opportunity for RAPs to identify, raise and discuss their cultural concerns, perspectives and assessment requirements (if any), in accordance with Section 4.2.2(e) of the Consultation Requirements.

Urbis is actively seeking information on the cultural heritage and cultural significance of the subject area. Such information includes the existence of any Aboriginal objects of cultural value to Aboriginal people in or near the subject area and the existence of any places of cultural value to Aboriginal people in or near the subject area (whether declared under s.84 of the NPW Act or not), including places of social, spiritual and cultural value, historic places with cultural significance and potential places/areas of historic, social, spiritual and/or cultural significance.

Please also consider the following when providing information:

- Do you have information on any Aboriginal objects within or near the subject area?
- Do you or somebody you know have information of cultural values, stories in relation to the subject area and if that information can be shared?

If you or your organisation has sensitive or restricted public access information for determining or managing the heritage values of the subject area, it is proposed that the proponent will manage this information (if provided by the Aboriginal community) in accordance with a sensitive cultural information management protocol. It is anticipated that the protocol will include making note of and managing the material in accordance with the following key limitations as advised by Aboriginal people at the time of the information being provided:

- Any restrictions on access of the material.
- Any restrictions on communication of the material (confidentiality).
- Any restrictions on the location/storage of the material.
- Any cultural recommendations on handling the material.
- Any names and contact details of persons authorised within the relevant Aboriginal group to make decisions concerning the Aboriginal material and degree of authorisation.
- Any details of any consent given in accordance with customary law.
- Any access and use by the RAPs of the cultural information in the material.

Please consider the above list when providing your recommendations regarding any culturally sensitive information.

6. QUESTIONNAIRE

To streamline information gathering during Stage 2 and 3, and to inform the proponent for any field inspection component, Urbis requests the following information from you:

1. **Cultural connection:** Please describe the nature of your cultural connection to the country on which the subject area is situated. Please include any relevant cultural knowledge or knowledge of Aboriginal objects or places within the subject area. Have you ever lived in or near the subject area? If you are a Traditional Owner, please state this clearly.

2. **Representing your community members:** Please state who you or your organisation represents. Do you or your organisation represent other members of the Aboriginal community? If so, please describe how information is provided to the other members, and how their information and knowledge may be provided back to the proponent and Urbis.
3. **Previous experience:** Please list your relevant (for example, in the area of the proposed project) previous experience in providing cultural heritage advice and survey participation.
4. **Schedule of Rates:** Please provide your Certificate of Currency including Product and Public Liability Insurance and Worker's Compensation. Please also include a schedule of rates (hourly/half day/day) for fieldwork participation, and include any expenses you may expect to incur, and these will be sought to be reimbursed. Please note that it is for the discretion for the proponent to decide if they invite RAPs for site works and the consultation process does not guarantee paid employment.

The above questions are provided as a questionnaire in Appendix B, for your convenience. Please complete the questionnaire and return it to:

Aaron Olsen
Consultant
Urbis
Level 8, 123 Pitt Street
Sydney NSW 2000
E: aolsen@urbis.com.au

Please provide the requested information and any other comments by close of business **4 June 2021**. Comments received after this date might be excluded from the draft ACHA report.

If you have any questions, please do not hesitate to contact us.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Andrew Crisp".

Andrew Crisp
Senior Consultant
+61 2 8233 7642
acrisp@urbis.com.au

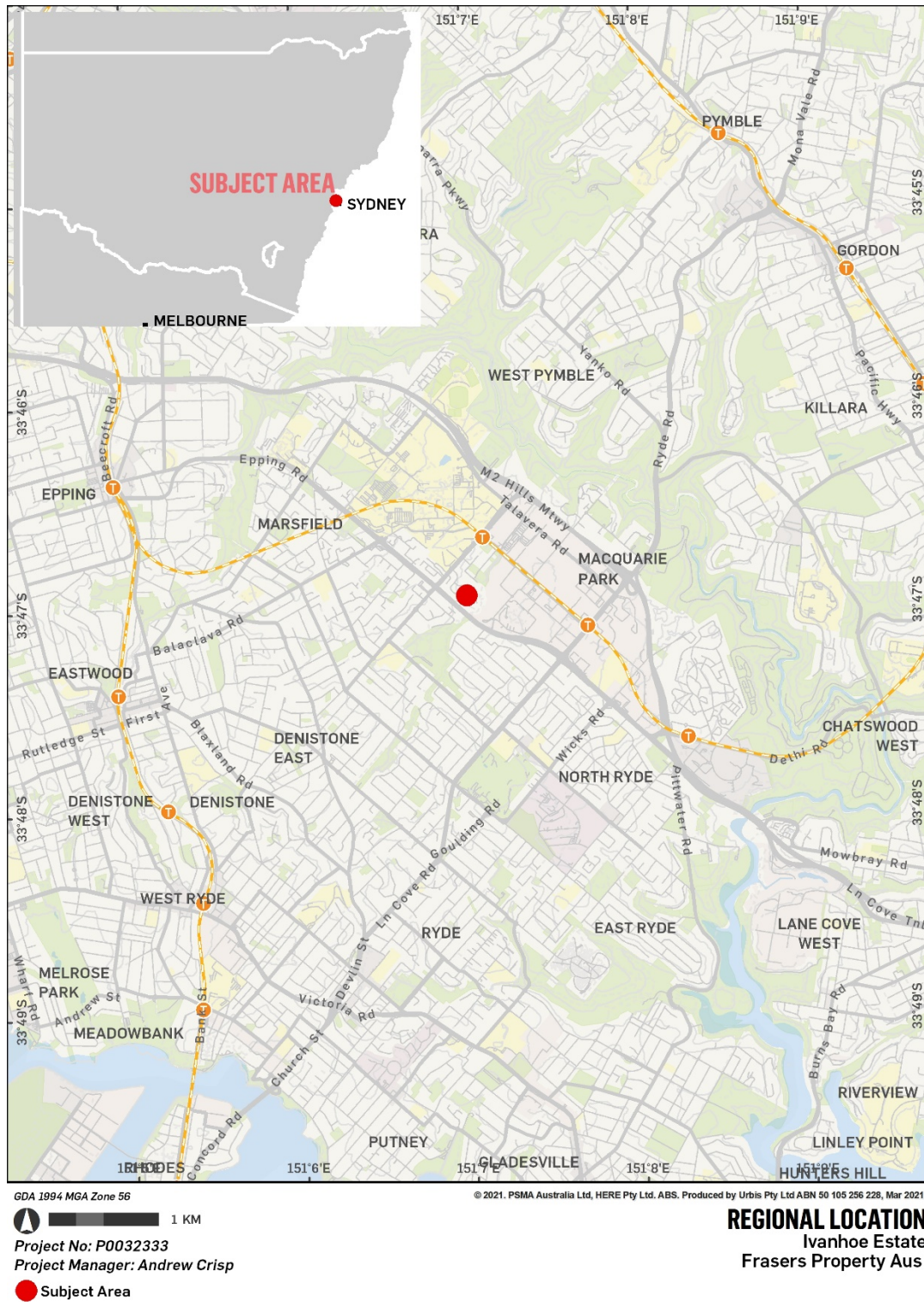
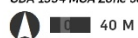


Figure 1 – Regional location



GDA 1994 MGA Zone 56



Project No: P0032333

Project Manager: Andrew Crisp

Subject Area — Contours

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Location of the Subject Area

Ivanhoe Estate

Frasers Property Aus

Figure 2 – Location of the subject area



Figure 3 – Ivanhoe Estate Masterplan
Source: Ethos Urban

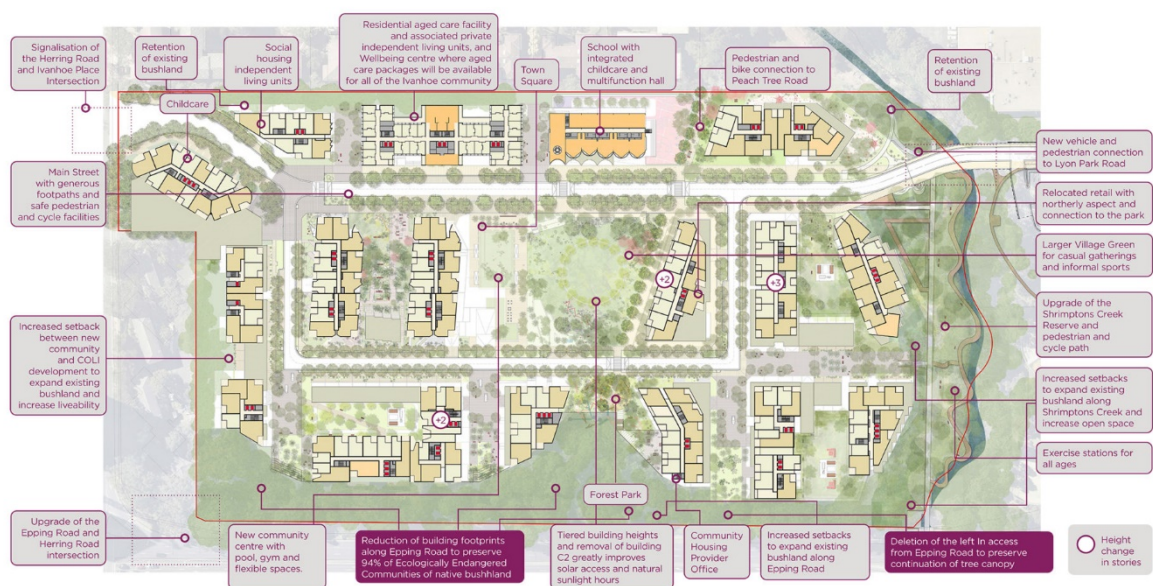


Figure 4 – Ivanhoe Estate Masterplan
Source: Ethos Urban

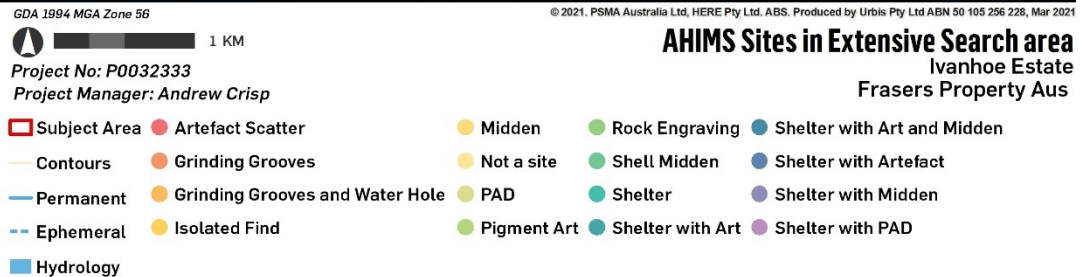
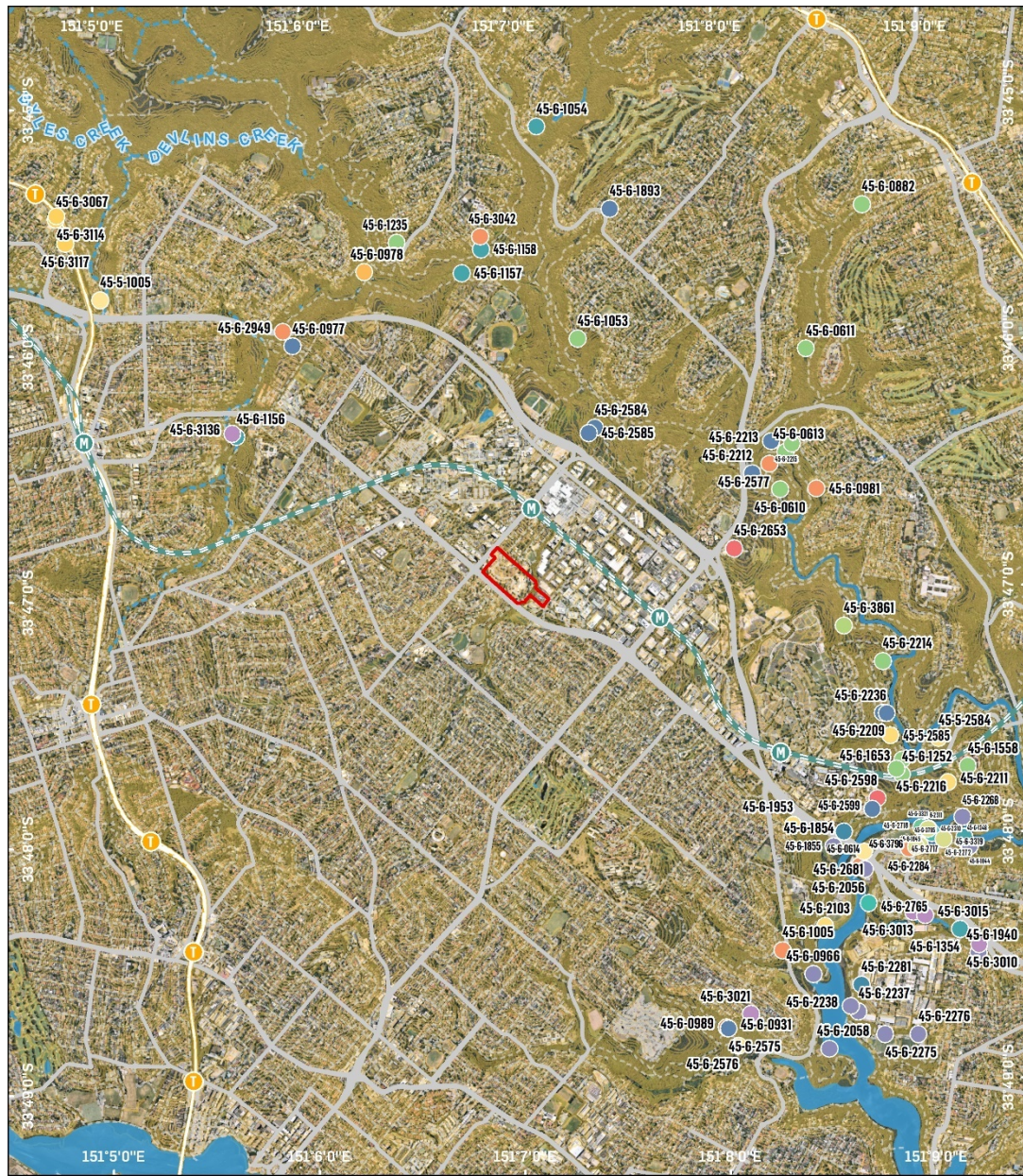
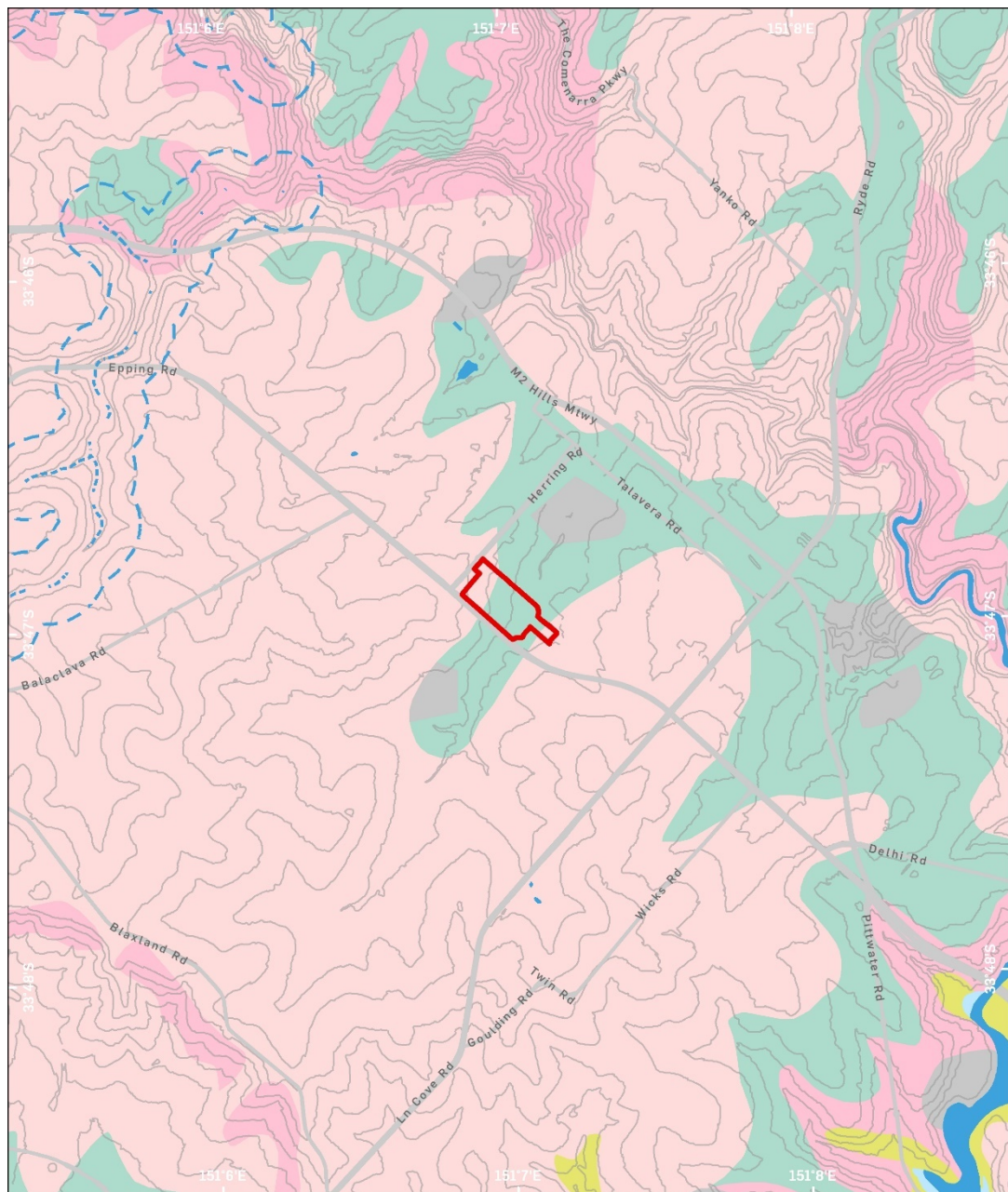


Figure 5 – Registered Aboriginal sites in extensive search area



GDA 1994 MGA Zone 56

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1 KM

Project No: P0032333

Project Manager: Andrew Crisp

Subject Area

Alluvial (ALlc)

Colluvial (COwp)

Erosional (ERgn)

Residual (RElh)

Hydrology

Colluvial (COha)

Disturbed Terrain (DTxx)

Erosional (ERgy)

Water

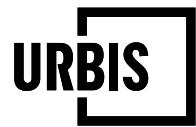
Ephemeral

Hydrology 200m Buffer

SOIL LANDSCAPES AND HYDROLOGY

Ivanhoe Estate
Fraser's Property Aus

Figure 6 – Soils landscapes and hydrology



APPENDIX A

AHIMS BASIC AND EXTENSIVE RESULTS

Urbis Pty Ltd - Angel Place L8 123 Pitt Street

Date: 05 March 2021

Level 8 123 Angel Street
Sydney New South Wales 2000

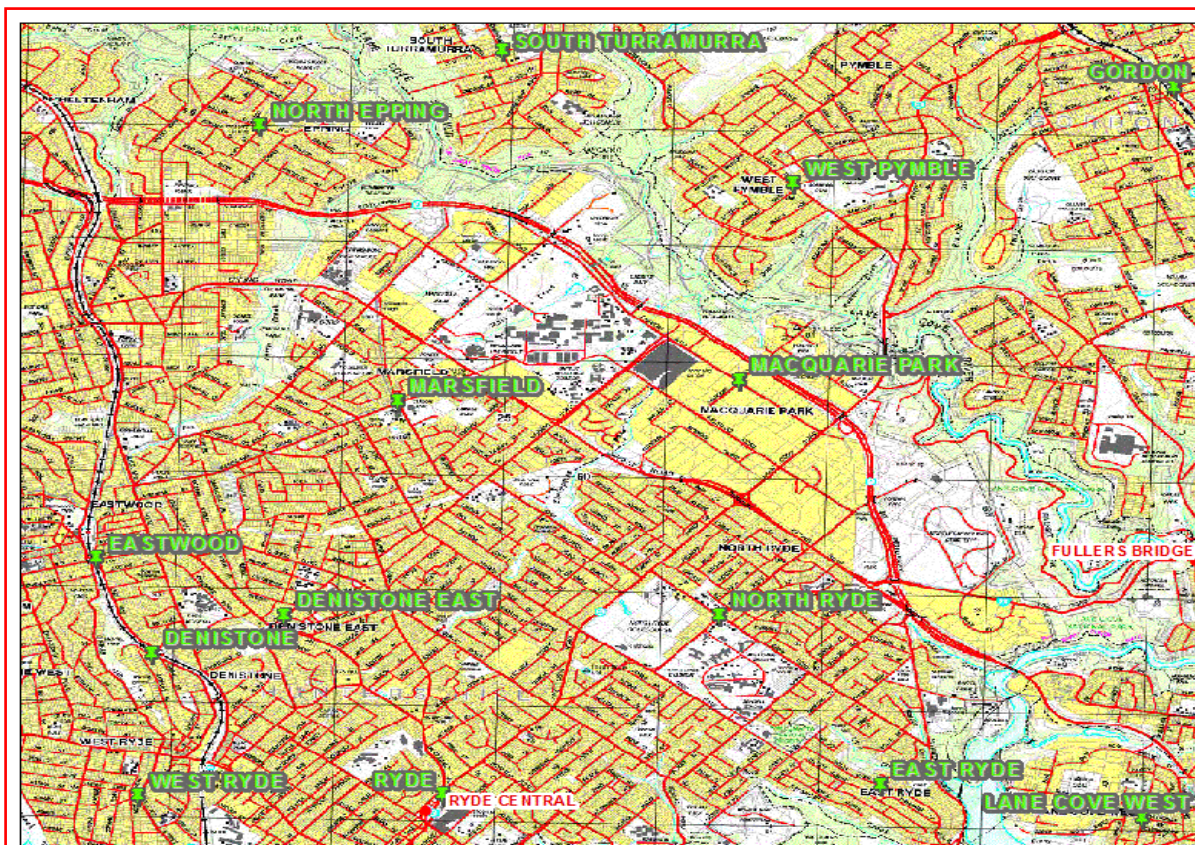
Attention: Meggan Walker

Email: mwalker@urbis.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 56, Eastings : 322157 - 329157, Northings : 6256858 - 6263858 with a Buffer of 0 meters, conducted by Meggan Walker on 05 March 2021.

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



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

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

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

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

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2584	Shrimptons Creek 1;Macquarie Park (Lane Cove NP); RYDE 005	GDA	56	326234	6261520	Closed site	Valid	Artefact : -	Shelter with Deposit	98744,102489
	<u>Contact</u>	<u>Recorders</u>	Michael Guider,Aboriginal Heritage Office					<u>Permits</u>		
45-6-2585	Shrimpton's Creek 2;Macquarie Park (Lane Cove NP); RYDE 006	GDA	56	326189	6261480	Closed site	Valid	Artefact : -	Shelter with Deposit	98744,102489
	<u>Contact</u>	<u>Recorders</u>	Michael Guider,Aboriginal Heritage Office					<u>Permits</u>		
45-6-2598	CSIRO 3 (CSIRO North Ryde) RYDE 010	GDA	56	328354	6258740	Open site	Valid	Artefact : -	Open Camp Site	4157,102489
	<u>Contact</u>	<u>Recorders</u>	Aboriginal Heritage Office,Ms.Tessa Corkill					<u>Permits</u>		
45-6-2599	CSIRO 2 (CSIRO North Ryde) RYDE 011	GDA	56	328319	6258660	Closed site	Valid	Artefact : -	Shelter with Deposit	4157,102489
	<u>Contact</u>	<u>Recorders</u>	Aboriginal Heritage Office,Ms.Tessa Corkill					<u>Permits</u>		
45-6-2236	Blue Gum Cave;	AGD	56	328320	6259190	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2237	Blackman Park 4;	AGD	56	328110	6256950	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2238	Blackman Park 5;	AGD	56	328050	6256990	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2275	Blackman Park 1;	AGD	56	328310	6256780	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2276	Blackman Park 2;	AGD	56	328560	6256780	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2281	Mars Rd Cave;Lane Cove West;	AGD	56	328130	6257150	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2284	Athletics Fields;Lane Cove West;	AGD	56	328490	6258170	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2310	Hand Hold Cave;	GDA	56	328738	6258512	Open site	Valid	Artefact : -	Open Camp Site	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		
45-6-2311	Rope Swing Cave;	GDA	56	328735	6258502	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider					<u>Permits</u>		

Report generated by AHIMS Web Service on 05/03/2021 for Meggan Walker for the following area at Datum :GDA, Zone : 56, Eastings : 322157 - 329157, Northings : 6256858 - 6263858 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 81

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

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-2216	Lane_Cove_#1	GDA	56	328497	6258962	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899
	<u>Contact</u>	<u>Recorders</u>	Ms.Bronwyn Conyers,DPIE,Ms.Elise McCarthy							
45-6-2653	Eden Gardens PAD RYDE 007	GDA	56	327279	6260615	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : -		102489
	<u>Contact</u>	<u>Recorders</u>	Aboriginal Heritage Office,Ms.Norma Richardson							
45-6-2681	PAD B	AGD	56	328150	6258150	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -	1613,1685	
	<u>Contact</u>	<u>Recorders</u>	Mrs.Robynne Mills							
45-6-2272	Mowbray Park 5;	GDA	56	329010	6258450	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							
45-6-0989	Gladesville;Ryde 018	GDA	56	327224	6257020	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102489
	<u>Contact</u>	<u>Recorders</u>	Mr.R Taplin,Aboriginal Heritage Office							
45-5-2584	LC NPM 1	AGD	56	328710	6259000	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Bobbie Oakley							
45-5-2585	LCNPM 2	AGD	56	328350	6259020	Open site	Valid	Shell : -, Artefact : -	Midden	
	<u>Contact</u>	<u>Recorders</u>	Bobbie Oakley							
45-6-1558	Delhi Road;North Ryde; RYDE 009	GDA	56	329034	6258982	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	102489
	<u>Contact</u>	<u>Recorders</u>	Warren Bluff,Aboriginal Heritage Office							
45-6-2056	Footbridge Cave;	GDA	56	328261	6258205	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1809
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							
45-6-2058	Sugarloaf 2	AGD	56	327890	6256670	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	1809
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							
45-6-0610	Lane Cove River De Burgh's Bridge	AGD	56	327518	6260868	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899,98744
	<u>Contact</u>	<u>Recorders</u>	Unknown Author							
45-6-0611	Lane Cove River West Pymble	AGD	56	327715	6261925	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899,98744
	<u>Contact</u>	<u>Recorders</u>	Charles.D Power							
45-6-0613	Lane Cove River Terrace Road Bradfield	AGD	56	327560	6261150	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899,98744
	<u>Contact</u>	<u>Recorders</u>	Ms.Bronwyn Conyers							

Report generated by AHIMS Web Service on 05/03/2021 for Meggan Walker for the following area at Datum :GDA, Zone : 56, Eastings : 322157 - 329157, Northings : 6256858 - 6263858 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 81

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-0614	North Ryde;Delhi Rd;	AGD	56	328121	6258045	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-1893	KP.1;	AGD	56	326239	6262975	Closed site	Valid	Artefact : -	Shelter with Deposit	
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-5-1005	IFCH1	AGD	56	322415	6262289	Open site	Not a Site	Artefact : -	Isolated Find	
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2209	Carters creek.	AGD	56	328290	6259190	Closed site	Valid	Artefact : -	Shelter with Deposit	1899
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2211	Lane Cove 3	AGD	56	328780	6258670	Open site	Valid	Shell : -, Artefact : -	Midden	1899
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2212	Blue Hole	AGD	56	327310	6260990	Closed site	Valid	Artefact : -	Shelter with Deposit	1899,98744
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2215	Terrace Road #2	AGD	56	327610	6261210	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899,98744
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2103	Magdala park; RYDE 014	GDA	56	327964	6257780	Open site	Valid	Shell : -, Artefact : -	Midden,Open Camp Site	102489
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-1235	Epping;Lane Cove River;	AGD	56	324644	6262720	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2575	Strangers Creek; RYDE 020	GDA	56	327239	6257010	Closed site	Valid	Artefact : -	Shelter with Deposit	102489
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2576	Field of Mars; RYDE 021	GDA	56	327314	6256880	Open site	Valid	Shell : -, Artefact : -	Midden	102489
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-2577	River Bend;	AGD	56	327440	6261060	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	98744
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-1156	Epping;Terrys Creek Cave; RYDE 002	GDA	56	323544	6261450	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	102489
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							
45-6-1157	Brown;Cut Inside Cave; RYDE 003	GDA	56	325234	6262680	Closed site	Valid	Art (Pigment or Engraved) : -	Shelter with Art	102489
	<u>Contact</u>	<u>Recorders</u>	<u>Permits</u>							

Report generated by AHIMS Web Service on 05/03/2021 for Meggan Walker for the following area at Datum :GDA, Zone : 56, Eastings : 322157 - 329157, Northings : 6256858 - 6263858 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 81

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-1158	Brown Two Ceiling Domes Cave RYDE 004	AGD	56	325274	6262670	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	102489
	<u>Contact</u>	<u>Recorders</u>	Mr.R Taplin,Aboriginal Heritage Office							<u>Permits</u>
45-6-2268	Big River Cave;	AGD	56	328890	6258410	Closed site	Valid	Shell :-, Artefact :-	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							<u>Permits</u>
45-6-1348	Mowbray Park;Lane Cove West;Mowbray Park 1.;Chatswood West;	GDA	56	329030	6258405	Closed site	Valid	Shell :-, Artefact :-, Art (Pigment or Engraved) :-	Shelter with Art,Shelter with Midden	1497
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow,Michael Guider							<u>Permits</u>
45-6-1354	Sewer Pipe Cave;Stringybark Creek;	GDA	56	328974	6257760	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	
	<u>Contact</u>	<u>Recorders</u>	Ms.Tessa Corkill							<u>Permits</u>
45-6-1252	LC#4 Chatswood	AGD	56	328435	6258730	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	1899
	<u>Contact</u>	<u>Recorders</u>	P Clark,Ms.Bronwyn Conyers							<u>Permits</u>
45-6-1940	Stringy Bark Creek Cave 1;	AGD	56	329010	6257390	Closed site	Valid	Shell :-, Artefact :-	Shelter with Midden	
	<u>Contact</u>	<u>Recorders</u>	Michael Guider							<u>Permits</u>
45-6-0931	Boronia Park, Ryde 019	GDA	56	327234	6257010	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	102489
	<u>Contact</u>	<u>Recorders</u>	Charles.D Power,Aboriginal Heritage Office							<u>Permits</u>
45-6-1653	Ironbarks	AGD	56	328440	6258840	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	J Wyeth							<u>Permits</u>
45-6-0882	Lane Cove River;Gordon;	AGD	56	328134	6263010	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	Charles.D Power							<u>Permits</u>
45-6-1953	Pages Creek Cave;	GDA	56	327724	6258540	Open site	Valid	Shell :-, Artefact :-	Midden	102489
	<u>Contact</u>	<u>Recorders</u>	Michael Guider,Aboriginal Heritage Office							<u>Permits</u>
45-6-1053	Lane Cove River;	AGD	56	326000	6262000	Open site	Valid	Art (Pigment or Engraved) :-	Rock Engraving	98744
	<u>Contact</u>	<u>Recorders</u>	Mr.R Taplin							<u>Permits</u>
45-6-1054	Lane Cove;Man Goanna Cave;	AGD	56	325690	6263590	Closed site	Valid	Art (Pigment or Engraved) :-	Shelter with Art	
	<u>Contact</u>	<u>Recorders</u>	ASRSYS							<u>Permits</u>
45-6-0966	Kitty's Creek;Lane Cove SRA; RYDE 016	GDA	56	327874	6257420	Closed site	Valid	Shell :-, Artefact :-	Shelter with Midden	1809,102489
	<u>Contact</u>	<u>Recorders</u>	Val Attenbrow,Alice Gorman,Aboriginal Heritage Office							<u>Permits</u>

Report generated by AHIMS Web Service on 05/03/2021 for Meggan Walker for the following area at Datum :GDA, Zone : 56, Eastings : 322157 - 329157, Northings : 6256858 - 6263858 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 81

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-1844	Mowbray Park 2, Chatswood west.;Chatswood West;	GDA	56	329050	6258380	Closed site	Valid	Artefact : -, Shell : -	Shelter with Deposit,Shelter with Midden	1497
	Contact	Recorders	Val Attenbrow,Michael Guider					Permits		
45-6-1845	Mowbray Park 3, Chatswood west.;	AGD	56	328670	6258230	Closed site	Valid	Artefact : -	Shelter with Deposit	1497
	Contact	Recorders	Val Attenbrow					Permits		
45-6-1854	L C/2 Lanecove 2 Epping Road Bridge RYDE 012	GDA	56	328104	6258490	Closed site	Valid	Shell : -, Artefact : -, Art (Pigment or Engraved) : -	Shelter with Art,Shelter with Midden	2383,102489
	Contact	Recorders	Val Attenbrow,Alice Gorman,K Cutmore,Ms.Laila Haglund,Aboriginal Heritage Offic					Permits		
45-6-1855	L C/1 Lanecove 1	AGD	56	327920	6258190	Closed site	Valid	Shell : -, Artefact : -	Shelter with Midden	
	Contact	Recorders	Ms.Laila Haglund					Permits		
45-6-0977	Epping;Lane Cove River; Little bloodwood stump cave RYDE 001	GDA	56	323964	6262130	Closed site	Valid	Artefact : -	Shelter with Deposit	2047,102489
	Contact	Recorders	Val Attenbrow,Aboriginal Heritage Office,Mr.Rick Bullers					Permits		
45-6-0978	Lane Cove River: KUR-050	GDA	56	324504	6262690	Open site	Valid	Grinding Groove : -, Water Hole : -	Axe Grinding Groove,Water Hole/Well	
	Contact	Recorders	Mr.Phil Hunt,Mr.R Taplin					Permits		
45-6-0981	Lane Cove River	AGD	56	327792	6260874	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	1899,98744
	Contact	Recorders	Mr.R Taplin					Permits		
45-6-1005	Martins Creek;Lane Cove SRA; RYDE 015	GDA	56	327644	6257600	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	102489
	Contact	Recorders	Michael Guider,J.A Hatfield,Aboriginal Heritage Office					Permits		
45-6-2717	Will-144 Mowbray Park	AGD	56	328660	6258290	Closed site	Valid	Habitation Structure : -		
	Contact	Recorders	David Watts					Permits		
45-6-2718	Will-145 - Mowbray Park	AGD	56	328580	6258330	Open site	Valid	Shell : -		
	Contact	Recorders	David Watts					Permits		
45-6-2213	DeBurghs Bridge	AGD	56	327454	6261230	Closed site	Valid	Artefact : -	Shelter with Deposit	1899
	Contact	Recorders	Ms.Bronwyn Conyers					Permits		
45-6-2214	Commandment Rock(LC#2)	AGD	56	328290	6259580	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	1899
	Contact	Recorders	P Clark,Ms.Bronwyn Conyers,D Brown					Permits		

Report generated by AHIMS Web Service on 05/03/2021 for Meggan Walker for the following area at Datum :GDA, Zone : 56, Eastings : 322157 - 329157, Northings : 6256858 - 6263858 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 81

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
45-6-3010	Stringybark Creek PAD Shelter 7 - LCC085	GDA	56	329119	6257645	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Aboriginal Heritage Office							
45-6-3013	Stringybark Creek PAD Shelter 8 - LCC 086	GDA	56	328624	6257885	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Aboriginal Heritage Office							
45-6-3021	Field of Mars RYDE 026	GDA	56	327404	6257120	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Aboriginal Heritage Office							
45-6-3015	Stringybark Creek PAD Shelter 9 LCC 087	GDA	56	328714	6257860	Closed site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	Recorders	Aboriginal Heritage Office							
45-6-3067	Crescent 1	GDA	56	322187	6263082	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kelleher Nightingale Consulting Pty Ltd							
45-6-3042	Eden Ave Groove 1 KUR 052	GDA	56	325374	6262955	Open site	Valid	Grinding Groove : 1		
	Contact	Recorders	Aboriginal Heritage Office							
45-6-3861	Riverside Drive Charcoal Art	GDA	56	328101	6260036	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	DPIE, Ms. Elise McCarthy							
45-6-2765	LCC 077 Pumphouse Shelter	AGD	56	328185	6257765	Open site	Valid	Habitation Structure : 1		
	Contact	Recorders	Mr. Phil Hunt							
45-6-2949	M2A1	GDA	56	323895	6262241	Open site	Valid	Grinding Groove : 1		
	Contact	Recorders	Mr. Rick Bullers							
45-6-3114	Epping to Thornleigh Third Track Unexpected Find 1	GDA	56	322194	6263106	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr. Josh Symons							
45-6-3136	Terrys Creek Shelter PAD1	GDA	56	323515	6261475	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
	Contact	Recorders	Mr. Phil Hunt							
45-6-3117	Crescent 2 (C2)	GDA	56	322259	6262900	Open site	Valid	Artefact : 1		
	Contact	Recorders	Matthew Kelleher							
45-6-3319	Mowbray Park PAD4 WILL214	GDA	56	328850	6258435	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		

Report generated by AHIMS Web Service on 05/03/2021 for Meggan Walker for the following area at Datum :GDA, Zone : 56, Eastings : 322157 - 329157, Northings : 6256858 - 6263858 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 81

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AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : P32333_IvanhoeEstate_3.5k

Client Service ID : 574117

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>	Mr.Phil Hunt,Aboriginal Heritage Office					<u>Permits</u>		
45-6-3321	Mowbray Park PAD3 WILL213	GDA	56	328735	6258510	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Phil Hunt,Aboriginal Heritage Office					<u>Permits</u>		
45-6-3795	Avian Cres PAD 1 WILL181	GDA	56	328675	6258385	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Phil Hunt					<u>Permits</u>		
45-6-3796	Avian Cres PAD 2 WILL182	GDA	56	328645	6258375	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.Phil Hunt					<u>Permits</u>		

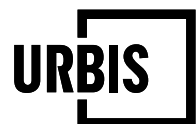
Report generated by AHIMS Web Service on 05/03/2021 for Meggan Walker for the following area at Datum :GDA, Zone : 56, Eastings : 322157 - 329157, Northings : 6256858 - 6263858 with a Buffer of 0 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 81

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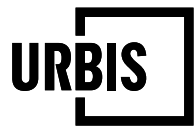
APPENDIX B

ACHA QUESTIONNAIRE



1. Cultural connection:

Please describe the nature of your cultural connection to the country on which the subject area is situated. Please include any relevant cultural knowledge or knowledge of Aboriginal objects or places within the subject area. Have you ever lived in or near the subject area? If you are a Traditional Owner, please state this clearly.



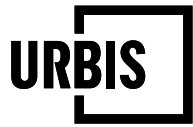
2. Representing your community members:

Please state who you or your organisation represents. Do you or your organisation represent other members of the Aboriginal community? If so, please describe how information is provided to the other members, and how their information and knowledge may be provided back to the Proponent and Urbis.



3. Previous experience:

Please list your relevant (for example, in the area of the proposed project) previous experience in providing cultural heritage advice and survey participation.



4. Schedule of Rates:

Please provide your Certificate of Currency including Product and Public Liability Insurance and Worker's Compensation. Please also schedule of rates (hourly/half day/day) for fieldwork participation, and include any expenses you may expect to incur, and these will be sought to be reimbursed. Please note that it is for the discretion for the Proponent to decide if they invite RAPs for site works and the consultation process does not guarantee paid employment.

From: [Aaron Olsen](#)
Cc: [Andrew Crisp](#)
Bcc: [officeadmin@metrolalc.org.au](#); [cazadirect@live.com](#); [butuheritage@gmail.com](#); [justinecoplin@optusnet.com.au](#); [didgengunawalclan@yahoo.com.au](#); [gulagachts@gmail.com](#); [philipkhan.acn@live.com.au](#); [ngambaaculturalconnections@hotmail.com](#); [danny@toconwall.com.au](#)
Subject: Aboriginal Cultural Heritage Assessment – Ivanhoe Estate – Stage 2/3 – Presentation of Information and Gathering Information about Cultural Significance (Our Ref: P0032333)
Date: Friday, 7 May 2021 11:36:00 AM
Attachments: [P0032333_Ivanhoe_Stage2.3_F01.pdf](#)
[image002.png](#)
[image004.png](#)
[image006.png](#)
[image008.png](#)
[image010.png](#)

Good morning

Thank you for registering your interest in the above project at Ivanhoe Estate at Ivanhoe Place (Lot 100 in DP1262209) and 2-4 Lyon Park Road (Lot 101 in DP 1263727). Please find attached a letter as part of Stages 2 and 3 of the ACHA process, which provides information on the project and methodology proposed to be employed.

You will note that we have included a request for specific information in the form of a Questionnaire (Appendix B). We would appreciate your response to that questionnaire as soon as possible. If you have already provided us with your Schedule of Rates, please disregard that question.

If you wish to provide any comments in relation to the attached document, please do so in writing, preferably by email, by **4 June 2021**, to:

Aaron Olsen
Consultant
Urbis Pty Ltd
Level 8, 123 Pitt Street
Sydney NSW 2000
P: 02 8233 9957
E: aolsen@urbis.com.au

Please let us know if you have any questions.

Kind regards

AARON OLSEN

CONSULTANT

D +61 2 8233 9957

T +61 2 8233 9900

E aolsen@urbis.com.au

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SYDNEY, NSW 2000, AUSTRALIA

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From: [Gulaga](#)
To: [Aaron Olsen](#)
Subject: Re: Aboriginal Cultural Heritage Assessment – Ivanhoe Estate – Stage 2/3 – Presentation of Information and Gathering Information about Cultural Significance (Our Ref: P0032333)
Date: Friday, 7 May 2021 2:51:01 PM
Attachments: [image002.png](#)
[image004.png](#)
[image006.png](#)
[image008.png](#)
[image010.png](#)

Hi Aaron,

Thank you for providing this information.

Gulaga supports the methodology and makes no comment at this stage.

Kind Regards
Wendy Smith
Cultural Heritage Officer
Gulaga
0401 808 988

This email may contain privileged information. Privilege is not waived if it has been sent to you in error, or if you are not the intended recipient. Please immediately notify me and delete the email if you have received this in error.

On Fri, May 7, 2021 at 11:37 AM Aaron Olsen <aolsen@urbis.com.au> wrote:

Good morning

Thank you for registering your interest in the above project at Ivanhoe Estate at Ivanhoe Place (Lot 100 in DP1262209) and 2-4 Lyon Park Road (Lot 101 in DP 1263727). Please find attached a letter as part of Stages 2 and 3 of the ACHA process, which provides information on the project and methodology proposed to be employed.

You will note that we have included a request for specific information in the form of a Questionnaire (Appendix B). We would appreciate your response to that questionnaire as soon as possible. If you have already provided us with your Schedule of Rates, please disregard that question.

If you wish to provide any comments in relation to the attached document, please do so in writing, preferably by email, by **4 June 2021**, to:

Aaron Olsen

Consultant

Urbis Pty Ltd

Level 8, 123 Pitt Street

Sydney NSW 2000

P: 02 8233 9957

E: aolsen@urbis.com.au

Please let us know if you have any questions.

Kind regards

AARON OLSEN

CONSULTANT

D +61 2 8233 9957

T +61 2 8233 9900

E aolsen@urbis.com.au

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From: [philip.khan](#)
To: [Aaron Olsen](#)
Subject: Re: Aboriginal Cultural Heritage Assessment – Ivanhoe Estate – Stage 2/3 – Presentation of Information and Gathering Information about Cultural Significance (Our Ref: P0032333)
Date: Wednesday, 19 May 2021 9:52:10 AM
Attachments: [image002.png](#)
[image004.png](#)
[image006.png](#)
[image008.png](#)
[image010.png](#)
[Outlook-yabwdumo.png](#)
[89C887D1BAAE453486399F09E76FE0D2.png](#)

Dear Aaron,

Thank you for your ACHA for Ivanhoe Estate stage 2/3. The study area is highly significant to the Aboriginal people. The study area is important to us Aboriginal people and as a last chance we should excavate the study area. We as Aboriginal people hold a deep connection to the land & we follow a lore that is known to us. the Aboriginal people have looked after this land for tens of thousands of years and continue to do so.

In saying that we would like to agree to your recommendations and we support your ACHA. I would also like to take the time to mention Aboriginal Cultural interpretation for the development or within the building. Some examples are native gardens, artefact display, artwork, and signage, please do not hesitate to contact us about interpretation plan. We should also always be mindful of burials as we do not know where they are located.

As a senior Aboriginal person for the past 50yrs, I actively participate in the protection of the Aboriginal Cultural Heritage throughout the Sydney Basin, & particularly throughout Western Sydney, on behalf of Kamilaroi Yankuntjatjara Working Group I wish to provide to you my organisation's registration of interest.

I wish to be involved & participate in all levels of consultation/project involvement. I wish to attend all meetings, participate in available field work & receive a copy of the report.

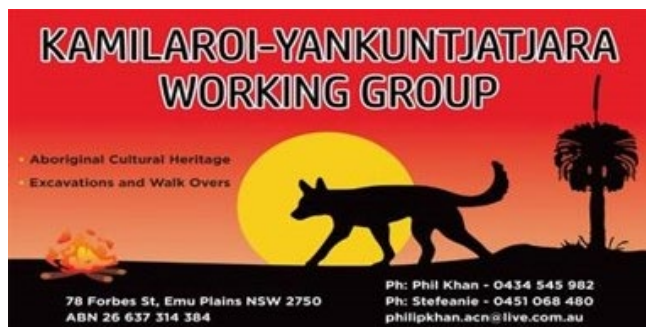
Our Rates - \$100 per hour, \$400 half day & \$800 full day (Exc. GST)

Our RAPS have up to 15yrs Cultural Heritage experience in – field work which involves manual excavation (digging), sieving, identifying artefacts, setting up transits, setting up equipment, packing equipment, site surveys & attending meetings.

Should you wish me to provide further information, please do not hesitate to contact me on 0434545982 or Stefeanie on 0451068480.

Kind Regards

Kadibulla Khan



From: Aaron Olsen <aolsen@urbis.com.au>
Sent: Friday, 7 May 2021 11:36 AM
Cc: Andrew Crisp <acrisp@urbis.com.au>
Subject: Aboriginal Cultural Heritage Assessment – Ivanhoe Estate – Stage 2/3 – Presentation of Information and Gathering Information about Cultural Significance (Our Ref: P0032333)

Good morning

Thank you for registering your interest in the above project at Ivanhoe Estate at Ivanhoe Place (Lot 100 in DP1262209) and 2-4 Lyon Park Road (Lot 101 in DP 1263727). Please find attached a letter as part of Stages 2 and 3 of the ACHA

process, which provides information on the project and methodology proposed to be employed.

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If you wish to provide any comments in relation to the attached document, please do so in writing, preferably by email, by **4 June 2021**, to:

Aaron Olsen
Consultant
Urbis Pty Ltd
Level 8, 123 Pitt Street
Sydney NSW 2000
P: 02 8233 9957
E: aolsen@urbis.com.au

Please let us know if you have any questions.

Kind regards

AARON OLSEN
CONSULTANT

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T +61 2 8233 9900
E aolsen@urbis.com.au

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From: [Aaron Olsen](#)
Cc: [Andrew Crisp](#)
Bcc: ["officeadmin@metrolalc.org.au"; "cazadirect@live.com"; "butuheritage@gmail.com"; "justinecoplin@optusnet.com.au"; "didgengunawalclan@yahoo.com.au"; "gulagachts@gmail.com"; "philipkhan.acn@live.com.au"; "ngambaaculturalconnections@hotmail.com"; "danny@tocomwall.com.au"](#)
Subject: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 4 Draft ACHAR (Our Ref: P0032333)
Date: Friday, 9 July 2021 9:42:00 AM
Attachments: [P0032333_Ivanhoe_ACHAR_D01.pdf](#)
[image002.png](#)
[image004.png](#)
[image006.png](#)
[image008.png](#)
[image010.png](#)

Good morning

Thank you again for registering your interest in the above project. As part of Stage 4 of the Aboriginal Cultural Heritage Assessment (ACHA), we now provide a draft Aboriginal Cultural Heritage Assessment Report (ACHAR) for your consideration and comment.

You will note that parts of the draft ACHAR include yellow highlighted text. These sections will be amended after completion of Stage 4 of the ACHA process.

Please provide any comments in relation to the draft ACHAR by **6 August 2021** to:

Andrew Crisp
Senior Consultant
Urbis Pty Ltd
Level 8, 123 Pitt Street
Sydney NSW 2000
E: acrisp@urbis.com.au
P: 02 8233 7642

If you have any questions, please let us know.

Kind regards

AARON OLSEN
CONSULTANT

D +61 2 8233 9957
T +61 2 8233 9900
E aolsen@urbis.com.au

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From: [philip.khan](#)
To: [Aaron Olsen](#)
Subject: Re: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 4 Draft ACHAR (Our Ref: P0032333)
Date: Friday, 16 July 2021 11:16:13 AM
Attachments: [Outlook-aff0mmzr.png](#)
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[B05B1BD945FA470B9B08ECA347E8D47E.png](#)

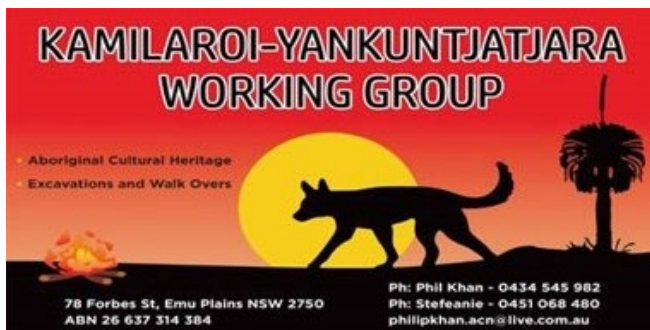
Dear Aaron,

Thank you for your ACHAR for proposed site Ivanhoe Estate. KYWG aim to conserve and protect cultural heritage. We look to the sky for guidance and follow the stories that it holds. We live off the land and we respect our mother earth as she provides for us, we follow the water ways to drink from. Not so Long ago we hunted and lived off the land, we camped close by to water and carried out daily activities. We lived a peace full life with lora and kinship and order, one with mother earth and our environment. We are connected to all types of life; we follow the sessions and move accordingly. We were colonized and assimilated to the white man's way, yet our culture savvied and lived the Aboriginal way of life still to this day.

The study area is highly significant due to it being in close proximity to water ways, for this reason we would like to push for monitoring of the any works, done by an Aboriginal person as we don't believe that the construction works can identify Aboriginal objects. One induction is not enough train and they may not have the time to be aware of Aboriginal finds. We also should be mindful of our burials as they hold deep meaning to us and we have been striped of the location of them.

Kind Regards

Kadibulla Khan



From: Aaron Olsen <aolsen@urbis.com.au>
Sent: Friday, 9 July 2021 9:42 AM
Cc: Andrew Crisp <acrisp@urbis.com.au>
Subject: Ivanhoe Estate - Aboriginal Cultural Heritage Assessment - Stage 4 Draft ACHAR (Our Ref: P0032333)

Good morning

Thank you again for registering your interest in the above project. As part of Stage 4 of the Aboriginal Cultural Heritage Assessment (ACHA), we now provide a draft Aboriginal Cultural Heritage Assessment Report (ACHAR) for your consideration and comment.

You will note that parts of the draft ACHAR include yellow highlighted text. These sections will be amended after completion of Stage 4 of the ACHA process.

Please provide any comments in relation to the draft ACHAR by **6 August 2021** to:

Andrew Crisp
Senior Consultant
Urbis Pty Ltd
Level 8, 123 Pitt Street
Sydney NSW 2000
E: acrisp@urbis.com.au
P: 02 8233 7642

If you have any questions, please let us know.

Kind regards

AARON OLSEN
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E aolsen@urbis.com.au

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APPENDIX D

GEOTECHNICAL BOREHOLE LOGS

TEST BORE REPORT

CLIENT: LIPMAN PTY LTD
PROJECT: PROPOSED MULTI STOREY BUILDING
LOCATION: 2-4 LYON PARK ROAD, NORTH RYDE

DATE: 1 AUGUST 00
PROJECT No.: 29190
SURFACE LEVEL: 45.12

BORE No. 1
SHEET 1 OF 1

Depth m	Description of Strata	Sampling & In Situ Testing			
		Type	Depth (m)	Results	Headspace PID (ppm)
0	FILLING - poorly compacted, light brown to brown clay filling with a trace of silt and gravel	A S	0.5	1,1,2 N=3	2
1			0.95		
1.4					
1.8	CLAY - firm, brown mottled red brown clay with a trace of ironstone gravel				
2.0	IRONSTONE				
2	TEST BORE DISCONTINUED AT 2.0 METRES - auger refusal				
3					
4					
5					

RIG: B40

DRILLER: DRIVER

LOGGED: CARLE

CASING:

TYPE OF BORING: 100mm DIAMETER SPIRAL FLIGHT AUGER

GROUND WATER OBSERVATIONS: NO FREE GROUNDWATER OBSERVED

REMARKS: TBM GRATE IN LYON PARK ROAD RL 48.22

SAMPLING & IN SITU TESTING LEGEND

A auger sample
B bulk sample
C core drilling
pp Pocket Penetration (kPa)
PL point load strength I_s (50)MPa
S standard penetration test
Ux x mm dia. tube
V shear vane (kPa)

CHECKED:

Initials:

Date: 10/8



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TEST BORE REPORT

CLIENT: LIPMAN PTY LTD
PROJECT: PROPOSED MULTISTOREY BUILDING
LOCATION: 2-4 LYON PARK ROAD, NORTH RYDE

PROJECT No: 29190
SURFACE LEVEL: 45.91
DIP OF HOLE: 90°

BORE No: 2
DATE: 2/8/00
SHEET 1 OF 1
AZIMUTH:

Depth (m)	Description of Strata	Degree of Weathering					Graphic Log	Rock Strength					Discontinuities		Fracture Spacing (m)				Sampling & In Situ Testing			
		EW	HM	MM	SM	US		Ex. Low	Very Low	Low	Medium	High	Very High	Ex. Hgt					Sample Type	Core Rec. %	RQD %	Test Results & Comments
0	FILLING - poorly compacted, dark brown silty sandy clay																					1,2,4 N=6
0.75	FILLING - poorly compacted, dark grey and yellow brown sandy clay and gravel filling																	S				
1.1	FILLING - crushed sandstone and gravel filling																					
1.7	SANDY CLAY - firm to stiff, light grey and yellow brown sandy clay																	S				3,4,4 N=8
3.0	SANDSTONE - extremely low to very low strength, light grey brown sandstone																					
3.5	TEST BORE DISCONTINUED AT 3.5 METRES																	A				
4																						
5																						
6																						
7																						
8																						
9																						
10																						

RIG: B40

DRILLER: DRIVER

LOGGED: PARMAR

CASING: UNCASSED

TYPE OF BORING: SPIRAL FLIGHT AUGER TO 3.5m

WATER OBSERVATIONS: NO FREE GROUNDWATER OBSERVED

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A auger sample
 B bulk sample
 C core drilling
 pp pocket penetrometer (kPa)
 PL point load strength I_s (50)MPa
 S standard penetration test
 Ux x mm dia. tube
 V Shear Vane (kPa)

CHECKED:

Initials:

Date: 10/8



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TEST BORE REPORT

CLIENT: LIPMAN PTY LTD
PROJECT: PROPOSED MULTISTOREY BUILDING
LOCATION: 2-4 LYON PARK ROAD, NORTH RYDE

PROJECT No: 29190
SURFACE LEVEL: 46.76
DIP OF HOLE: 90°

BORE No: 3
DATE: 2/8/00
SHEET 1 OF 1
AZIMUTH:

Depth (m)	Description of Strata	Degree of Weathering EW HM SW FS FR	Graphic Log	Rock Strength Ex Low Very Low Low Medium High Very High Ex High	Discontinuities B - Bedding J - Joint S - Shear D - Drill Break	Fracture Spacing (m) 0.01 0.05 0.10 0.50 1.00	Sampling & In Situ Testing			
							Sample Type	Core Rec. %	RQD %	Test Results & Comments
0	FILLING - brown clay filling									
0.3	FILLING - poorly compacted, yellow brown grey sandy clay filling with ironstone gravel						S			1,1,3 N=4
0.9	SANDY SILTY CLAY - soft to firm, light grey sandy silty clay									
1.2	SANDY CLAY - firm to stiff, brown sandy clay									
1.8	SANDY CLAY - stiff, light yellow grey mottled red brown sandy clay						S			3,3,6 N=9
2.3	SANDSTONE - extremely low strength, extremely weathered sandstone									
2.5	SANDSTONE - low strength sandstone									
2.6	SANDSTONE - medium and high strength, moderately weathered, slightly fractured to unbroken, light yellow brown to grey brown and purple, medium to coarse grained sandstone									
2.8	SANDSTONE - medium and high strength, moderately weathered, slightly fractured to unbroken, light yellow brown to grey brown and purple, medium to coarse grained sandstone									
3										
4										
5										
5.6	TEST BORE DISCONTINUED AT 5.6 METRES									
6										
7										
8										
9										
10										

RIG: B40

DRILLER: DRIVER

LOGGED: PARMAR

CASING: GL TO 2.6m

TYPE OF BORING: SPIRAL FLIGHT AUGER TO 2.6m, NMLC CORING TO 5.6m

WATER OBSERVATIONS: NO FREE GROUNDWATER OBSERVED WHILST AUGERING

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A auger sample
B bulk sample
C core drilling
pp pocket penetrometer (kPa)
PL point load strength I_s (50)MPa
S standard penetration test
Ux x mm dia. tube
V Shear Vane (kPa)

CHECKED:

Initials:

Date: 10/8



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TEST BORE REPORT

CLIENT: LIPMAN PTY LTD
PROJECT: PROPOSED MULTI STOREY BUILDING
LOCATION: 2-4 LYON PARK ROAD, NORTH RYDE

DATE: 1 AUGUST 00
PROJECT No.: 29190
SURFACE LEVEL: 47.3

BORE No. 4
SHEET 1 OF 1

Depth m	Description of Strata	Sampling & In Situ Testing			
		Type	Depth (m)	Results	Headspace PID (ppm)
0	FILLING - poorly compacted, brown, slightly sandy clay filling	Ax S	0.5	1,2,4 N=6	2
1	- 0.95m - traces of wood		0.95		
1.3	CLAY - red brown clay with a trace of silt and sand	A	1.8		2
1.7	SILTY SANDY CLAY - grey silty sandy clay		2.0	2,3,5 N=8	
2	CLAY - firm, red brown clay	S	2.45		
2.8	SANDSTONE - extremely low strength, light grey sandstone with some clay				
3.5	TEST BORE DISCONTINUED AT 3.5 METRES - auger refusal				

RIG: B40

DRILLER: DRIVER

LOGGED: CARLE

CASING:

TYPE OF BORING: 100mm DIAMETER SPIRAL FLIGHT AUGER

GROUND WATER OBSERVATIONS: NO FREE GROUNDWATER OBSERVED

REMARKS: *DENOTES DUPLICATE SAMPLE ZI TAKEN

SAMPLING & IN SITU TESTING LEGEND

A auger sample
 B bulk sample
 C core drilling
 pp Pocket Penetration (kPa)
 PL point load strength I_s (50)MPa
 S standard penetration test
 Ux x mm dia. tube
 V shear vane (kPa)

CHECKED:

Initials:

Date:



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TEST BORE REPORT

CLIENT: LIPMAN PTY LTD
PROJECT: PROPOSED MULTISTOREY BUILDING
LOCATION: 2-4 LYON PARK ROAD, NORTH RYDE

PROJECT No: 29190
SURFACE LEVEL: 48.05
DIP OF HOLE: 90°

BORE No: 5
DATE: 3/8/00
SHEET 1 OF 1
AZIMUTH:

Depth (m)	Description of Strata	Degree of Weathering	Graphic Log	Rock Strength	Discontinuities B - Bedding J - Joint S - Shear D - Drill Break	Fracture Spacing (m)	Sampling & In Situ Testing			
							Sample Type	Core Rec. %	RQD %	Test Results & Comments
0	FILLING - poorly to moderately compacted, light brown sandy clay and gravel filling									2,3,5 N=8
1.8	SILTY SANDY CLAY - soft, light yellow brown mottled red silty sandy clay with a trace of ironstone gravel						S/A			2,1,2 N=3
3.1	SANDSTONE - extremely low to very low strength, highly weathered, light grey sandstone				Note: unless otherwise stated rock is fractured along smooth planar bedding planes dipping at 10° - 20°		S			7,20,17 N=37
4.58	SANDSTONE - medium then high strength, slightly weathered, fractured to slightly fractured, light grey, medium to coarse grained sugary sandstone with extremely low and very low strength bands				4.77m: B 10° with 2-3mm silty clay 4.95m: B 10° with clayey coating 5.04m: J 25° Core loss 200mm		C	84	37	PL (A)=1.4MPa PL (A)=0.5MPa
5.07	SANDSTONE - medium then high strength, moderately and slightly weathered, slightly fractured to fractured, light yellow brown and grey, medium to coarse grained sandstone				6.46m: B 10° with carbonaceous coating		C	100	90	PL (A)=1.9MPa PL (A)=1.2MPa
5.27					7.49m: B 10° with clayey coating					
5.37										
7.75	TEST BORE DISCONTINUED AT 7.75 METRES									

RIG: B40

DRILLER: DRIVER

LOGGED: PARMAR

CASING: GL TO 4.45m

TYPE OF BORING: SPIRAL FLIGHT AUGER TO 4.45m, NMLC CORING TO 7.75m

WATER OBSERVATIONS: NO FREE GROUNDWATER OBSERVED WHILST AUGERING

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A auger sample
B bulk sample
C core drilling
pp pocket penetrometer (kPa)
PL point load strength I_s (50)MPa
S standard penetration test
Ux x mm dia. tube
V Shear Vane (kPa)

CHECKED:

Initials:

Date: 1/8



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Sampling

Sampling is carried out during drilling or test pitting to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on colour, type, inclusions and, depending upon the degree of disturbance, some information on strength and structure.

Undisturbed samples are taken by pushing a thin-walled sample tube into the soil and withdrawing it to obtain a sample of the soil in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

Test Pits

Test pits are usually excavated with a backhoe or an excavator, allowing close examination of the in-situ soil if it is safe to enter into the pit. The depth of excavation is limited to about 3 m for a backhoe and up to 6 m for a large excavator. A potential disadvantage of this investigation method is the larger area of disturbance to the site.

Large Diameter Augers

Boreholes can be drilled using a rotating plate or short spiral auger, generally 300 mm or larger in diameter commonly mounted on a standard piling rig. The cuttings are returned to the surface at intervals (generally not more than 0.5 m) and are disturbed but usually unchanged in moisture content. Identification of soil strata is generally much more reliable than with continuous spiral flight augers, and is usually supplemented by occasional undisturbed tube samples.

Continuous Spiral Flight Augers

The borehole is advanced using 90-115 mm diameter continuous spiral flight augers which are withdrawn at intervals to allow sampling or in-situ testing. This is a relatively economical means of drilling in clays and sands above the water table. Samples are returned to the surface, or may be collected after withdrawal of the auger flights, but they are disturbed and may be mixed with soils from the sides of the hole. Information from the drilling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively low

reliability, due to the remoulding, possible mixing or softening of samples by groundwater.

Non-core Rotary Drilling

The borehole is advanced using a rotary bit, with water or drilling mud being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from the rate of penetration. Where drilling mud is used this can mask the cuttings and reliable identification is only possible from separate sampling such as SPTs.

Continuous Core Drilling

A continuous core sample can be obtained using a diamond tipped core barrel, usually with a 50 mm internal diameter. Provided full core recovery is achieved (which is not always possible in weak rocks and granular soils), this technique provides a very reliable method of investigation.

Standard Penetration Tests

Standard penetration tests (SPT) are used as a means of estimating the density or strength of soils and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, Methods of Testing Soils for Engineering Purposes - Test 6.3.1.

The test is carried out in a borehole by driving a 50 mm diameter split sample tube under the impact of a 63 kg hammer with a free fall of 760 mm. It is normal for the tube to be driven in three successive 150 mm increments and the 'N' value is taken as the number of blows for the last 300 mm. In dense sands, very hard clays or weak rock, the full 450 mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form.

- In the case where full penetration is obtained with successive blow counts for each 150 mm of, say, 4, 6 and 7 as:
4,6,7
N=13
- In the case where the test is discontinued before the full penetration depth, say after 15 blows for the first 150 mm and 30 blows for the next 40 mm as:
15, 30/40 mm

Sampling Methods

The results of the SPT tests can be related empirically to the engineering properties of the soils.

Dynamic Cone Penetrometer Tests / Perth Sand Penetrometer Tests

Dynamic penetrometer tests (DCP or PSP) are carried out by driving a steel rod into the ground using a standard weight of hammer falling a specified distance. As the rod penetrates the soil the number of blows required to penetrate each successive 150 mm depth are recorded. Normally there is a depth limitation of 1.2 m, but this may be extended in certain conditions by the use of extension rods. Two types of penetrometer are commonly used.

- Perth sand penetrometer - a 16 mm diameter flat ended rod is driven using a 9 kg hammer dropping 600 mm (AS 1289, Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.
- Cone penetrometer - a 16 mm diameter rod with a 20 mm diameter cone end is driven using a 9 kg hammer dropping 510 mm (AS 1289, Test 6.3.2). This test was developed initially for pavement subgrade investigations, and correlations of the test results with California Bearing Ratio have been published by various road authorities.



Description and Classification Methods

The methods of description and classification of soils and rocks used in this report are based on Australian Standard AS 1726-1993, Geotechnical Site Investigations Code. In general, the descriptions include strength or density, colour, structure, soil or rock type and inclusions.

Soil Types

Soil types are described according to the predominant particle size, qualified by the grading of other particles present:

Type	Particle size (mm)
Boulder	>200
Cobble	63 - 200
Gravel	2.36 - 63
Sand	0.075 - 2.36
Silt	0.002 - 0.075
Clay	<0.002

The sand and gravel sizes can be further subdivided as follows:

Type	Particle size (mm)
Coarse gravel	20 - 63
Medium gravel	6 - 20
Fine gravel	2.36 - 6
Coarse sand	0.6 - 2.36
Medium sand	0.2 - 0.6
Fine sand	0.075 - 0.2

The proportions of secondary constituents of soils are described as:

Term	Proportion	Example
And	Specify	Clay (60%) and Sand (40%)
Adjective	20 - 35%	Sandy Clay
Slightly	12 - 20%	Slightly Sandy Clay
With some	5 - 12%	Clay with some sand
With a trace of	0 - 5%	Clay with a trace of sand

Definitions of grading terms used are:

- Well graded - a good representation of all particle sizes
- Poorly graded - an excess or deficiency of particular sizes within the specified range
- Uniformly graded - an excess of a particular particle size
- Gap graded - a deficiency of a particular particle size with the range

Cohesive Soils

Cohesive soils, such as clays, are classified on the basis of undrained shear strength. The strength may be measured by laboratory testing, or estimated by field tests or engineering examination. The strength terms are defined as follows:

Description	Abbreviation	Undrained shear strength (kPa)
Very soft	vs	<12
Soft	s	12 - 25
Firm	f	25 - 50
Stiff	st	50 - 100
Very stiff	vst	100 - 200
Hard	h	>200

Cohesionless Soils

Cohesionless soils, such as clean sands, are classified on the basis of relative density, generally from the results of standard penetration tests (SPT), cone penetration tests (CPT) or dynamic penetrometers (PSP). The relative density terms are given below:

Relative Density	Abbreviation	SPT N value	CPT qc value (MPa)
Very loose	vl	<4	<2
Loose	l	4 - 10	2 - 5
Medium dense	md	10 - 30	5 - 15
Dense	d	30 - 50	15 - 25
Very dense	vd	>50	>25

Soil Descriptions

Soil Origin

It is often difficult to accurately determine the origin of a soil. Soils can generally be classified as:

- Residual soil - derived from in-situ weathering of the underlying rock;
- Transported soils - formed somewhere else and transported by nature to the site; or
- Filling - moved by man.

Transported soils may be further subdivided into:

- Alluvium - river deposits
- Lacustrine - lake deposits
- Aeolian - wind deposits
- Littoral - beach deposits
- Estuarine - tidal river deposits
- Talus - scree or coarse colluvium
- Slopewash or Colluvium - transported downslope by gravity assisted by water. Often includes angular rock fragments and boulders.



Rock Strength

Rock strength is defined by the Point Load Strength Index ($Is_{(50)}$) and refers to the strength of the rock substance and not the strength of the overall rock mass, which may be considerably weaker due to defects. The test procedure is described by Australian Standard 4133.4.1 - 2007. The terms used to describe rock strength are as follows:

Term	Abbreviation	Point Load Index $Is_{(50)}$ MPa	Approximate Unconfined Compressive Strength MPa*
Extremely low	EL	<0.03	<0.6
Very low	VL	0.03 - 0.1	0.6 - 2
Low	L	0.1 - 0.3	2 - 6
Medium	M	0.3 - 1.0	6 - 20
High	H	1 - 3	20 - 60
Very high	VH	3 - 10	60 - 200
Extremely high	EH	>10	>200

* Assumes a ratio of 20:1 for UCS to $Is_{(50)}$. It should be noted that the UCS to $Is_{(50)}$ ratio varies significantly for different rock types and specific ratios should be determined for each site.

Degree of Weathering

The degree of weathering of rock is classified as follows:

Term	Abbreviation	Description
Extremely weathered	EW	Rock substance has soil properties, i.e. it can be remoulded and classified as a soil but the texture of the original rock is still evident.
Highly weathered	HW	Limonite staining or bleaching affects whole of rock substance and other signs of decomposition are evident. Porosity and strength may be altered as a result of iron leaching or deposition. Colour and strength of original fresh rock is not recognisable
Moderately weathered	MW	Staining and discolouration of rock substance has taken place
Slightly weathered	SW	Rock substance is slightly discoloured but shows little or no change of strength from fresh rock
Fresh stained	Fs	Rock substance unaffected by weathering but staining visible along defects
Fresh	Fr	No signs of decomposition or staining

Degree of Fracturing

The following classification applies to the spacing of natural fractures in diamond drill cores. It includes bedding plane partings, joints and other defects, but excludes drilling breaks.

Term	Description
Fragmented	Fragments of <20 mm
Highly Fractured	Core lengths of 20-40 mm with some fragments
Fractured	Core lengths of 40-200 mm with some shorter and longer sections
Slightly Fractured	Core lengths of 200-1000 mm with some shorter and longer sections
Unbroken	Core lengths mostly > 1000 mm

Rock Descriptions

Rock Quality Designation

The quality of the cored rock can be measured using the Rock Quality Designation (RQD) index, defined as:

$$\text{RQD \%} = \frac{\text{cumulative length of 'sound' core sections} \geq 100 \text{ mm long}}{\text{total drilled length of section being assessed}}$$

where 'sound' rock is assessed to be rock of low strength or better. The RQD applies only to natural fractures. If the core is broken by drilling or handling (i.e. drilling breaks) then the broken pieces are fitted back together and are not included in the calculation of RQD.

Stratification Spacing

For sedimentary rocks the following terms may be used to describe the spacing of bedding partings:

Term	Separation of Stratification Planes
Thinly laminated	< 6 mm
Laminated	6 mm to 20 mm
Very thinly bedded	20 mm to 60 mm
Thinly bedded	60 mm to 0.2 m
Medium bedded	0.2 m to 0.6 m
Thickly bedded	0.6 m to 2 m
Very thickly bedded	> 2 m

Symbols & Abbreviations

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Introduction

These notes summarise abbreviations commonly used on borehole logs and test pit reports.

Drilling or Excavation Methods

C	Core drilling
R	Rotary drilling
SFA	Spiral flight augers
NMLC	Diamond core - 52 mm dia
NQ	Diamond core - 47 mm dia
HQ	Diamond core - 63 mm dia
PQ	Diamond core - 81 mm dia

Water

▷	Water seep
▽	Water level

Sampling and Testing

A	Auger sample
B	Bulk sample
D	Disturbed sample
E	Environmental sample
U ₅₀	Undisturbed tube sample (50mm)
W	Water sample
pp	Pocket penetrometer (kPa)
PID	Photo ionisation detector
PL	Point load strength Is(50) MPa
S	Standard Penetration Test
V	Shear vane (kPa)

Description of Defects in Rock

The abbreviated descriptions of the defects should be in the following order: Depth, Type, Orientation, Coating, Shape, Roughness and Other. Drilling and handling breaks are not usually included on the logs.

Defect Type

B	Bedding plane
Cs	Clay seam
Cv	Cleavage
Cz	Crushed zone
Ds	Decomposed seam
F	Fault
J	Joint
Lam	Lamination
Pt	Parting
Sz	Sheared Zone
V	Vein

Orientation

The inclination of defects is always measured from the perpendicular to the core axis.

h	horizontal
v	vertical
sh	sub-horizontal
sv	sub-vertical

Coating or Infilling Term

cln	clean
co	coating
he	healed
inf	infilled
stn	stained
ti	tight
vn	veneer

Coating Descriptor

ca	calcite
cbs	carbonaceous
cly	clay
fe	iron oxide
mn	manganese
slt	silty

Shape

cu	curved
ir	irregular
pl	planar
st	stepped
un	undulating

Roughness

po	polished
ro	rough
sl	slickensided
sm	smooth
vr	very rough

Other

fg	fragmented
bnd	band
qtz	quartz

Symbols & Abbreviations

Graphic Symbols for Soil and Rock

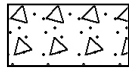
General



Asphalt



Road base



Concrete



Filling

Soils



Topsoil



Peat



Clay



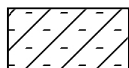
Silty clay



Sandy clay



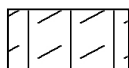
Gravelly clay



Shaly clay



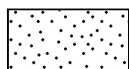
Silt



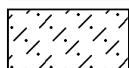
Clayey silt



Sandy silt



Sand



Clayey sand



Silty sand



Gravel



Sandy gravel



Cobbles, boulders



Talus

Sedimentary Rocks



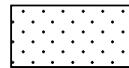
Boulder conglomerate



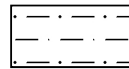
Conglomerate



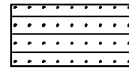
Conglomeratic sandstone



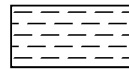
Sandstone



Siltstone



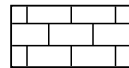
Laminite



Mudstone, claystone, shale

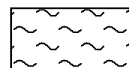


Coal

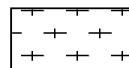


Limestone

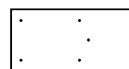
Metamorphic Rocks



Slate, phyllite, schist

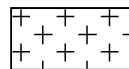


Gneiss

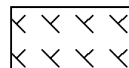


Quartzite

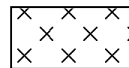
Igneous Rocks



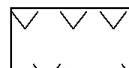
Granite



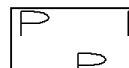
Dolerite, basalt, andesite



Dacite, epidote



Tuff, breccia



Porphyry

