

Macquarie Park Data Centre Campus IC3 Super West, 17-23 Talavera Road, Macquarie Park

DRAFT

Aboriginal Cultural Heritage
Assessment Report (ACHAR)

Report to GIDDIS Pty Ltd

LGA: Ryde

November 2021



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EXECUTIVE SUMMARY

Background

This Aboriginal Cultural Heritage Assessment (ACHAR) has been prepared by Artefact Heritage Services on behalf of Macquarie Data Centres (MDC) C/- GIDDIS Project Management.

The following ACHAR has been produced to support the Environmental Impact Statement (EIS) prepared by Willowtree Planning PTY Ltd (Willowtree Planning).

The EIS has been submitted to the New South Wales (NSW) Department of Planning, Industry and Environment (DPIE), in support of an application for State Significant Development (SSD), for the construction and operation of a data centre, involving earth works, provision of infrastructure and expansion of an existing data centre at 17 – 23 Talavera Road, Macquarie Park (Lot 527 DP 752035).

The proposal represents an extension to the approved data centre (LDA/2018/0322) to allow for additional data storage capacity at the subject site, improving the overall operational efficiencies and provision of technology services to customers and the wider locality.

The proposal involves the construction and operation of an expansion to an existing data centre located at 17-23 Talavera Road, Macquarie Park (Lot 527 in DP 752035).

The proposal was awarded status as a State Significant Development by the Department of Planning Industry and Environment (DPIE) on 12 August 2021 (SSD-24299707).

Consultation with the Aboriginal community has taken place in accordance with the *Aboriginal cultural heritage consultation requirements for proponents* (Consultation requirements) (DECCW 2010).

Overview of findings

The following results and recommendations are based on consideration of:

- The requirements of Aboriginal heritage guidelines including:
 - *The Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a) – known as *The Code of Practice*
 - Guide to investigating and assessing and reporting on Aboriginal Cultural Heritage in New South Wales (OEH 2011) – known as ACHAR guidelines.
 - *The Aboriginal Cultural Heritage consultation requirements for proponents 2010* (OEH 2010b)- known as Consultation Guidelines)
- The SEARs awarded to the proposal by the Department of Planning Industry and Environment (DPIE) on 12 August 2021 (SSD-24299707).
- The results of the Due Diligence assessment which included background research and an archaeological survey

The assessment found that:

- No previously unrecorded Aboriginal sites or objects were identified within the study area during the site inspection.

- After physical examination of the study area and examination of historical aerial photography the study area has been assessed as having nil to low potential to retain intact archaeological deposits
- These findings will be updated to reflect Aboriginal community comment on the final draft of this report.

Recommendations

Based on the results of this assessment and in accordance with Aboriginal heritage guidelines mandated in the SEARs for SSD proposals, the following recommendations are made:

- As the study area was found to be disturbed and to have a nil-low potential for Aboriginal objects to be located within it, it is recommended that further archaeological assessment is not required.
- If changes are made to the proposal that may result in impacts to areas not assessed by this ACHAR further assessment would be required.
- Unexpected Aboriginal objects remain protected by the *National Parks and Wildlife Act 1974*. If any such objects, or potential objects, are uncovered in the course of the activity, all work in the vicinity should cease immediately. A qualified archaeologist should be contacted to assess the find and Heritage NSW and Metropolitan LALC must be notified.
- If human remains, or suspected human remains, are found in the course of the activity, all work in the vicinity should cease, the site should be secured, and the NSW Police and Heritage NSW should be notified.

CONTENTS

1.0	Introduction.....	1
1.1	Project background.....	1
1.2	Location	1
1.2.1	Site Description.....	3
1.3	Overview of the project.....	3
1.4	Purpose and scope of the report	5
1.5	Secretary's Environmental Assessment Requirements	6
1.5.1	State Significant Developments.....	6
1.6	Authorship.....	6
2.0	Legislative Context.....	7
2.1	Introduction	7
2.2	NSW <i>National Parks and Wildlife Act 1974</i>	7
2.2.1	National Parks and Wildlife Regulation 2019	7
2.3	NSW Environmental Planning and Assessment Act 1979	8
2.3.1	Ryde Council Local Environmental Plan (LEP).....	8
2.4	NSW Aboriginal Land Rights Act 1983.....	9
2.5	NSW Native Title Act 1994	9
2.6	Commonwealth Environment Protection and Biodiversity Conservation Act 1999.....	9
2.6.1	National Heritage List	9
2.6.2	Commonwealth Heritage List	10
3.0	Aboriginal Community Participation	11
3.1	Aboriginal consultation	11
3.2	Identification of stakeholders and registration of interest	11
4.0	Environmental Context.....	13
4.1	Geology and soils	13
4.2	Landform and hydrology.....	13
4.3	Vegetation.....	14
4.4	European history and land use.....	15
5.0	Archaeological and Ethnographic Context.....	17
5.1	Ethnographic and historical evidence.....	17
5.2	Archaeological Evidence	20
5.3	Registered Aboriginal sites.....	21
5.3.1	Summary of sites.....	22
5.4	Previous archaeological investigations	24
5.5	Predictive model	27
6.0	Site Survey Methodology	29

6.1	Aboriginal site definition.....	29
6.2	Archaeological survey methodology.....	29
6.2.1	Site inspection	29
6.2.2	Aims of archaeological survey.....	31
6.3	Archaeological survey coverage.....	31
6.3.1	Summary:	32
7.0	Significance Assessment.....	33
7.1	Significance assessment methodology	33
7.2	Socio/cultural significance	34
7.3	Historic significance.....	34
7.4	Scientific significance	34
7.5	Aesthetic significance	34
7.6	Statement of significance	35
8.0	Avoiding and Minimising Harm.....	36
8.1	Proposed works	36
	The proposal involves the construction and an expansion to an existing data centre comprising:..	36
8.2	Impact assessment methodology	36
8.3	Aboriginal heritage impact assessment.....	36
8.4	Ecological Sustainable Development principles.....	36
8.4.1	The integration principle	37
8.4.2	The precautionary principle	37
8.4.3	The principle of intergenerational equity	37
8.5	Cumulative impacts	37
9.0	Management and Mitigation Measures.....	38
9.1	Unexpected finds	38
10.0	Conclusions and Recommendations	39
11.0	References	40
12.0	Appendices	43

FIGURES

Figure 1. Study Area.....	2
Figure 2. The site 17 – 23 Talavera Road, Macquarie Park, being Lot 527 DP 752035	4
Figure 3. Site plan	5
Figure 4: Location of study area within the Glenorie Soil Landscape (erosional) (Source: Soil Landscapes Outline, from espade.environment.nsw.gov.au © State of NSW and Department of Planning, Industry and Environment 2021 accessed 30 September 2021).....	13
Figure 5: Proximity of watercourses to the study area (Source SixMaps, 30 September 2021)	14
Figure 6. Study area in 1943 aerial photograph showing market gardens	16
Figure 7. Study area in 1998, showing industrial sites and disturbance to land previously used as market gardens and major arterial road (Historical Imaging map 1998 4457_04_048).....	16
Figure 8: Boundaries of the Wallumedegal Clan. (Source: Hunters Hill Museum. Accessed 24 May 2021).....	19
Figure 9: Wallumedegal women fishing, Source: Dictionary of Sydney Media.....	19
Figure 10: AHIMS Sites in proximity to the study area.....	23
Figure 11. Updated search of sites within the 2013 search area, showing 84 sites and the location of the current study area.....	25
Figure 12: Temporary buildings in southwest corner; construction material in foreground. View southwest.....	30
Figure 13: Resurfaced rear carpark. View north	30
Figure 14: Landscaping at rear of study area. View west	30
Figure 15: Erosion of ground surface. View south	30
Figure 16: Western side of study area. Temporary construction workers' buildings to right. View north.	30
Figure 17: Temporary construction workers' building on brick pillars over levelled ground. View South	30

TABLES

Table 1. Secretary's Environmental Requirements	6
Table 2: Registered Aboriginal parties for the study area	12
Table 3: Summary of RAP comments on ACHAR methodology.....	12
Table 4: Summary of RAP comments on the draft ACHAR.	12
Table 5: Frequency of recorded site types	21
Table 6. Effective survey coverage	31
Table 7. Landform survey coverage	31
Table 8 Burra Charter Heritage significance criteria	33
Table 9: Scientific significance assessment	34

1.0 INTRODUCTION

1.1 Project background

This Aboriginal Cultural Heritage Assessment (ACHAR) has been prepared by Artefact Heritage Services on behalf of Macquarie Data Centres (MDC) C/- GIDDIS Project Management. It has been produced to support the Environmental Impact Statement (EIS) prepared by Willowtree Planning PTY Ltd (Willowtree Planning).

The EIS has been submitted to the New South Wales (NSW) Department of Planning, Industry and Environment (DPIE), in support of an application for State Significant Development (SSD), for the construction and operation of a data centre, involving earth works, provision of infrastructure and expansion of an existing data centre at 17 – 23 Talavera Road, Macquarie Park (Lot 527 DP 752035).

The proposal represents an extension to the approved data centre (LDA/2018/0322) to allow for additional data storage capacity at the subject site, improving the overall operational efficiencies and provision of technology services to customers and the wider locality.

The proposal involves the construction and operation of an expansion to an existing data centre located at 17-23 Talavera Road, Macquarie Park (Lot 527 in DP 752035).

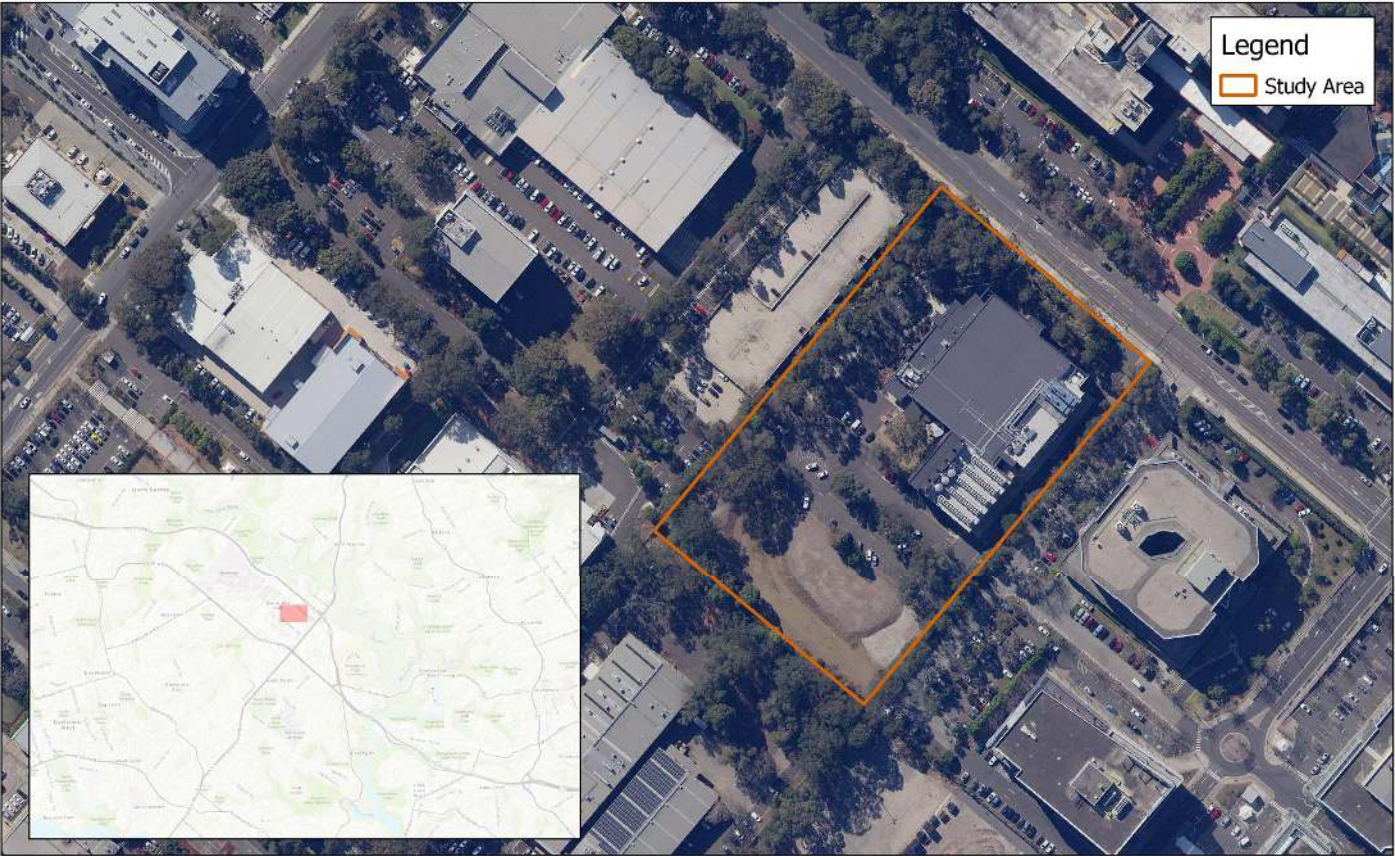
The proposal was awarded status as a State Significant Development by the Department of Planning Industry and Environment (DPIE) on 12 August 2021 (SSD-24299707).

1.2 Location

The study area (Figure 1) is located in the City of Ryde Local Government Area (LGA) and within the Parish of Hunters Hill in Cumberland County. The study area is in the Wallumedegal peoples' country within the boundary of the Metropolitan Local Aboriginal Land Council (Metro LALC). The site is surrounded by light industrial buildings. Macquarie University is located to the north west, the suburb of Marsfield lies to the west and south-west, and North Ryde lies to the south. The site lies parallel to the M2 Motorway, beyond which the Lane Cove River runs through a narrow section of the Lane Cove National Park. The river is approximately 781m from the study area at its closest point.

The study area is located in close proximity to the Lane Cove River, with the Lane Cove National Park lying to the north. The National Parks of the broader region contain numerous Aboriginal sites, especially rock shelters and rock engravings. Ku-ring-gai Chase National Park, Lion, Long and Spectacle Island Nature Reserves contain over 800 sites or locations including shell middens in foreshore areas, rock engravings and paintings, grinding grooves, stone arrangements, burials and occupation sites (Kelleher Nightingale Consulting (KNC) 2015: 4).

Figure 1. Study Area



Source: C:\Users\gholes\Documents\Talavera\Talavera.qgz



Study Area
21089 Project Number and 17-23 Talavera Road
LGA: City of Ryde

Scale: 1:2,000
Size: A4
Date: 11-11-2021



1.2.1 Site Description

The site is described as Lot 527 DP 752035, commonly known as 17 – 23 Talavera Road, Macquarie Park. The site has a total area of approximately 20,000m², with access achieved via Talavera Road (Figure 2).

The site forms part of the Macquarie Park Corridor, which is the strategic centre of Macquarie Park, being a health and education precinct and an important economic and employment powerhouse in Sydney's North District.

The site is described through its current commercial setting as an existing Data Centre (LDA/2018/0322), adjoining surrounding commercial premises along Talavera Road, and forming part of the wider Macquarie Park Corridor.

The site is situated approximately 12.5 km northwest of the Sydney CBD and 11.3 km northeast of Parramatta. It is within close proximity to transport infrastructure routes (predominantly the bus and rail networks), as well as sharing direct links with the wider regional road network, including Talavera Road, Lane Cove Road, Epping Road and the M2 Motorway.

These road networks provide enhanced connectivity to the subject site and wider locality. Additionally, the site is located within close proximity to active transport links, such as bicycle routes, providing an additional mode of accessible transport available to the subject site.

1.3 Overview of the project

The proposal represents an extension to the approved data centre (LDA/2018/0322) to allow for additional data storage capacity at the subject site, improving the overall operational efficiencies and provision of technology services to customers and the wider locality (Figure 3). The proposal involves the construction and operation of an expansion to an existing data centre located at 17-23 Talavera Road, Macquarie Park (Lot 527 in DP 752035), comprising:

- a five-storey building
- ancillary office space and staff amenities
- a back-up power system
- associated infrastructure, car parking, loading docks and landscaping

The subject site is located within the City of Ryde Local Government Area (LGA). The proposal seeks to operate 24 hours per day, seven (7) days per week.

The particulars of this proposal are summarised below:

- Minor earthworks involving cut and fill works
- Infrastructure comprising civil works and utilities servicing
- Construction of a five (5) storey building extension, comprising up to:
 - 14 data halls
 - 18 back up generators
 - Fit out of the building for use as a data centre (on an as-needs basis).

Figure 2. The site 17 – 23 Talavera Road, Macquarie Park, being Lot 527 DP 752035



Figure 3. Site plan



1.4 Purpose and scope of the report

Artefact Heritage has been engaged to prepare an ACHAR to meet the requirements of the SEARs. This report considers the impacts the proposed construction might have on Aboriginal cultural heritage and the potential archaeological resources within the study area. The report includes:

- Assessment of the Aboriginal cultural heritage values of the study area and identification of any specific areas of cultural significance
- Assessment of archaeological potential for the study area
- Aboriginal stakeholder consultation
- Preparation of a methodology for archaeological management including test excavation and salvage where required.

This ACHAR has been undertaken in accordance with the following guidelines:

- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales 2010 (DECCW 2010b)
- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011)

- Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW 2010a).

1.5 Secretary's Environmental Assessment Requirements

1.5.1 State Significant Developments.

The proposal was awarded status as a State Significant Development by the Department of Planning Industry and Environment (DPIE) on 12 August 2021 (SSD-24299707). The SEARs have been issued and requirements are listed in Table 1.

Table 1. Secretary's Environmental Requirements

Item	Secretary's Environmental Assessment Requirements	Where addressed in this report
1	Aboriginal cultural heritage – include an Aboriginal Cultural Heritage Assessment Report in accordance with relevant guidelines	This report
2	identify and describe Aboriginal cultural heritage values on the site	Sections 6 and 7
3	Assess any impacts for any Aboriginal cultural heritage values on the site	Sections 7, 8 and 9
4	Consultation with relevant local, state of Commonwealth Government authorities	Section 2
5	Consultation with relevant community groups and affected landowners	Sections 3 and 7

The SEARs also require assessment of non-Aboriginal cultural heritage values. This has been provided by Artefact in 17-23 Talavera Road, Macquarie Park, Statement of Heritage Impact and non-Aboriginal (Historic) Archaeological Assessment, Report to GIDDIS, October 2021. assessment of the study area and this has been provided in a separate report.

1.6 Authorship

This ACHAR has been prepared by Elizabeth Bonshek (Senior Heritage Consultant, Artefact Heritage) with review and management provided by Sandra Wallace (Director, Artefact Heritage).

2.0 LEGISLATIVE CONTEXT

2.1 Introduction

There are several pieces of legislation that are relevant to the assessment of Aboriginal cultural heritage for the proposal. This chapter provides a summary of these Acts and the potential implications for the proposal.

2.2 NSW National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) provides statutory protection to all Aboriginal places and objects. An Aboriginal Place is declared by the Minister, under Section 84 of the NPW Act in recognition of its special significance with respect to Aboriginal culture. Under Section 86 of the NPW Act objects are places are protected. An Aboriginal object is defined as:

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

The protection provided to Aboriginal objects applies irrespective of the level of their significance or issues of land tenure. However, areas are only gazetted as Aboriginal Places if the Minister is satisfied that sufficient evidence exists to demonstrate that the location was and/or is of special significance to Aboriginal culture.

There are no gazetted Aboriginal Places in the study area. All Aboriginal objects, whether recorded or not, are protected under the NPW Act.

If it is assessed that sites exist or there is a likelihood of sites existing within the study area and maybe impacted by the proposed activity, further archaeological investigations may be required. Projects which have been awarded status as State Significant Development under Part 4 Division 4.7 of the Environmental Planning & Assessment Act 1979, need not apply for a permit issued under the NPW Act which are not required for works undertaken in accordance with the SSD Conditions of Approval issued by DPIE.

The SSD requirements state that attempts to avoid damage must be made. Where damage is unavoidable the ACHAR and EIS must outline mitigation measures.

All Aboriginal objects, whether recorded or not, are protected under the NPW Act.

There are no registered Aboriginal sites in the study area.

2.2.1 National Parks and Wildlife Regulation 2019

Under the authority of the NPW Act, the National Parks and Wildlife Regulation 2019 provides regulations for Aboriginal heritage assessment and consultation with registered Aboriginal parties.

Part 5 (Division 2) of the National Parks and Wildlife Regulation sets out the requirements of a due diligence assessment process and provides requirements for more detailed assessment and consultation with registered Aboriginal parties for activities that may result in harm to Aboriginal objects. This includes:

- Clause 60 – consultation process to be carried out before application for Aboriginal Heritage Impact Permit (AHIP)
- Clause 61 – application for AHIP to be accompanied by cultural heritage assessment report.

In order to comply with Clause 60 and 61 of the National Parks and Wildlife Regulation 2019, preparation of an ACHAR and consultation with RAPs must be in accordance with the following guidelines:

- Code of Practice (DECCW 2010a)
- ACHAR guidelines (OEH 2011)
- Consultation guidelines (DECCW 2010b).

The current assessment has been carried out in accordance with the above guidelines in order to meet the standard SEARs which refer to them.

2.3 NSW Environmental Planning and Assessment Act 1979

The *Environmental Planning & Assessment Act 1979* (EP&A Act) provides planning controls and requirements for environmental assessment in the development approval process. The EP&A Act consists of three main parts of direct relevance to Aboriginal cultural heritage: Part 3 which governs the preparation of planning instruments; Part 4 which relates to development requiring consent; and Part 5 which relates to activity that does not require consent.

As the project has been awarded SEARs (SSD-24299707, on 12 August 2021), the project is subject to assessment and approval by the NSW Minister for Planning and Public Spaces under Part 4 Section Division 4.7 of the EP&A Act, which establishes an assessment and approval regime for SSD.

An EIS supported by the current assessment has been prepared to assess the impacts of the proposal, in accordance with standard SEARs.

Section 4.12(8) of the EP&A Act provides that environmental planning instruments (such as local environmental plans LEPS and SEPPs) do not, with some exceptions, apply to SSD projects. Notwithstanding, the environmental planning instruments that are relevant to the proposal have been considered for consistency, as described below.

2.3.1 Ryde Council Local Environmental Plan (LEP)

Planning decisions within LGAs are guided by Local Environmental Plans (LEPs).

LEPs are prepared by councils in accordance with the EP&A Act to guide planning divisions for LGAs. Each LGA is required to develop and maintain an LEP that includes Aboriginal and historical heritage items listed within its schedule and which are protected under the EP&A Act and the *Heritage Act 1977*.

The study area is located in the Ryde LGA and is subject to consents under the Ryde Local Environment Plan 2014. However, as the project has been approved as a SSD, approval by Council through a Development Application is not required.

There are no listed sites with identified Aboriginal heritage values in the Ryde Local Environmental Plan 2014 in the study area.

2.4 NSW Aboriginal Land Rights Act 1983

The *Aboriginal Land Rights Act 1983* (ALR Act) established Aboriginal Land Councils (at State and Local levels). These bodies have a statutory obligation under the ALR Act to:

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

The study area is within the boundary of the Metropolitan LALC.

2.5 NSW Native Title Act 1994

The *Native Title Act 1994* was introduced to work in conjunction with the Commonwealth *Native Title Act 1993*. Native Title claims, registers and Indigenous Land Use Agreements are administered under the Act.

There are no Native Title claims currently registered in the study area (date of search 6 September 2021 undertaken by Michael Lever).

2.6 Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The *Environment and Heritage Legislation Amendment Act (No. 1) 2003* amends the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) to include 'national heritage' as a matter of national environmental significance and protects listed places to the fullest extent under the Constitution. It also establishes the National Heritage List and the Commonwealth Heritage List.

The *Australian Heritage Council Act 2003* establishes a new heritage advisory body – the Australian Heritage Council – to the Minister for the Environment and Energy and retains the Register of the National Estate.

The *Australian Heritage Council (Consequential and Transitional Provisions) Act 2003* repeals the *Australian Heritage Commission Act 1975*, amends various Acts as a consequence of this repeal and allows the transition to the current heritage system.

Together the above three Acts provide protection for Australia's natural, Indigenous and non-Indigenous heritage. The new framework includes:

- A new National Heritage List of places of national heritage significance
- A Commonwealth Heritage List of heritage places owned or managed by the Commonwealth
- The creation of the Australian Heritage Council, an independent expert body to advise the Minister on the listing and protection of heritage places
- Continued management of the non-statutory Register of the National Estate.

2.6.1 National Heritage List

The NHL is a list of places with outstanding heritage value to our nation, including places overseas. So important are the heritage values of these places that they are protected under the EPBC Act.

This means that a person cannot take an action that has, will have, or is likely to have, a significant impact on the national heritage values of a national heritage place without the approval of the Australian Government Minister for the Environment and Heritage

There are no items listed on the National Heritage List located within the study area for this assessment.

2.6.2 Commonwealth Heritage List

The Commonwealth Heritage List (CHL) is a list of places managed or owned by the Australian Government and not of relevance to this project.

There are no items listed on the Commonwealth Heritage List located within the study area for this assessment.

3.0 ABORIGINAL COMMUNITY PARTICIPATION

3.1 Aboriginal consultation

Aboriginal community consultation has been conducted in accordance with the Consultation Requirements (DECCW 2010a).

A consultation log has been maintained which details all correspondence with the registered Aboriginal parties for the ACHAR (see Appendix).

3.2 Identification of stakeholders and registration of interest

The consultation for this ACHAR commenced in anticipation of the SEARs being awarded for the proposal.

In accordance with step 4.1.2 of the Consultation Requirements, Artefact Heritage corresponded with the following organisations by email on the 6 September 2021 requesting the details of Aboriginal people who may hold cultural knowledge relevant to determining the Aboriginal significance of Aboriginal objects and/or places within the local area:

- Metropolitan Local Aboriginal Land Council
- Ryde Council
- Native Title Service Corporation (NTSCorp)
- Heritage NSW
- National Native Title Tribunal
- Office of the Registrar, Aboriginal Land Rights Act 1983

In addition to this, and in accordance with Step 4.1.3 of the Consultation Requirements, an advertisement was placed in *The Weekly Times* on 8 September 2021 inviting the participation of Aboriginal people who may hold cultural knowledge relevant to determining the Aboriginal significance of Aboriginal objects and/or places within the local area.

In accordance with Step 4.1.3 of the Consultation Requirements, on the 24 September 2021, emails or letters were sent to all Aboriginal persons or organisations identified through advertisement or through responses from agencies contacted as part of Step 4.1.2. In accordance with Step 4.2 the letters provided details about the location and nature of the proposal, as well as an invitation to register as an Aboriginal stakeholder.

As a result of that process 7 groups and individuals registered their interest (see Table 2). A copy of the proposed assessment methodology was sent to registered Aboriginal parties (RAPs) by email and postal mail on 12 October 2021, requesting comments by 9 November 2021. A total of two RAPs provided comment on the proposed assessment methodology. These RAPs and summary of their comments are listed below in Table 3.

Table 2: Registered Aboriginal parties for the study area

Organisation/ Individual	Contact Name
A1 Indigenous Services	Carolyn Hickey
Didge Ngunawal Clan	Lillie Carroll & Paul Boyd
Ngambaa Cultural Connections	Kaarina Slater
Kamilaroi Yankuntjatjara Working Group	Pollowan Phil Khan
Darug Custodian Aboriginal Corporation	Justine Coplin
Wori Woilywa	Daniel Chalker
Goobah	Basil Smith

A summary list of RAP comments is presented in Table 3.

Table 3: Summary of RAP comments on ACHAR methodology.

Organisation	Individual	Comments
Goobah	Basil Smith	This is confirmation that we support the proposed ACHAR methodology and wish to be kept informed on any further developments
A1 Indigenous Services	Carolyn Hickey	I have reviewed the document and support the Information and Methodology. A1 would like to be involved in any future Meetings and field work

On 10 November 2021 the draft ACHAR was emailed to the RAPs for feedback and comment. Table 4 presents the comments of RAPs who have responded to date.

Table 4: Summary of RAP comments on the draft ACHAR.

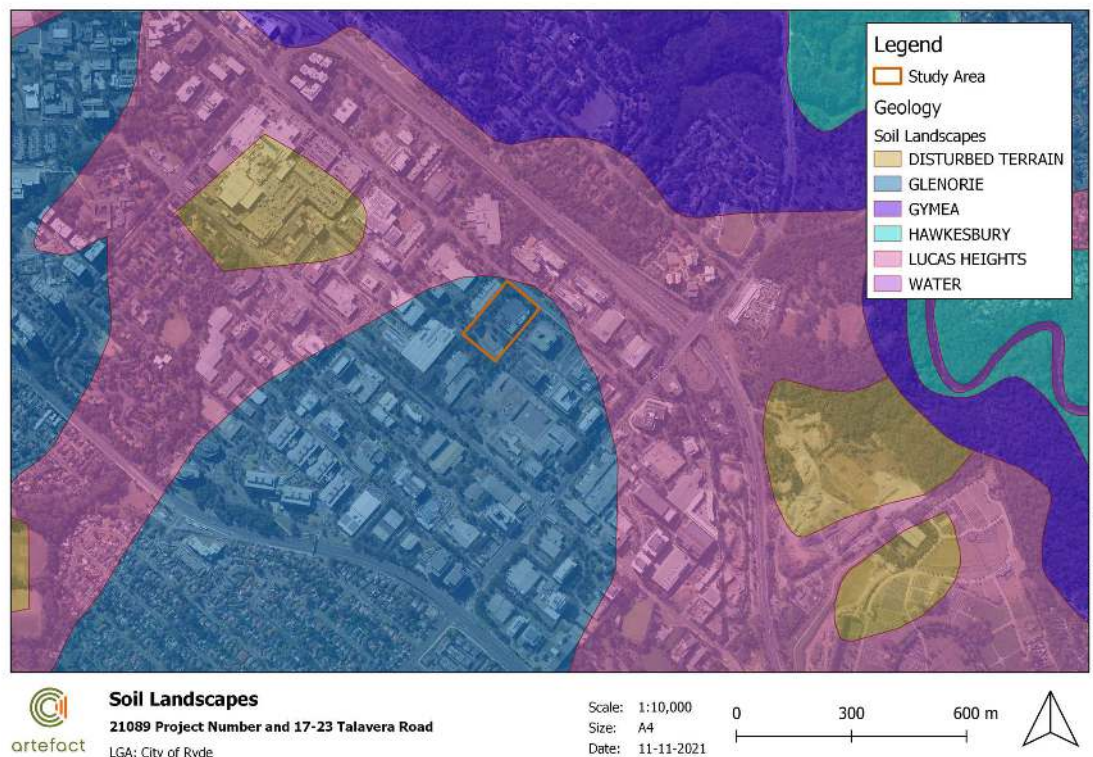
Organisation	Individual	Comments
Darug Custodian Aboriginal Corporation	Justine Coplin	Supports recommendations of ACHAR
Goobah	Basil Smith	Supports recommendations of ACHAR

4.0 ENVIRONMENTAL CONTEXT

4.1 Geology and soils

The study area is located on the edge of the Glenorie soil landscape which touches Talavera Road (Figure 4). This soil landscape occurs north of the Parramatta River on the Hornsby Plateau in Baulkham Hills, Hornsby, Ku-ring-gai, and in the Ryde local government area. The soils are underlain by Wianamatta Group Ashfield Shale and Bringelly Shale formations. Soils include topsoil of friable dark brown loam; underlain with hard setting brown clay loam; whole-coloured, reddish-brown, strongly pedal clay; mottled grey plastic clay, commonly occurring as deep subsoil; and brownish-grey plastic silty clay, usually in subsoil (B horizon) (Soil Landscapes Outline from espade.environment.nsw.gov.au © State of NSW and Department of Planning, Industry and Environment 2021 accessed 30 September 2021).

Figure 4: Location of study area within the Glenorie Soil Landscape (erosional) (Source: Soil Landscapes Outline, from espade.environment.nsw.gov.au © State of NSW and Department of Planning, Industry and Environment 2021 accessed 30 September 2021).



4.2 Landform and hydrology

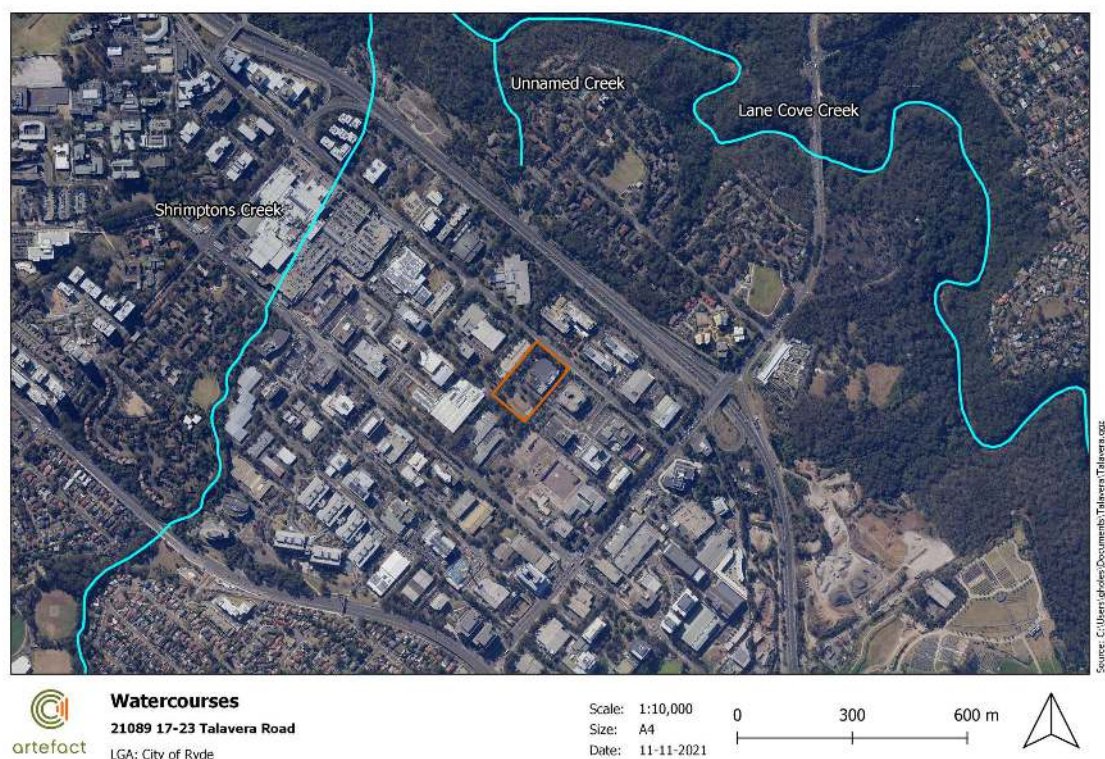
The natural topography of the area consists of low rolling and steep hills, with relief ranging between 50-120m and slopes of between 5-20%. Convex, narrow (20-300m) ridges and hillcrests form into moderately inclined slopes with narrow concave drainage lines. Moderate slopes of 10-15% dominate. (Soil Landscapes Outline from espade.environment.nsw.gov.au © State of NSW and Department of Planning, Industry and Environment 2021 accessed 30 September 2021).

The study area is located on land that has been levelled, although there is a gentle slope running north east. Talavera Road, which the study area faces from the north, has a significant east/west slope.

The Lane Cove River is the major watercourse in the local area and flows south into Sydney Harbour in the Lane Cove / Woolwich area. A number of tributaries, including predominantly first order unnamed watercourses, are located across the broad ridge crest landform associated with the majority of area in which the study area lies (Artefact 2013: 17).

The nearest first order tributary is Lane Cove River located approximately 675m from the study area. Two other water courses branch off Lane Cove River in a southerly direction: Shrimpton Creek (approximately 675m from the study area), and an unnamed watercourse which would have flowed 411m from the study area. The latter originally travelled in a south easterly direction through the study area. The watercourse has been modified and turned into a stormwater drain which now traverses underground.

Figure 5: Proximity of watercourses to the study area (Source SixMaps, 30 September 2021)



4.3 Vegetation

The area would originally have been comprised of tall, wet sclerophyll forest with Sydney Blue Gum (*Eucalyptus saligna*), Band lackbutt (*Eucalyptus pilularis*) dominating. Other species would have included Turpentine (*Syncarpia glomulifera*), Grey Ironbark (*Eucalyptus paniculate*), white stringybark (*E. globoidea*), rough-barked apple (*Angophora floribunda*). Pittosporum (*Pittosporum undulatum*) and coffee bush (*Breynia oblongifolia*) would have been common plants in the understorey.

Most original vegetation has been cleared, but remnant species can be seen in Dalrymple Hay Reserve at St Ives and in Blackwood Memorial Sanctuary in Beecroft (Soil Landscapes Outline from

4.4 European history and land use

Artefact Heritage's (2021), *Statement of Heritage Impact and non-Aboriginal (Historic) Archaeological Assessment* provides a detailed and concise European history of North Ryde/Macquarie Park.

The first land grants began in 1792 when eight marines were granted land with a frontage on Parramatta River. This area was called the Field of Mars (Smith 2005), and by 1796 had extended to include much of North Ryde (then known as the Northern Bush) and the area now known as Macquarie Park. In 1804, the land in which the study area lies was formerly set aside as a common for the residents, and the area became known as the Field of Mars Common. Settlers used this area to graze their animals. In 1874 plans were made to construct roads and allotments within this area, and subdivision and sales proceeded between 1889 to 1898. Market gardening continued in this area into the 1940s.

In 1963 the NSW Government announced the purchase of a large portion of land at the northern end of the North Ryde Green Belt to build Macquarie University. The adjacent area, now known as Macquarie Park, was developed concurrently as the 'Macquarie Park Employment Area' with a view to creating a hi-tech industrial estate surrounding the university, allowing for interaction between the university and industry partners. Macquarie Park was formerly part of the suburb of North Ryde, and became a suburb of its own in 1999 (Ryde Council, <https://www.ryde.nsw.gov.au/Library/Local-and-Family-History/Historic-Ryde/History-of-Ryde>).

The alignment of roads running through the study area has changed relatively little since 1898. The current M2 Motorway follows the route of Pittwater Road; Lucknow Road was renamed Epping Road. The only major changes were the extension of Delhi Road to meet Lucknow/Epping Road prior to 1928, and the shortening of Waterloo Road, which had originally continued through the M2 Site to meet Pittwater Road (Artefact 2013: 17).

The original vegetation has been cleared of its natural timbers and replaced first with grazing land, subsequently with market gardens. The area retained market gardens, poultry farms and bushland until the mid-20th century (Figure 6) until the area was built over with industrial complexes (Figure 7)

Figure 6. Study area in 1943 aerial photograph showing market gardens

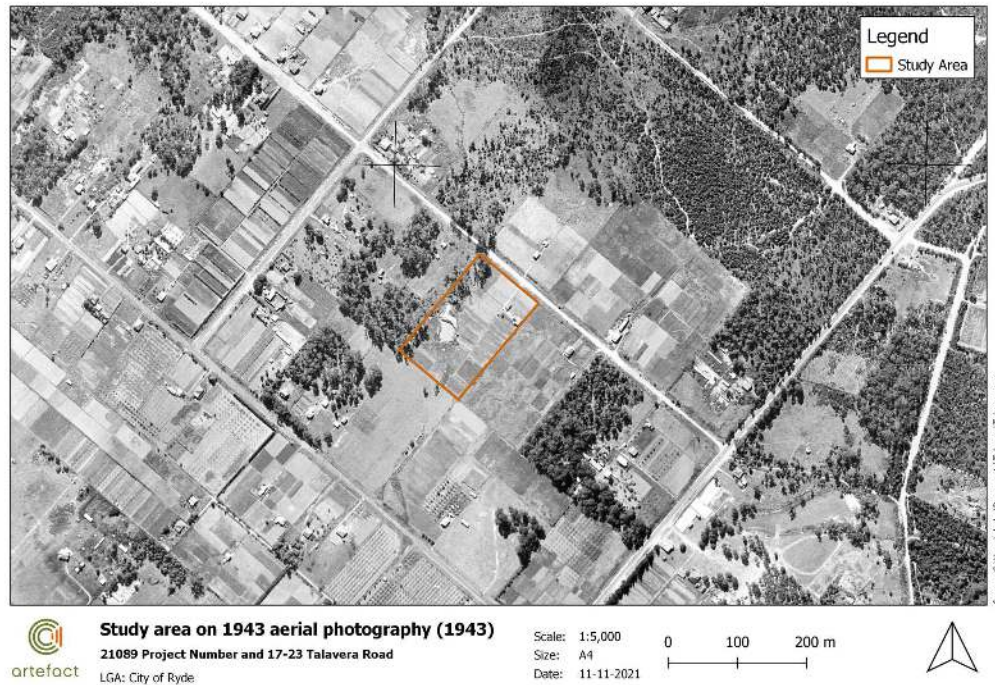


Figure 7. Study area in 1998, showing industrial sites and disturbance to land previously used as market gardens and major arterial road (Historical Imaging map 1998 4457_04_048).



5.0 ARCHAEOLOGICAL AND ETHNOGRAPHIC CONTEXT

5.1 Ethnographic and historical evidence

Prior to the appropriation of their land by Europeans, Aboriginal people lived in small family or clan groups that were associated with particular territories or places. It seems that territorial boundaries were fairly fluid, although details are not known. The language group spoken on the Cumberland Plain is known as Darug (Dharruk – alternative spelling). This term was used for the first time in 1900 (Matthews & Everitt (1900) as before the late 1800s language groups or dialects were not discussed in the literature (Attenbrow 2010:31). The Darug language group is thought to have extended from Appin in the south to the Hawkesbury River, west of the Georges River, Parramatta, the Lane Cove River and to Berowra Creek (Attenbrow 2010:34). This area was home to a number of different clan groups throughout the Cumberland Plain.

The study area is within the territory of the Wallumedegal (or Wallumattagal) clan. The word Wallumedgal is derived from *wallumai* which means snapper. Hence the Wallumedegal clan are also referred to as the snapper peoples (<https://www.ryde.nsw.gov.au/Library/Local-and-Family-History/Historic-Ryde/Aboriginal-History>) and their language is spoken by the clans along the coast (Smith 2005:5). The exact boundaries of the territory are not known, and may have been fluid, but the Wallumedegal area is thought to have extended around Sydney Harbour from Lane Cove along the northern bank of the Parramatta River (Smith 2005: 1, Attenbrow 2010: 23; Hunters Hill Museum, <https://huntershillmuseum.org.au/indigenous-connections-past-and-present-hunters-hill/>) (see Figure 8).

European expansion and exploitation of Wallumedegal land has resulted in the loss of this rich culture and evidence of Aboriginal occupation across Macquarie Park is scant. Apart from the remnant rock shelters or sandstone overhangs the pervasiveness of colonisation has obscured evidence of Wallumedegal occupation. Macquarie Park (formerly North Ryde) was quickly transformed into farming allotments, with massive tree clearing operations having immediate impact across Port Jackson.

European appropriation of Wallumedegal territory occurred very early in the colonization period. Boats were sent along the harbour up the Lane Cove and Parramatta Rivers within days of the arrival of the First Fleet. Numerous overland parties quickly arrived to explore the potential of land surrounding the harbour. Information about the way that Aboriginal people lived before white settlement can be gained from observations of these early parties of explorers.

Lieutenant William Bradley wrote on his observations of Aboriginal people during an expedition up the Lane Cove River in February 1788. He noted that Aborigines were plying the river in canoes, but it is not known what their activities were.

'We did not meet with any Natives again 'till this day, at day light saw several canoes in the Cove we were surveying; they all fled, some out of the Cove and others up to a Cove above' (Bradley 1969: 74)

The first reference to the people of the Ryde area was by Governor Philip on 13 February 1790. He wrote:

'The South side of the Harbour from the above-mentioned Cove [now Darling Harbour] to Rose-Hill, which the natives call Par-ra-matta, the district is called

Wann, and the tribe, Wanngal. The opposite shore is called Wallumetta, and the tribe, Wallumedegal' (Smith 2005:1 quoting Philip).

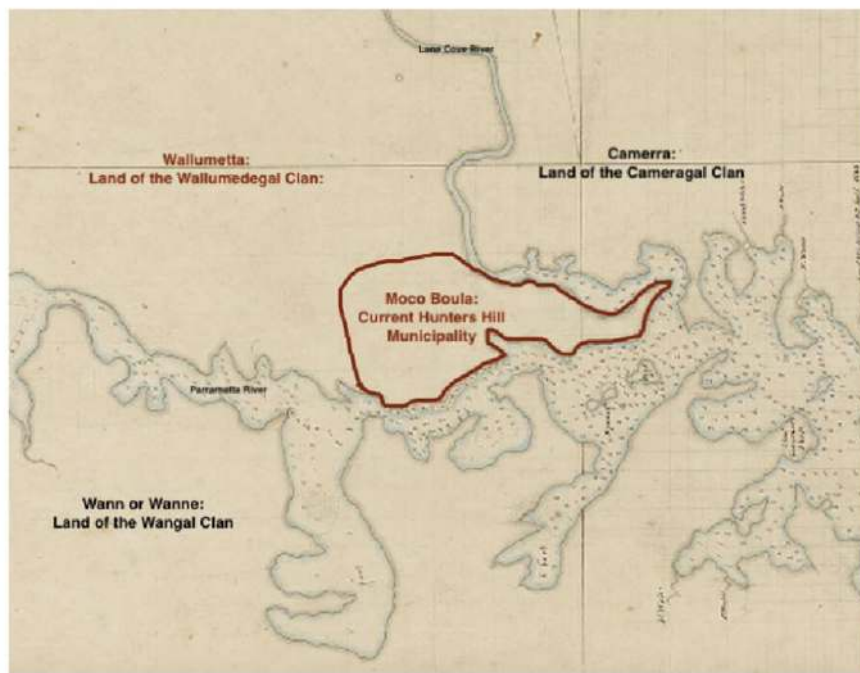
In May 1788 Surgeon George Worgan described the landscape of Wallumedegal country. He describes 'the trees are small and grow in almost regular rows so that together with the evenness of the land to a considerable extent it resembles a beautiful park' (Worgan quoted in Smith 2005:11). Aboriginal people through selective use of fire had shaped the countryside described. This 'fire stick farming' was designed to modify the landscape to attract game, which was seen to be plentiful and to is said to have supported a pre-contact population of approximately 3000-5000 people in the Sydney region. The small pox epidemic of 1789 had a profound effect on the population of the Sydney region, and would have decimated groups in the Ryde area. From 1790 any Aboriginal people remaining in the Ryde area would have been further disenfranchised, as convicts were moved in to harvest the timber and lime resources of the area (Artefact 2013: 18-19)

Assumptions about Aboriginal land use patterns are made on the basis of archaeological information gained from the local area, from observations made by colonists and settlers after settlement of the area, and from information known about available natural resources.

Aboriginal people were highly mobile hunter-gathers. They used a range of resources, some of which were only available seasonally. This necessitated movement and/or trade in such resources. Particular ceremonial or ritual events also prompted people to move (Attenbrow 2010: 78). Aboriginal people hunted kangaroo and wallaby and snared possums for food and skins (Bradley 1969 [1788-]) and caught fish and collected shellfish in marine or estuarine environments.

Plants were an important source of nutrition and were also used in the manufacture of tools. Gum and sap were used for binding or for hafting, such as in the manufacture of stone hatchets and plant fibres were used to make baskets, nets, ropes and hammocks. Plant products were also used in the manufacture of shelters, shields and other weapons, coolamons, used to carry food and water, and digging sticks.

Figure 8: Boundaries of the Wallumedegal Clan. (Source: Hunters Hill Museum. Accessed 24 May 2021)



Boundaries of the Wallumedegal Clan superimposed on Chart of Port Jackson by Captain John Hunter, February 1788.

Figure 9: Wallumedegal women fishing, Source: Dictionary of Sydney Media



By Richard Clevely From the collections of the [State Library of New South Wales](#) [a7225030 / DL PXX 84, 30] (Dixon Library) (From Arthur Phillip, The Voyage of Governor Phillip to Botany Bay, London, printed for John Stockdale, 1789, plate 4))

5.2 Archaeological Evidence

Aboriginal people have lived in New South Wales for more than 50,000 years. Evidence of Aboriginal occupation has been found dated to 40-60,000 years before present (yBP) at Lake Mungo in south western NSW and basal dates of over 14,000 years have been recorded within the Sydney basin (Nanson and Young 1987: JMcDCHM 2005a). The archaeological material record provides evidence of this long occupation, but also provides evidence of a dynamic culture that has changed through time.

The existing archaeological record is limited to certain 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. Archaeological analyses of these artefacts in their contexts have provided the basis for the interpretation of change in material culture over time. Technologies used for making tools changed, along with preference of raw material. Different types of tools appeared at certain times, for example ground stone hatchets are first observed in the archaeological record around 4,000 yBP in New South Wales (Attenbrow 2010:102). It is argued that these changes in material culture were an indication of changes in social organisation and behaviour.

The Eastern Regional Sequence was first developed by McCarthy in 1948 to explain the typological differences he was seeing in stone tool technology in different stratigraphic levels during excavations such as Lapstone Creek near the foot of the Blue Mountains (McCarthy 1948). The sequence had three phases that corresponded to different technologies and tool types (the Capertian, Bondaian and Eloueran). The categories have been refined through the interpretation of further excavation data and radiocarbon dates (Hiscock & Attenbrow 2005, JMcDCHM 2005b).

It is now thought that prior to 8,500 yBP tool technology remained fairly static with a preference for silicified tuff, quartz and some unheated silcrete. Bipolar flaking was rare with unifacial flaking predominant. No backed artefacts have been found of this antiquity. After 8,500 yBP silcrete was more dominant as a raw material, and bifacial flaking became the most common technique for tool manufacture. From about 4,000 yBP to 1,000 yBP backed artefacts appear more frequently. Tool manufacture techniques become more complex and bipolar flaking increases (JMcD CHM 2006). It has been argued that from 1,400 to 1,000 years before contact there is evidence of a decline in tool manufacture. This reduction may be the result of decreased tool making, an increase in the use of organic materials, changes in the way tools were made, or changes in what types of tools were preferred (Attenbrow 2010:102). The reduction in evidence coincides with the reduction in frequency of backed blades as a percentage of the assemblage (Artefact 2013).

Long term changes in climate and sea level have occurred in Port Jackson over the past 20,000 years, with the sea level stabilising at its present level approximately 6,000 years ago (Birch 2007: 219). Comparisons between Sugarloaf 1 and other sites on the foreshores of Port Jackson indicate clearly that the Wallumedegal clan were highly skilled fishers. Many colonists, including Watkin Tench (2012 [1789]) recorded the resourcefulness and skill of Wallumedegal woman who fished during the day and night, and who maintained an open fire in the prow of their vessels which were known as *nowie* (Figure 9).

The northern side of Port Jackson is rich in exposed sandstone outcrops. These sandstone outcrops retain evidence of Aboriginal occupation. The types of cultural material associated with sandstone outcrops are rock shelters rock art sites, engravings and remnant middens camps. It is estimated that there are a minimum 1500 rock shelters across the northern Sydney harbour area. Midden sites are generally located in close proximity to rock shelters. The Aboriginal Heritage Office has investigated

the status of some 242 registered sites. These sites cover six councils including Ku-ring-gai which borders with Ryde a short distance from the study area, on the eastern side of Lane Cover River. (Aboriginal Heritage Office 2019).

5.3 Registered Aboriginal sites

The locations and details of Aboriginal sites are considered culturally sensitive information. It is recommended that this information, including the AHIMS data and GIS imagery, is removed from this report if it is to enter the public domain.

An extensive search of the Aboriginal Heritage Information System (AHIMS) database was undertaken on 21 May 2021 (Client ID: 592635).

The AHIMS search provides archaeological context for the area and identifies whether any previously recorded Aboriginal sites are located within or near the study area. An area of approximately 1 kilometre (east-west) by 1 kilometre (north-south) from the study area was included in the search. The parameters of the search were as follows:

GDA 1994 MGA 56	██████████ E
	██████████ N
Buffer	1000 m
Number of sites	█

A total of █ sites were identified in the extensive AHIMS search area. The distribution of recorded sites within the AHIMS search area is shown in (Figure 10). There are 20 standard site features that can be used to describe a site registered with AHIMS, and more than one feature can be used for each site. The frequency of recorded site types is summarised in Table 5 below. For the █ sites within the search area, █ site features were recorded. Most of the recorded sites are Artefacts (n=█) followed by Artefact with Potential Archaeological Deposit (PAD) (n=█).

Table 5: Frequency of recorded site types

Site Feature	Frequency	Percentage
Rock Shelter	█	25
Artefact, Rock Shelter	█	50
Artefact, Potential Archaeological Deposit (PAD)	█	25
Total	█	100

The nature and location of registered Aboriginal sites is a reflection of the past Aboriginal occupation from which they derive, but is also influenced by historical land-use, and the nature and extent of previous archaeological investigations. Although Aboriginal occupation covered the whole of the landscape, the availability of fresh water, and associated resources, was a significant factor in repeated and long-term occupation of specific areas within the landscape. Certain site types, such as culturally modified trees, are particularly vulnerable to destruction through historical occupation, while others, such as stone artefacts, are more resilient.

Shrimpton Creek ■ – Macquarie Park (Lane Cove NP); ■ This site was recorded by National Parks & Wildlife Services in 1998 during part of an archaeological survey of Metropolitan Sydney. The site has been revisited by the Aboriginal Heritage Office (City of Ryde Council) on two occasions (29/06/2010 and 27/08/2010) to monitor and assess site disturbance. The site is a narrow shelter with a sandy floor and near vertical back wall. No shell was visible within the deposit. ■). There is evidence of flooding and debris on the site. The site is approximately ■ from the study area.

Shrimpton Creek ■ – Macquarie Park (Lane Cove NP); ■ ■. The site was first recorded in 1998. Two silcrete artefacts were found ■, and the site has grinding grooves platform. The site has been heavily disturbed and vandalised. The site was revisited on 27 August 2010 by the Aboriginal Heritage Office (City of Ryde Council) and classified as a shelter with deposit. The two silcrete artefacts were relocated. The shelter had been affected by flooding and associated garbage which had washed into the shelter. The site is approximately ■ from the study area.

■ ■

This site, a shelter with archaeological deposits and engravings located approximately ■ from the study area, was first recorded in 1990. Eight artefacts were found in the shelter including: four stone artefacts; two complete flakes; one broken flake and a partial flake. The flakes were classified as mudstone. The shelter has been disturbed and partially vandalised.

Eden Gardens ■

This site is approximately ■ from the study area. It was first recorded in 2003 as part of a test excavation by HLA-EnviroScience Pty Ltd and comprises one quartz flake and a PAD. The flake was located within the upper layer of a test pit. The site was re-investigated on 23 August 2010 when it was classified as very disturbed as the result of residential and industrial development.

5.3.1 Summary of sites

The nature and location of these registered sites represents a reflection of the past Aboriginal occupation and the day-to-day activities people carried out while drawing upon the natural resources around them. The availability of fresh water and resources was a significant factor in Aboriginal peoples' repeated and long-term occupation of specific areas within the landscape. The survival of identified sites is also determined by historical land-use and disturbance. The nature and extent of previous archaeological investigations plays a major role in determining where recorded sites are located.

Another factor in the identification of Aboriginal sites is the durability of the materials the people used in carrying out their activities. Sites comprised of robust materials such as rock shelters are most likely to be preserved, while sites comprised of bone, wood and skin are least likely to be preserved. With only two exceptions in the early 20th century, no wood or bone objects have been found during archaeological excavations in the Sydney region (Attenbrow, 2010). Shell and bone artefactual remains found in middens have only been dated to less than 3200 years ago (Attenbrow, 2010).

There are three sites identified as rock shelters. They are near a major water resource and are located within lands that appear to have been preferentially preserved through their incorporation into a National Park. Shrimpton Creek ■ and Shrimpton Creek ■ are ■ to the study area. These sites are nearly ■ from the study area and within ■ of water sources.

Figure 10: AHIMS Sites in proximity to the study area

Map removed for public release

5.4 Previous archaeological investigations

There has been one due diligence assessment (AECOM 2020) of the study area carried out previously. This was undertaken by AECOM in 2020 to assess the potential for any impact on Aboriginal heritage at the site prior to the development of a Data Centre. The proposed works included the construction of ancillary offices, car parking, loading dock, security facilities, installation of service infrastructure which involved earthworks and landscaping.

No sites or artefacts were found in an AHIMS search. A site inspection carried out on the 15 September 2020 by AECOM staff and a site officer from the Metropolitan Local Aboriginal Land Council (MLALC) did not find any Aboriginal artefacts or archaeological potential at the site. The MLAC site officer reported that there were no Aboriginal archaeological constraints on the proposed development.

After assessment of the landform, past disturbance of the ground through previous development, consultation with Metropolitan Aboriginal Land Council and past archaeological assessments in the surrounding area, the site was classified as having low archaeological sensitivity. The potential for discovering Aboriginal artefacts during surface impacts and disturbance caused by construction was also assessed as low. The report's recommendations included that no further heritage assessment was required; construction staff should undergo induction to develop awareness of the importance of Aboriginal cultural heritage and places to Aboriginal communities as well as their legal standing in regard to the disturbance or destruction of Aboriginal heritage and sites. The report also recommended an unexpected finds policy be implemented for the duration of the works.

Slightly removed from the study area, there have been a number of archaeological investigations along the banks of the Lane Cove River, and in the Lane Cove National Park to the [REDACTED] of the study area.

In 2013 Artefact were engaged to prepare a due diligence assessment for Transport for NSW for the proposed Epping to Chatswood Rail Line (ECRL). This report summarised a number of earlier excavations undertaken between 1989 to 2012 (Artefact 2013:14-15) in preparation for the proposed construction of 5 new train stations, including one at Macquarie Park (approximately 500m south-east). An assessment was undertaken of the Aboriginal heritage values within 250m radius of each proposed station. A site inspection was publicly accessible land was undertaken in addition to background research and areas of archaeological sensitivity identified. Areas identified as having the greatest archaeological sensitivity includes areas with remaining open spaces and remnant intact sub-surface archaeological deposit. The assessment did not include private land.

While an extensive search of the AHIMS database found no sites within the study area, [REDACTED] sites were found within a [REDACTED] buffer. However, most sites were located along the [REDACTED] and predominantly on the [REDACTED] side of the [REDACTED]. The sites included art sites, middens and artefacts. An updated search of sites in this area is shown in Figure 11.

The area within the Macquarie Park Station buffer zone consisted entirely of roads and commercial development and no areas of public open space were identified within the buffer zone. No Aboriginal objects were identified within the accessible portions of the Macquarie Park Station buffer zone.

Figure 11. Updated search of sites within the 2013 search area, showing 84 sites and the location of the current study area.

Map removed for public version.

Artefact Heritage 2019

Artefact Heritage (2019) was engaged by Ausgrid to undertake an Aboriginal heritage assessment at [REDACTED], Hunters Hill (Lot 3 DP 539241) approximately [REDACTED] from the study area. The proposed works comprised the removal and replacement of two timber power poles within [REDACTED] reserve. An AHIMS registered search found two AHIMS sites [REDACTED] in proximity of the study area.

Physical investigation of the site revealed that the underlying subsurface deposit at Power Pole 1 (referred to as location 1, adjacent to [REDACTED]), was highly disturbed and comprised of backfill. Power Pole 2 (Location 2) was located below [REDACTED] but it was assessed as having no Aboriginal archaeological significance.

Investigation of the two [REDACTED] revealed that they were incorrectly registered. The locations found using the coordinates associated with the registered site card information did not correlate with any of the [REDACTED] within the study area. The study area was recorded as being heavily disturbed and having low Aboriginal archaeological sensitivity.

Artefact Heritage 2017 Aboriginal Heritage Due Diligence Assessment. [REDACTED] Road & [REDACTED] Street, East Ryde.

Artefact Heritage (2017) was engaged by Ausgrid to undertake a Due Diligence assessment for installation of underground cabling between [REDACTED] and [REDACTED], East Ryde. This site is approximately [REDACTED] from the study area. The site is within [REDACTED] water courses ([REDACTED] and [REDACTED]). The study area is also within [REDACTED] of three registered AHIMS sites, classified as Shelters with Middens ([REDACTED] [REDACTED]).

The proposal included subsurface excavations between [REDACTED] and [REDACTED]. The site inspection noted that the landform had been modified. Inspection of vegetation and associated sandstone outcrops showed no evidence of past usage by Aboriginal people. A large proportion of sandstone had been shattered and it was posited that this occurred in the manufacturing of the road.

Urbis Pty Ltd., 2017 Aboriginal Archaeological Due Diligence Assessment, [REDACTED], Lindfield

Urbis Pty Ltd (2017) was engaged by the NSW Department of Education to undertake an Aboriginal Archaeological Due Diligence Assessment for the [REDACTED] to support the department's application for status as a State Significant Development. The site was approximately [REDACTED] from the study area and located in the former [REDACTED], known as [REDACTED]. The proposal was a redevelopment of the former campus into a "learning village", which included an educational facility spanning kindergarten to year 12. A "home base model" was proposed for the Child Care Centre, operated by Aurora College (Distance Education) along with After Hour Facilities. The impacts of the proposal included the installation of a security fence, a new concrete pathway, recreation area, and re-landscaping.

An inspection of the site did not ascertain any Aboriginal archaeological objects or sites. The site had limited ground surface visibility as a result of vegetation growth and leaf litter across the site. Areas within the site that had visible ground surface were observed to be considerably disturbed with introduced fill replacing the original A1 horizon. Sandstone outcrops did not exhibit any evidence of modification. No rock shelters or platforms were observed during the site inspection. It was deemed that the site held low archaeological potential and that the site was severely disturbed.

Artefact Heritage 2014 Aboriginal Heritage Due Diligence Assessment Lindfield Substation

Artefact Heritage (2014) was engaged by Parsons Brinckerhoff to undertake a due diligence assessment for the construction of a traction power substation at [REDACTED] and an ancillary electrical works between [REDACTED] and [REDACTED]. The site is approximately [REDACTED] from the study area. The works undertaken across the sites included:

- construction of new transformers
- major earthworks
- road paving and driveway access
- landscaping
- relocation of streetlights, and
- other minor works.

Two site inspections were undertaken in March and June of 2014. A second inspection was undertaken specifically to observe the areas where the ancillary electrical works were to be undertaken. It was observed that previous works had introduced fill and levelled ground across the area designated for construction of the substation.

Inspections of the areas to the north and south, which included the ancillary works, discovered that the ground was highly disturbed and modified to provide a level ground surface. The site was deemed to be of low Aboriginal archaeological sensitivity. The site was not near any permanent water courses or sensitive landforms. No Aboriginal archaeological objects were located across the site.

5.5 Predictive model

Beth White and Jo McDonald (White and McDonald 2010) developed a predictive model for site locations on the Cumberland Plain based on archaeological excavations in the Rouse Hill Development Area (RHDA). It draws on and supports earlier models that predicted a correlation between site location and proximity to permanent water sources but also stressed the relationship between topographical unit and Aboriginal occupation. It was found that artefact densities were highest on terraces and lower slopes within 100 m of water. A stream order model was used to differentiate between artefact densities associated with intermittent streams as opposed to permanent water. It was found that artefacts were most likely to be found within 50 to 100 m of higher (fourth) order streams, within 50 m of second order streams, and that artefact distribution around first order streams was not significantly affected by distance from the watercourse (White and McDonald 2010: 33). Landscapes associated therefore, with higher order streams (second order or greater) were found to have higher artefact densities and more continuous distribution than lower order intermittent streams.

Archaeological sites around the Port Jackson area have different characteristics than those located across the Cumberland Plain. Artefact assemblages have more diversity and contain higher proportions of chert, quartz, quartzite, and basalt (Artefact 2019). In contrast, the dominant stone resources associated across the Cumberland Plain tend to be silcrete, quartz and Tuff.

Hawthorne (1982) investigated a number of sites on the northern side of Port Jackson in order to understand location and use type. Hawthorne's model suggests that rock shelters predominately have a north, northwest or northeast facing position and the majority would be located within 100m of the littoral zone. Generally midden sites were located within 20m of water sources.

The Aboriginal Site Report (1986) by E. Rich, supports Hawthorne's model. Rich observed that Port Jackson sites are predominately shell middens, engravings, and art. Artefact assemblages are diverse with high proportions of chert, quartz, quartzite and basalt.

Site types and artefact assemblages across the Port Jackson region tend to be more variable than compared to the Cumberland Plain. Sites across the northern side of Port Jackson tend to be located within 100m of a water source and rock shelters sites most commonly have a northern facing aspect.

6.0 SITE SURVEY METHODOLOGY

6.1 Aboriginal site definition

An Aboriginal site is generally defined as an Aboriginal object or place. An Aboriginal object refers to any deposit, object or material evidence (not being a handicraft) relating to Aboriginal habitation of the area that comprises New South Wales (DECCW 2010). Aboriginal objects may include stone tools, scarred trees or rock art. Some sites, or Aboriginal places, can also be intangible and although they might not be visible, these places have cultural significance to Aboriginal people.

The Code of Practice states, in regard to the definition of a site and its boundary, that one or more of the following criteria must be used when recording material traces of Aboriginal land use:

- The spatial extent of any visible Aboriginal objects, or direct evidence of their location
- Obvious physical boundaries where present, for example mound site and middens (if visibility is good), a ceremonial ground
- Identification by the Aboriginal community on the basis of cultural information

6.2 Archaeological survey methodology

6.2.1 Site inspection

A site inspection was undertaken for the Due Diligence report on 26 May 2021 by Dr Elizabeth Bonshek (Senior Heritage Consultant) and Brye Marshall (Heritage Consultant). A request to attend the site visit was made to the Metropolitan LALC but a representative did not attend. As the study area has not changed since that time, the observations made on that day are presented here.

Overall, the surface visibility was constrained by the presence of both permanent and temporary buildings across the study area, combined with extensive areas of tarmac carpark. Both the entrance to the property and rear areas provided surfaced parking areas. Temporary buildings had been installed for site workers as well as areas set aside for construction materials.

Ground surface visibility across the study area was low.

The temporary buildings occupied a large proportion of the south-western corner of the study area (at the rear of the property) and lay adjacent to the boundary line (running towards Talavera Road, Figure 12). The ground surface had been completely modified through leveling, laying of asphalt, underground drainage systems, landscaping and concrete gutters (Figure 12, Figure 13, Figure 14).

While observable ground surface was located in parts of the study area, access was restricted by machinery, construction supplies and fill (Figure 15) preventing extensive ground surface inspection. Ground surface visibility along the western boundary of the study area was limited as a result of the temporary buildings positioned in parallel to the fence line (Figure 16, Figure 17). The length of the section along the western boundary of the study, between the temporary buildings and the fence line (Figure 16) was inspected. This section was covered in a layer of leaf litter, which was moved to expose the ground surface. Investigation along this section of the study area did not reveal any surface artefacts.

Ground surface visibility across the study area was low. The locations where ground surface could be observed did not reveal any archaeologically significant objects. Disturbance and / or modification

of ground surface is a result of terracing to accommodate a level surface for the data centre and the carpark.

Figure 12: Temporary buildings in southwest corner; construction material in foreground. View southwest



Figure 13: Resurfaced rear carpark. View north



Figure 14: Landscaping at rear of study area. View west



Figure 15: Erosion of ground surface. View south



Figure 16: Western side of study area. Temporary construction workers' buildings to right. View north.



Figure 17: Temporary construction workers' building on brick pillars over levelled ground. View South



Ground surface visibility was low, and the ground surface had been completely modified, having been levelled for the construction of buildings, carparks and landscaping.

No Aboriginal artefacts were found during the site survey.

No areas of potential archaeological deposit were identified during the site survey.

6.2.2 Aims of archaeological survey

The aims of the archaeological survey were to:

- Inspect the ground surface of the site
- Record any surface or potential subsurface Aboriginal sites that have not been recorded in AHIMS
- Identify areas of PAD that may be present in areas that have had no or minimal disturbance
- Collect information to ascertain whether further archaeological investigation is required.

6.3 Archaeological survey coverage

Ground surface visibility across the study area was low. This was due to large scale ground disturbance to provide a level surface for the data centre and the carparks.

The effective survey coverage of the study area is presented in Table 6.

The landform survey coverage is presented in (Table 7).

Ground surface visibility was low. The locations where ground surface could be observed did not reveal any archaeologically significant objects.

Table 6. Effective survey coverage

Survey unit	Landform	Survey unit area (sq. m)	Visibility (%)	Exposure (%)	Effective coverage area (sq. m)	Effective coverage (%)
1	flat	20,000	Low	10	2500	12.5

Table 7. Landform survey coverage

Landform	Landform area (sq. m)	Area effectively surveyed (sq. m)	% of landform effectively surveyed	Number of sites identified
flat	2,500	70	Less than 10	0

6.3.1 Summary:

Ground surface visibility was low, and the ground surface had been completely modified, having been levelled for the construction of buildings, carparks and landscaping.

No Aboriginal artefacts were found in the study area during the site survey.

No areas of potential archaeological deposit were identified during the site survey.

7.0 SIGNIFICANCE ASSESSMENT

7.1 Significance assessment methodology

An assessment of the cultural heritage significance of an item or place is required in order to form the basis of its management. *The Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011) provides guidelines for heritage assessment with reference to the *Burra Charter* (Australia ICOMOS 2013). The assessment is made in relation to four values or criteria (Table 8). In relation to each of the criteria, the significance of the subject area should be ranked as high, moderate, or low.

Cultural heritage consists of places or objects, that are of significance to Aboriginal people. Cultural heritage values are the attributes of these places or objects that allow the assessment of levels of cultural significance.

Assessing the cultural significance of a place or object means defining why a place or object is culturally important. It is only when these reasons are defined that measures can be taken to appropriately manage possible impacts on this significance. Assessing cultural significance involves two main steps, identifying the range of values present across the study area and assessing why they are important.

Social/cultural heritage significance should be addressed by the Aboriginal people who have a connection to, or interest in, the site. As part of the consultation process the Aboriginal stakeholders were asked to provide information on the cultural significance of the study area. Information on consultation with Aboriginal stakeholders for the project is provided in Section 3.1.

Table 8 Burra Charter Heritage significance criteria

Criterion	Description
Social	The spiritual, traditional, historical or contemporary associations and attachments the place or area has for Aboriginal people. Social or cultural value is how people express their connection with a place and the meaning that place has for them. Does the subject area have strong or special association with the Aboriginal community for social, cultural or spiritual reasons?
Historic	Historic value refers to the associations of a place with a historically important person, event, phase or activity in an Aboriginal community. Is the subject area important to the cultural or natural history of the local area and/or region and/or state?
Scientific	This refers 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. Information about scientific values will be gathered through any archaeological investigation carried out. 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?
Aesthetic	This refers to the sensory, scenic, architectural and creative aspects of the place. It is often linked with the social values. It may consider form, scale, colour, texture and material of the fabric or landscape, and the smell and sounds associated with the place and its use. Is the subject area important in demonstrating aesthetic characteristics in the local area and/or region and/or state?

In addition to the four criteria, Heritage NSW (OEH 2011; 10) requires consideration of the following:

- 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?

7.2 Socio/cultural significance

Socio/cultural heritage values should be addressed by Aboriginal people who have a connection to, or interest in, the area.

The RAPs who provided feedback, did / did not make any specific comments regarding socio/cultural significance. Consultation is ongoing.

7.3 Historic significance

Historic values refer to the association of place with aspect of Aboriginal history. Historic values are not necessarily reflected in physical objects, but may be intangible and relate to memories, stories, or experiences.

The RAPs who provided feedback, did / did not make any specific comments regarding historic significance. Consultation is ongoing.

7.4 Scientific significance

Scientific values refer to a site's potential to contribute to our current understanding and information. As there are no archaeological values in the site, there is no scientific significance.

Table 9: Scientific significance assessment

Site Name (AHIMS ID)	Research potential	Representativeness	Rarity	Education potential	Overall significance assessment
No AHIMS sites	None	None	None	None	None

7.5 Aesthetic significance

Aesthetic values refer to the sensory, scenic, architectural, and creative aspects of the place. These values may be related to the landscape and are often closely associated with social/cultural values.

As the subject site is located within a developed agricultural setting, much of the aesthetic significance is lost.

The RAPs who provided feedback, did / did not make any specific comments regarding aesthetic significance. Consultation is ongoing.

7.6 Statement of significance

In summary, the RAPs who provided feedback, did / did not make any specific comments regarding the social/cultural, historic or aesthetic significance of the study area. The significance of the study area is therefore assessed to be XXXXX. Consultation is ongoing.

8.0 AVOIDING AND MINIMISING HARM

8.1 Proposed works

The proposal involves the construction and an expansion to an existing data centre comprising:

- a five-storey building
- ancillary office space and staff amenities
- a back-up power system
- associated infrastructure, car parking, loading docks and landscaping

The particulars of this proposal are summarised include:

- Minor earthworks involving cut and fill works
- Infrastructure comprising civil works and utilities servicing
- Construction of a five (5) storey building extension, comprising up to:
 - 14 data halls
 - 18 back up generators
 - Fit out of the building for use as a data centre (on an as-needs basis).

8.2 Impact assessment methodology

The definition of harm to an object or place under the NPW Act includes any act or omission that 'destroys, defaces or damages the object or place or in relation to an object –moves the object from land on which it had been situated.'

Direct harm may occur as a result of activities which disturb the ground surface including site preparation activities, earthworks and ground excavation, and the installation of services and infrastructure.

Indirect harm for Aboriginal heritage refers to impacts that may affect sites or features located immediately beyond or within the area of the proposed works. Indirect harm may include impacts from vibration, increased visitation, or increased erosion, including ancillary project activities (construction and/or operation) that are not located within the study area.

8.3 Aboriginal heritage impact assessment

There were no Aboriginal objects identified in the survey area, and no sites identified in the AHIMS database. This report has assessed that intact archaeological deposits are not likely to be present below the ground surface. Therefore, the proposal is unlikely to impact any Aboriginal heritage objects places, or potential Aboriginal archaeology.

8.4 Ecological Sustainable Development principles

In accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales*¹, the principles of ecologically sustainable development have been considered in preparation of this Aboriginal heritage assessment, including options to avoid impacts to Aboriginal cultural heritage, assessment of unavoidable impacts, identification of mitigation and

¹ Office of Environment and Heritage 2011

management measures, and taking account of Aboriginal community views. The principles of ecologically sustainable development are detailed in the NSW *Protection of the Environment Administration Act 1991*. Principles of ecologically sustainable development relevant to the assessment of the project as it relates to Aboriginal cultural heritage are considered below.

8.4.1 The integration principle

Decision making processes should effectively integrate both long term and short term economic, environmental, social and equitable considerations (the 'integration principle'). The preparation of this ACHAR demonstrates regard for the integration principle by considering Aboriginal heritage values and impacts to these from the proposal during the planning phase. The nature of the proposal is in itself one that contributes to the long term economic and social needs of current and future residents of the area.

8.4.2 The precautionary principle

If there are threats of serious or irreversible environmental damage, lack of full scientific confidence should not be used as a reason for postponing measures to prevent environmental degradation (the 'precautionary principle').

As no archaeological sites were identified in the study area, no further archaeological investigation is recommended.

8.4.3 The principle of intergenerational equity

The proposed works would adhere, as close as possible, to the principle of intergenerational equity by collating scientific and cultural information on former Aboriginal occupation of the study area through the previous investigations and this ACHAR.

This report has assessed that no further archaeological investigations through test excavations need be conducted. However, see Unexpected Finds below.

8.5 Cumulative impacts

A cumulative impact is an impact on Aboriginal cultural heritage resulting from the incremental impact of the action/s of a development when added to other past, present and reasonably foreseeable future actions.

As there are no registered sites and no identified impacts within the study area, there are no cumulative impacts.

A draft of the ACHAR was provided to RAPS for commentary and feedback. RAPS have not so far provided any additional information with respect to the cumulative impacts.

9.0 MANAGEMENT AND MITIGATION MEASURES

9.1 Unexpected finds

An unexpected finds policy would be implemented in the event of any unexpected finds of Aboriginal sites, objects, or archaeological deposits being identified during construction.

An unexpected archaeological finds policy would involve the following actions:

- Stop work within the affected area, protect the potential archaeological find, and inform environment staff or supervisor
- Contact a suitably qualified archaeologist to assess the potential archaeological find
- If Aboriginal archaeological material is identified, works in the area should cease, and NSW Heritage should be informed. Further archaeological mitigation may be required prior to works recommencing
- If human remains are found:
 - Immediately cease all work at the particular location
 - Notify site manager and project archaeologist
 - Notify NSW Police
 - Notify Heritage NSW on the Environment Line 131555 as soon as practicable and provide details of the remains and their locations
 - Notify the Metropolitan LALC

10.0 CONCLUSIONS AND RECOMMENDATIONS

The following results and recommendations are based on consideration of:

- The requirements of Aboriginal heritage guidelines including:
 - *The Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a) – known as *The Code of Practice*
 - Guide to investigating and assessing and reporting on Aboriginal Cultural Heritage in New South Wales (OEH 2011) – known as ACHAR guidelines.
 - *The Aboriginal Cultural Heritage consultation requirements for proponents 2010* (OEH 2010b)- known as Consultation Guidelines)
- The SEARs awarded to the proposal by the Department of Planning Industry and Environment (DPIE) on 12 August 2021 (SSD-24299707).
- The results of the Due Diligence assessment carried out by Artefact Heritage in May 2021, which included an archaeological survey, together with the additional research presented in this ACHAR.

The assessment found that:

- No previously unrecorded Aboriginal sites or objects were identified within the study area during the site inspection.
- After physical examination of the study area and examination of historical aerial photography the study area has been assessed as having low potential to retain intact archaeological deposits
- These findings will be updated to reflect Aboriginal community comment on the final draft of this report.

Based on the results of this assessment and in accordance with Aboriginal heritage guidelines mandated in the SEARs for the proposal, the following recommendations are made:

- As the study area was found to be disturbed and to have a low potential for Aboriginal objects to be located within it, it is recommended that further archaeological assessment is not required.
- If changes are made to the proposal that may result in impacts to areas not assessed by this ACHAR further assessment would be required.
- Unexpected Aboriginal objects remain protected by the *National Parks and Wildlife Act 1974*. If any such objects, or potential objects, are uncovered in the course of the activity, all work in the vicinity should cease immediately. A qualified archaeologist should be contacted to assess the find and Heritage NSW and Metropolitan LALC must be notified.
- If human remains, or suspected human remains, are found in the course of the activity, all work in the vicinity should cease, the site should be secured, and the NSW Police and Heritage NSW should be notified.

11.0 REFERENCES

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12.0 APPENDICES

APPENDIX ONE: CONSULTATION LOG

CONTACT	ORGANISATION	CONTACTED BY	ORGANISATION	METHOD	DATE	COMMENT/ RESPONSE
4.1.2 – AGENCY LETTERS						
Heritage NSW	Heritage NSW	Michael Lever	Artefact	Email	6/9/2021	
National Native Title Tribunal	National Native Title Tribunal	Michael Lever	Artefact	Email	6/9/2021	
Michael Lever	Artefact	Michael Lever	Artefact	Email	6/9/2021	
Office of the Registrar Aboriginal Land Rights Act	Office of the Registrar Aboriginal Land Rights Act	Michael Lever	Artefact	Email	6/9/2021	
City of Ryde	City of Ryde	Michael Lever	Artefact	Email	6/9/2021	
Greater Sydney Local Land Services	Greater Sydney Local Land Services	Michael Lever	Artefact	Email	6/9/2021	
			Artefact	Email		
Michael Lever	Artefact	National Native Title Tribunal	National Native Title Tribunal	Email	6/9/2021	No Native Title Determination Applications, Determinations of Native Title, or Indigenous Land Use Agreements over the identified area.
Michael Lever	Artefact	Greater Sydney Local Land Services	Greater Sydney Local Land Services	Email	6/9/2021	GS LLS feels that it is not a primary source of contact for First Nations (Aboriginal) communities or persons that may inform or provide comment on development or planning issues. GS LLS strongly recommends you contact Heritage NSW to seek their advice on all-inclusive contact lists of persons and organisations who 'speak for Country' and that may assist with your investigation.
Michael Lever	Artefact	Tilly Vaughan	Michael Lever	Artefact	7/9/2021	Requested inquiries be directed to NNTT (see above)
4.1.3 – Identification of Potential Aboriginal Parties						

Metropolitan Local Aboriginal Land Council	Nathan Moran	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Darug Aboriginal Cultural Heritage Assessments	Gordon Morton	Michael Lever	Artefact	mail	24/9/2021	Invitation to register
Darug Land Observations	Jamie Workman and Anna Workman	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
A1 Indigenous Services	Carolyn Hickey	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Eric Keidge	Eric Keidge	Michael Lever	Artefact	mail	24/9/2021	Invitation to register
Kamilaroi Yankuntjatjara Working Group	Pollowan Phil Khan	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Tocomwall	Scott Franks	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Amanda Hickey Cultural Services	Amanda Hickey	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Dhinawan Culture & Heritage Pty Ltd	Stephen Fields	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Gunyu	Kylie Ann Bell	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Walbunja	Hika Te Kowhai	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Badu	Karia Lea Bond	Michael Lever	Artefact	mail	24/9/2021	Invitation to register
Goobah Developments	Basil Smith	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Wullung	Lee-Roy James Boota	Michael Lever	Artefact	mail	24/9/2021	Invitation to register
Yerramurra	Robert Parson	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Nundagurri	Newton Carriage	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Murrumbul	Mark Henry	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Jerringong	Joanne Anne Stewart	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Pemulwuy CHTS	Pemulwuy Johnson	Michael Lever	Artefact	Email	24/9/2021	Invitation to register

Bilinga	Simalene Carriage	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Munyunga	Kaya Dawn Bell	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Wingikara	Hayley Bell	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Minnamunnung	Aaron Broad	Michael Lever	Artefact	mail	24/9/2021	Invitation to register
Walgalu	Ronald Stewart	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Thauaira	Shane Carriage	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Dharug	Andrew Bond	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Gulaga	Wendy Smith	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Callendulla	Corey Smith	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Murramarang	Roxanne Smith	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
DJMD Consultancy	Darren Duncan	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Butucarbin Aboriginal Corporation	Jennifer Beale	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Didge Ngunawal Clan	Lillie Carroll & Paul Boyd	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Ginninderra Aboriginal Corporation	Steven Johnson and Krystle Caroll	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Wailwan Aboriginal Group	Philip Boney	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Barking Owl Aboriginal Corporation	Mrs Jody Kulakowski	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Thoorga Nura	John Carriage	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Darug Boorooberongal Elders Aboriginal Corporation	Paul Hand	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
B.H. Heritage Consultants	Ralph Hampton	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
B.H. Heritage Consultants	Nola Hampton	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Ngambaa Cultural Connections	Kaarina Slater	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Goodradigbee Cultural & Heritage	Caine Carroll	Michael Lever	Artefact	Email	24/9/2021	Invitation to register

Aboriginal Corporation,						
Mura Indigenous Corporation	Phillip Carroll	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Aragung Aboriginal Cultural Heritage Site Assessments	Jamie Eastwood	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Waawaar Awaar Aboriginal Corporation	Rodney Gunther & Barry Gunther	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Wori Woilywa	Daniel Chalker	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Darug Custodian Aboriginal Corporation	Justine Coplin	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Wurrumay Pty Ltd	Kerrie Slater and Vicky Slater	Michael Lever	Artefact	Email	24/9/2021	Invitation to register
Michael Lever	Artefact	Bigpond server				Mura email incorrect
Michael Lever	Artefact	Microsoft outlook		Email		[REDACTED] could not be delivered
Registered Aboriginal Parties						
Michael Lever	Artefact	A1 Indigenous Services	Carolyn Hickey	Email	24/9/2021	Registered interest
Michael Lever	Artefact	Didge Ngunawal Clan	Lillie Carroll & Paul Boyd	Email	24/9/2021	Registered interest
Michael Lever	Artefact	Ngambaa Cultural Connections	Kaarina Slater	Email	28/9/2021	Registered interest
Michael Lever	Artefact	Kamilaroi Yankuntjatjara Working Group	Pollowan Phil Khan	Email	29/9/2021	Registered Interest
Michael Lever	Artefact	Darug Custodian	Justine Coplin	Email	30/9/2021	Registered Interest

		Aboriginal Corporation				
Michael Lever	Artefact	Wori Woilywa	Daniel Chalker	Email	30/9/2021	Registered Interest
Michael Lever	Artefact	Goobah	Basil Smith	Email	7/10/2021	Registered Interest
Proposed ACHAR methodology						
Metropolitan Local Aboriginal Land Council	Nathan Moran	Michael Lever	Artefact	Email	12/10/2021	Sent ACHAR Methodology
Didge Ngunawal Clan	Lillie Carroll & Paul Boyd	Michael Lever	Artefact	Email	12/10/2021	Sent ACHAR Methodology
A1 Indigenous Services	Carolyn Hickey	Michael Lever	Artefact	Email	12/10/2021	Sent ACHAR Methodology
Ngambaa Cultural Connections	Kaarina Slater	Michael Lever	Artefact	Email	12/10/2021	Sent ACHAR Methodology
Darug Custodian Aboriginal Corporation	Justine Coplin	Michael Lever	Artefact	Email	12/10/2021	Sent ACHAR Methodology
Wori Woilywa	Daniel Chalker	Michael Lever	Artefact	Email	12/10/2021	Sent ACHAR Methodology
Goobah Developments	Basil Smith	Michael Lever	Artefact	Email	12/10/2021	Sent ACHAR Methodology
Heritage NSW		Michael Lever	Artefact	Email	1/11/2021	Sent ACHAR Methodology
Responses to proposed ACHAR methodology						
Michael Lever	Artefact	A1 Indigenous Services	Carolyn Hickey	Email	21/10/2021	Supports methodology
Michael Lever	Artefact	Goobah	Basil Smith	Email	28/10/2021	Supports methodology
DRAFT ACHAR						
Metropolitan Local Aboriginal Land Council	Nathan Moran	Elizabeth Bonshek	Artefact Heritage	Email	10/11/2021	Sent Draft ACHAR
Didge Ngunawal Clan	Lillie Carroll & Paul Boyd	Elizabeth Bonshek	Artefact Heritage	Email	10/11/2021	Sent Draft ACHAR
A1 Indigenous Services	Carolyn Hickey	Elizabeth Bonshek	Artefact Heritage	Email	10/11/2021	Sent Draft ACHAR

Ngambaa Cultural Connections	Kaarina Slater	Elizabeth Bonshek	Artefact Heritage	Email	10/11/2021	Sent Draft ACHAR
Darug Custodian Aboriginal Corporation	Justine Coplin	Elizabeth Bonshek	Artefact Heritage	Email	10/11/2021	Sent Draft ACHAR
Wori Woilywa	Daniel Chalker	Elizabeth Bonshek	Artefact Heritage	Email	10/11/2021	Sent Draft ACHAR
Goobah Developments	Basil Smith	Elizabeth Bonshek	Artefact Heritage	Email	10/11/2021	Sent Draft ACHAR
Responses to ACHAR						
Michael Lever	Artefact Heritage	Darug Custodian Aboriginal Corporation	Justine Coplin	Email	11/11/2021	Supports recommendations of ACHAR
Elizabeth Bonshek	Artefact Heritage	Goobah	Basil Smith	Email	12/11/2021	Supports recommendations of ACHAR

APPENDIX TWO: COMPLETE CONSULTATION RECORDS

(To be inserted as PDF at completion of consultation process)



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