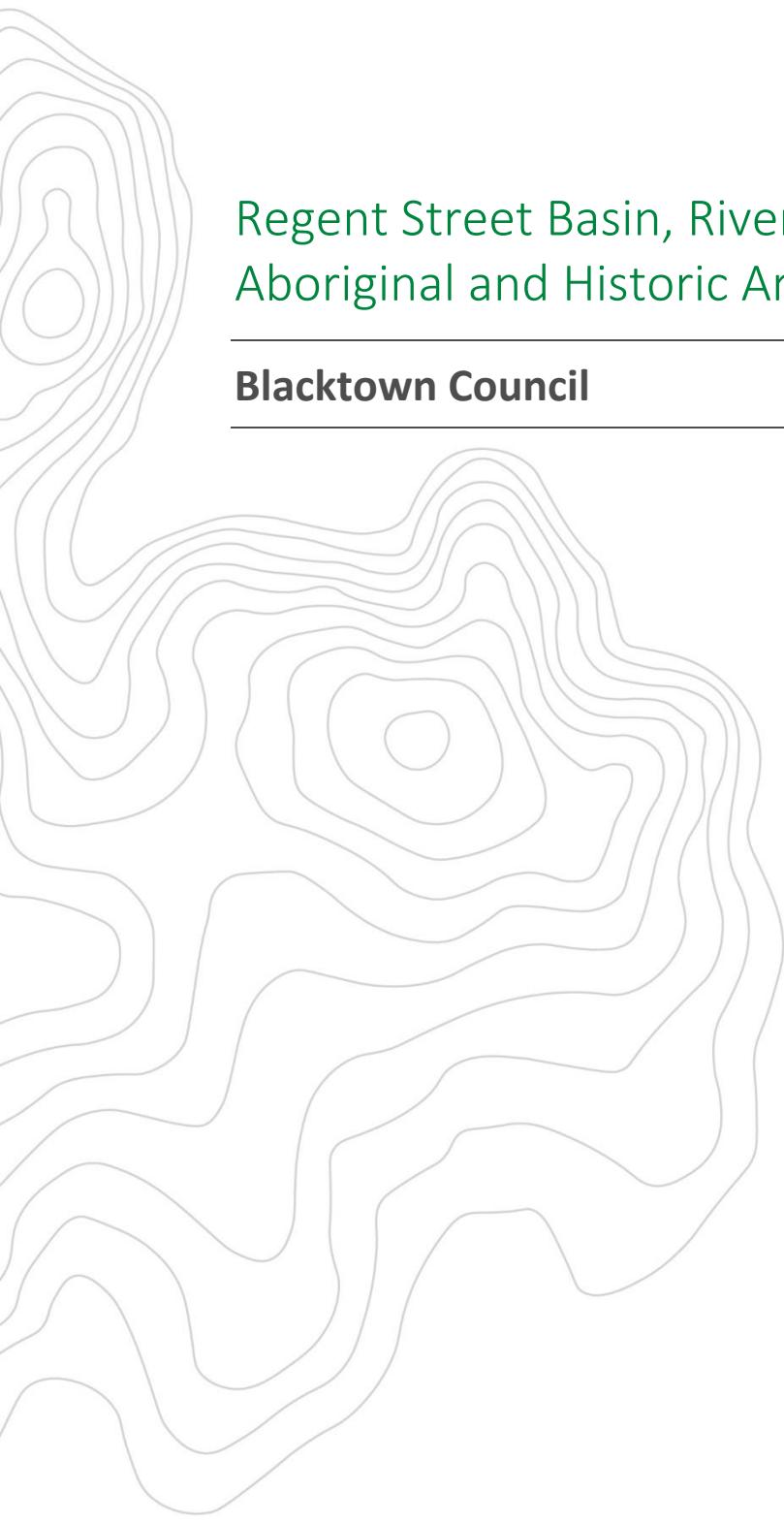




Appendix F. Aboriginal Heritage and Historical Heritage



Regent Street Basin, Riverstone NSW

Aboriginal and Historic Archaeological Assessment

Blacktown Council

DOCUMENT TRACKING

| | |
|------------------------|--|
| Project Name | Basin F1.1 Regent Street, Riverstone NSW – Aboriginal and Historic Archaeological Assessment |
| Project Number | 21SYD - 20686 |
| Project Manager | Jennifer Norfolk |
| Prepared by | Kate Storan, Jessica Horton and Jennifer Norfolk |
| Reviewed by | Jennifer Norfolk and Karyn McLeod |
| Approved by | Karyn McLeod |
| Status | Final |
| Version Number | v3 |
| Last saved on | 29 July 2022 |

This report should be cited as 'Eco Logical Australia, 2022 *Regent Street Basin, Riverstone NSW – Aboriginal and Historic Archaeological Assessment*. Prepared for Blacktown Council.'

ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from Blacktown Council.

Disclaimer

This document may only be used for the purpose for which it was commissioned and in accordance with the contract between Eco Logical Australia Pty Ltd and Blacktown Council. The scope of services was defined in consultation with Blacktown Council, by time and budgetary constraints imposed by the client, and the availability of reports and other data on the study area. Changes to available information, legislation and schedules are made on an ongoing basis and readers should obtain up to date information. Eco Logical Australia Pty Ltd accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this report and its supporting material by any third party. Information provided is not intended to be a substitute for site specific assessment or legal advice in relation to any matter. Unauthorised use of this report in any form is prohibited.

Contents

| | |
|--|-----------|
| 1. Introduction | 1 |
| 1.1 Project background | 1 |
| 1.2 Study area..... | 1 |
| 1.3 Purpose and Objectives of the archaeological assessment..... | 2 |
| 1.4 Authorship | 2 |
| 2. Legislative context..... | 5 |
| 2.1 National Parks and Wildlife Act 1974..... | 5 |
| 2.2 Aboriginal Land Rights Acts 1983..... | 6 |
| 2.3 Heritage Act 1977 (NSW) | 6 |
| 2.4 Environmental Planning & Assessment Act 1979 | 7 |
| 3. Environmental context | 8 |
| 3.1 Soil Landscapes..... | 8 |
| 3.2 Hydrology | 9 |
| 3.3 Vegetation | 9 |
| 3.4 Land use history | 10 |
| 3.5 Summary..... | 10 |
| 4. Aboriginal context | 17 |
| 4.1 Ethnohistory | 17 |
| 4.2 Archaeological context..... | 18 |
| 4.2.1 Database searches | 18 |
| 4.2.2 Previous archaeological investigations within the vicinity of the study area | 23 |
| 4.2.3 Previous archaeological investigations within the study area..... | 25 |
| 4.3 Regional character..... | 27 |
| 4.4 Predictive models..... | 28 |
| 4.4.1 Site types..... | 29 |
| 4.4.2 Site occurrence..... | 30 |
| 5. Archaeological survey..... | 31 |
| 5.1 Purpose..... | 31 |
| 5.2 Survey strategy | 31 |
| 5.2.1 Site definition and recording | 31 |
| 5.2.2 Protocol for recording Potential Archaeological Deposits..... | 32 |
| 5.3 Survey results | 32 |
| 6. Impact assessment | 37 |
| 7. Management and mitigation measures | 39 |

| | |
|---|-----------|
| 7.1 Avoidance and conservation | 39 |
| 7.2 Aboriginal Cultural Heritage Assessment and Aboriginal Heritage Impact Permit | 39 |
| 7.3 Unexpected finds | 40 |
| 8. Recommendations | 41 |
| References | 43 |
| Appendix A – AHIMS Search Results | 45 |
| Appendix B – Site Cards..... | 53 |
| Appendix C – Basic Heritage induction sheets..... | 54 |

List of Figures

| | |
|---|----|
| Figure 1: The study area | 3 |
| Figure 2: Plan of proposed scope of works (study area in yellow). (source: Blacktown City Council 2021) | 4 |
| Figure 3: Soils and hydrology of the study area | 11 |
| Figure 4: Gidley parish map, undated. Showing the study area within Maurice Charles O’Connell’s original 1000-acre land grant (Source: HLRV) | 12 |
| Figure 5: 1947 aerial imagery showing several dams and widespread clearance and ploughing for agriculture (Source: NSW Govt. spatial portal)..... | 13 |
| Figure 6: 1975 aerial imagery showing more dams and infilled old dams, new residential structures and further ploughing and landscape modification (Source: NSW Govt. spatial portal)..... | 14 |
| Figure 7: 2014 aerial imagery showing new dams and more extensive agricultural land use, excavated pipeline for Sydney water infrastructure and compound SE corner (Source: NSW Govt. spatial portal)..... | 15 |
| Figure 8: 2015 aerial imagery showing further excavated works for Sydney Water Infrastructure along Regent Street and corner of Clarke and Garfield Road. (Source: NSW Govt. spatial portal) aerial imagery | 16 |
| Figure 9: Regional overview of AHIMS sites surrounding the study area..... | 21 |
| Figure 10: AHIMS sites within and in the proximity of the study area | 22 |
| Figure 11: Drainage line/ flat landform in Lot 11 DP712 and Lot 122 DP1240910; view south-west. Extensive flooding, disturbance and exposure. Raised development in the distance..... | 33 |
| Figure 12: Visibility and exposure of ground surfaces across 5 Clarke Street. View south across low lying study area surrounding First Ponds Creek in Lot 71-72 DP 1238721..... | 33 |
| Figure 13: Visible ground surface and soil exposure on bank of drainage line cut along the north boundary of Regent Street..... | 33 |
| Figure 14: Limited visibility extensive low lying flooded ground surface view north towards Clarke Street along Regent Street. Raised landform along Clarke street..... | 33 |
| Figure 15: Gently sloping landform, dense grass cover and small stands of trees; view south east. Undulating ground surface, earth mounds and residential buildings. | 33 |
| Figure 16: Low lying undulating landform of Lot 11-12 O DP712. Dense grass cover and small stands of trees; view east. Undulating ground surface, earth mounds and residential buildings. | 33 |
| Figure 17: Survey areas defined by residential lots | 36 |

Figure 18: Potential impacts from the CP20 Regent Street, F1.1 Basin works and future bioretention works 38

List of Tables

| | |
|---|----|
| Table 1: Properties within the study area | 1 |
| Table 2: Cumberland Plain subregion summary (source: NSW Department of Planning, Industry and Environment)..... | 8 |
| Table 3: Parameters for the AHIMS database search and results | 19 |
| Table 4: Frequencies of site types..... | 19 |
| Table 5: AHIMS sites within the study area | 19 |
| Table 6: AHIMS sites adjacent to the study area | 20 |
| Table 7: Predictive model for the occurrence of archaeological site types in the study area | 30 |
| Table 8: Survey unit description summary..... | 34 |
| Table 9: Impact assessment | 37 |
| Table 10: Recommendations..... | 40 |

Abbreviations

| Abbreviation | Description |
|--------------|---|
| ACHA | Aboriginal Cultural Heritage Assessment |
| AHID | Australian Heritage Database |
| AHIP | Aboriginal Heritage Impact Permit |
| AHIMS | Aboriginal Heritage Information Management System |
| ATR | Archaeological Technical Report |
| BCC | Blacktown City Council |
| CHL | Commonwealth Heritage List |
| DECCW | (Former) Department of Environment Climate Change and Water |
| ELA | Eco Logical Australia Pty Ltd |
| Heritage NSW | Heritage NSW, Department of Premier and Cabinet |
| LEP | Local Environmental Plan |
| LGA | Local Government Area |
| NHL | National Heritage List |
| OEH | NSW Office of Environment and Heritage |
| PAD | Potential Archaeological Deposit |
| SHI | State Heritage Inventory |
| SHR | State Heritage Register |
| WHL | World Heritage List |

1. Introduction

1.1 Project background

Eco Logical Australia (ELA) has been engaged by Blacktown City Council to prepare an Aboriginal and Historical Archaeological Assessment for the proposed CP20 Regent Street Basin F1.1 and future works for Reserve 917, Riverstone NSW. The proposed works are part of the Water Cycle Management facilities in the First Ponds Creek Catchment and include the construction of F13.1 Drainage Channel, F13.2 Wetland and Frog Habitat, F13.3 to F13.7 Bioretention Basins (Figure 2).

ELA previously undertook an Aboriginal Due Diligence assessment for part of the study area, the assessment determined the presence of previously registered Aboriginal sites in proximity to the study area and the proximity to an established waterway indicated that there was a moderate to high potential for subsurface archaeological deposits (ELA, 2018). It was recommended that further archaeological investigations were required to assess the potential for subsurface archaeological deposits assess the potential impacts to registered Aboriginal sites and that an ACHA and AHIP would be required.

The purpose of this archaeological assessment is to identify areas of disturbance and areas of potential archaeological deposit (PAD) for the entirety of the study area. The assessment will establish areas that may require further archaeological investigation.

This assessment has been undertaken in accordance with *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a). Preliminary consultation has been undertaken with Deerubbin Local Aboriginal Land Council.

1.2 Study area

The study area measures approximately 17 hectares and is located in the Riverstone Precinct of the North West Growth Centre (Figure 1). The study area is bound by Garfield Road East to the north, Clarke Street to the east, Riverstone Road to the south and McColloch Street to the west.

The study area covers several entire lots and partial lots

Table 1: Properties within the study area

| Address | Lot | Section | Plan |
|------------------------|-------|---------|-----------|
| Garfield Road East | 11 | N | DP712 |
| 3 Clarke Street | 10 | N | DP712 |
| 5 Clarke Street | 10 | O | DP712 |
| 7 Clarke Street | 9 | O | DP712 |
| 228 Garfield Road East | 122 | | DP1240910 |
| Regent Street | 71 | | DP1224329 |
| Regent Street | 72-73 | | DP1224329 |
| 159 Regent Street | 56 | | DP1247574 |
| 163 Regent Street | 74 | | DP1224329 |
| Regent Street | 31 | | DP1246761 |

| Address | Lot | Section | Plan |
|---------------------|-----|---------|-----------|
| Regent Street | 11 | O | DP712 |
| Regent Street | 12 | O | DP712 |
| 189 Riverstone Road | 8 | O | DP712 |
| 181 Riverstone Road | 7 | O | DP712 |
| Pina Road | 100 | | DP1216455 |

The study area is located in the Parish of Gidley in the County of Cumberland, within the Blacktown Local Government Area (LGA). The study area falls within the Deerubbin Local Aboriginal Land Council boundaries.

1.3 Purpose and Objectives of the archaeological assessment

The purpose of the archaeological assessment is to identify any areas of disturbance and areas of potential archaeological deposit (PAD) within the entirety of the study area to define where Blacktown Council can proceed with the proposed works and to determine which areas should be protected for further testing or conservation. The assessment will assess the likelihood of archaeological deposits across the study area to determine where further investigation may be required and to inform the next stage.

1.4 Authorship

This Archaeological assessment has been prepared by ELA Archaeologist Jessica Horton and Kate Storan with input from ELA Senior Archaeologist Jennifer Norfolk. It was reviewed by ELA Principal Heritage Consultant, Karyn McLeod.

Jennifer Norfolk has an MSc. (Marine Archaeology) from Southampton University and Karyn McLeod has a BA Honours (Archaeology) from the University of Sydney and a MA (Cultural Heritage) from Deakin University.



Figure 1: The study area

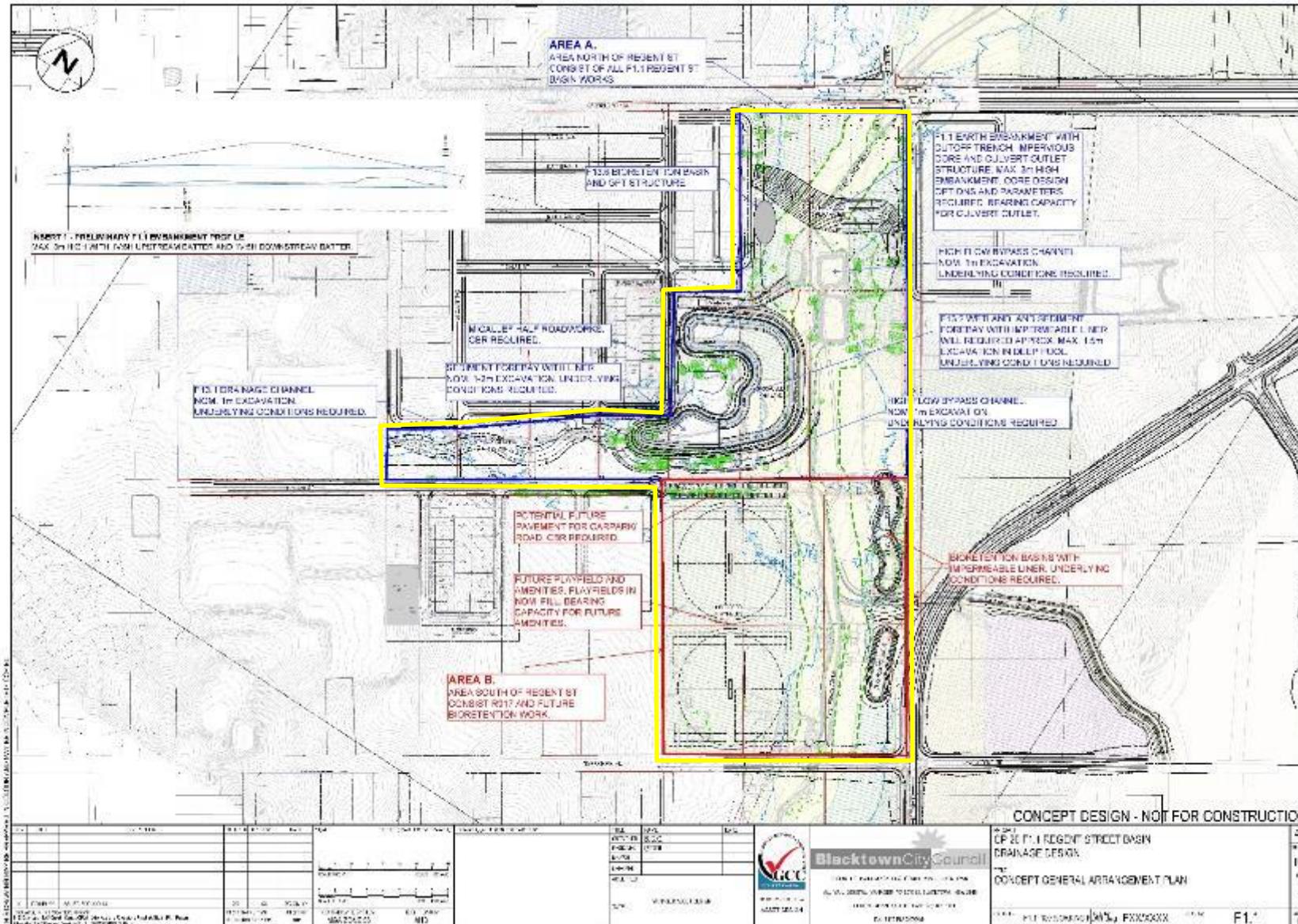


Figure 2: Plan of proposed scope of works (study area in yellow). (source: Blacktown City Council 2021)

2. Legislative context

2.1 National Parks and Wildlife Act 1974

Aboriginal cultural heritage in NSW is afforded protection under the provisions of the *National Parks and Wildlife Act 1974* (NSW) [NPW Act]. The Act is administered by Heritage NSW, which has responsibilities under the legislation for the proper care, preservation, and protection of 'Aboriginal objects' and 'Aboriginal places'.

Under the provisions of the NPW Act, all Aboriginal objects are protected irrespective of their level of significance or issues of land tenure. Aboriginal objects are defined by the Act as, *any deposit, object or material evidence (that is not a handicraft made for sale) relating to Aboriginal habitation of NSW, before or during the occupation of that area by persons of non-Aboriginal extraction (and includes Aboriginal remains)*. Aboriginal objects are limited to physical evidence and may be referred to as 'Aboriginal sites', 'relics' or 'cultural material'. Aboriginal objects can include scarred trees, artefact scatters, middens, rock art and engravings, as well as post-contact sites and activities such as fringe camps and stockyards. Heritage NSW must be notified about the discovery of Aboriginal objects under section 89A of the NPW Act.

Part 5 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to destroy, deface, damage, or move them from the land. The *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (CoP) (DECCW 2010c) as adopted by the and Wildlife Regulation 2019 (NPW Regulation) made under the NPW Act, provides guidance to individuals and organisations to exercise due diligence when carrying out activities that may harm Aboriginal objects. The CoP also determines whether proponents should apply for consent in the form of an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the Act. The CoP can be used for all activities across all environments. The NPW Act provides that a person who exercises due diligence in determining that their actions will not harm Aboriginal objects has a defence against prosecution for the strict liability offence if they later unknowingly harm an object without an AHIP. However, if an Aboriginal object is encountered in the course of an activity work must cease and an application should be made for an AHIP.

The *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a) assists in establishing the requirements for undertaking archaeological investigation without an AHIP or establishing the requirements that must be followed when carrying out archaeological investigation in NSW where an application for an AHIP is likely to be made. Heritage NSW recommends that the requirements of this Code also be followed where a proponent may be uncertain about whether or not their proposed activity may have the potential to harm Aboriginal objects or declared Aboriginal places.

AHIMS DATABASE

The Aboriginal Heritage Information Management System (AHIMS) is a statutory register managed by Heritage NSW under section 90Q of the NPW Act. The AHIMS manages information on known Aboriginal sites, including objects as defined under the Act.

2.2 Aboriginal Land Rights Acts 1983

The *Aboriginal Land Rights Act 1983* (ALR Act) established Aboriginal Land Councils (at State and Local levels). Division 1A outlines the functions of Local Aboriginal Land Councils and their 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 Deerubbin Local Aboriginal Land Council (LALC).

2.3 Heritage Act 1977 (NSW)

The *Heritage Act 1977 (NSW)* is a statutory tool designed to conserve the environmental heritage of NSW and is used to regulate development impacts on the state's heritage places, buildings, works, relics, moveable objects or precincts that are important to the people of NSW. These include items of Aboriginal and non-Aboriginal heritage significance. Where these items have particular importance to the state of NSW, they are listed on the State Heritage Register (SHR).

Identified heritage items may be protected by means of either Interim Heritage Orders (IHO) or by listing on the SHR. Proposals to alter, damage, move or destroy places, buildings, works, relics; moveable objects or precincts protected by an IHO or listed on the SHR require an approval under section 60.

Archaeological features and deposits are afforded statutory protection by the 'relics provision' section 139 of the Act (as amended in 1999). Under this section it is illegal to disturb or excavate any land knowing or suspecting that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed. In such cases, an excavation permit under section 140 is required. Note that no formal listing is required for archaeological relics; they are automatically protected if they are of local significance or higher.

HERITAGE REGISTERS

Heritage NSW maintains registers of heritage sites that are of State or local significance to NSW. The NSW SHR is the statutory register under Part 3A of the *Heritage Act 1977 (NSW)*. The State Heritage Inventory (SHI) is an amalgamated register of items on the SHR, items listed on LEPs and/or on a State Government Agency's Section 170 register and may include items that have been identified as having state or local level significance. If a particular site does not appear on either the SHR or SHI this does not mean that the site does not have heritage significance as many sites within NSW have not been assessed to determine their heritage significance. Sites that appear on either the SHR or SHI have a defined level of statutory protection.

Key Aboriginal sites, including post contact sites, can be protected by inclusion on the SHR. The Heritage Council nominates sites for consideration by the Minister for Environment and Heritage.

2.4 Environmental Planning & Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (NSW) [EP&A Act] requires that consideration is given to environmental impacts as part of the land use planning process. In NSW, environmental impacts are interpreted as including cultural heritage impact. Proposed activities and development are considered under different parts of the EP&A Act.

The study area also falls under the former State Environmental Planning Policy (Sydney Region Growth Centres) 2006. The new consolidate SEPP is the State Environmental Planning Policy (Precincts-Central River City) 2021. These documents contain provisions to conserve and protect cultural heritage resources, with specific reference to Aboriginal cultural heritage and historical heritage.

STATE ENVIRONMENT PLANNING POLICY (PRECINCTS-CENTRAL RIVER CITY) 2021

The aims of the State Environment Planning Policy (SEPP) are to co-ordinate the release of land for residential, employment and other urban development in the North West Growth Centre. Amongst other things, this SEPP provides for comprehensive planning for growth centres, provision of infrastructure, protection and enhancement of land with natural and cultural heritage value, provides land use and development controls that will contribute to the conservation of biodiversity and controls in order to protect the health of the waterways in growth centres.

This land is zoned under Alex Avenue and Riverstone Precinct Plan 2010. Land that is zoned under this SEPP is not subject to the provisions of any environmental planning instrument (other than a State environmental planning policy).

Schedule 5 Environmental Heritage

There are no Heritage items located within the study area.

3. Environmental context

Landscape, geomorphic history, and extent of disturbance within a given area all play a role in the presence and/or preservation of Aboriginal objects. As outlined in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010a), this section aims to assist in the prediction of:

- The potential of the landscape to contain Aboriginal objects; and
- The ways Aboriginal people have used the landscape in the past, with reference to the presence of resource areas, surfaces for art and other focal points which may have been used for particular activities and settlement; and
- Disturbance, including historical land-use, which may have removed earlier archaeological evidence; and
- The likely distribution of the material traces of Aboriginal land use based on the above.

To investigate these elements, this section focuses on the environmental context of the current study area, including geomorphology and soils, vegetation, hydrology, and previous land use to identify potential disturbance.

The study area is situated within the Cumberland subregion of the NSW Sydney Basin bioregion of NSW. A summary of the geology, landforms, soils, and vegetation typical within this subregion is provided in Table 2 below:

Table 2: Cumberland Plain subregion summary (source: NSW Department of Planning, Industry and Environment)

| Cumberland Subregion | |
|--------------------------|---|
| Geology | Triassic Wianamatta groups shales and sandstones. A down warped block on the coastal side of the Lapstone monocline. Intruded by a small number of volcanic vents and partly covered by Tertiary river gravels and sands. Quaternary alluvium along the mains streams. |
| Characteristic Landforms | Low rolling hills and wide valleys in a rain shadow area below the Blue Mountains. At least three terrace levels evident in the gravel splays. Volcanics from low hills in the shale landscapes. Swamps and lagoons on the floodplain of the Nepean River. |
| Typical Soils | Red and yellow texture contrast soils on slopes, becoming harsher and sometimes affected by salt in tributary valley floors. Pedal uniform red to brown clays on volcanics. Poor uniform stony soils, often with texture contrast profiles on older gravels, high quality loams on modern floodplain alluvium. |
| Vegetation | Grey box, forest red gum, narrow-leaved ironbark woodland with some spotted gum on the shale hills. Hard-leaved scribbly gum, rough-barked apple and old man banksia on alluvial sands and gravels. Broad-leaved apple, cabbage gum and forest red gum with abundant swamp oak on river flats. Tall spike rush, and juncus with Parramatta red gum in lagoons and swamps. |

3.1 Soil Landscapes

The study area covers two soil landscapes, the Blacktown residual soil landscape and the South Creek alluvial soil landscape.

BLACKTOWN RESIDUAL SOIL LANDSCAPE

The underlying geology of this landscape is that of the Wianamatta Group – Ashfield Shale – consisting of laminate and dark grey siltstone, Bringelly Shale and Minchinbury Sandstone. The topography comprises of gently undulating rises on Wianamatta Shale with local relief of 10-30m and small slopes. There is not much erosion in the area, but some minor sheet and gully erosion may occur (Morgan, 2001).

Blacktown soils consist of shallow to moderately deep friable brownish black loam (up to 30cm) and hard setting brown clay loams. Blacktown soils are conductive to artefact survivability; however, these soils are also acidic which means there is a low likelihood that organic materials remain. In addition to this, the tendency of these soils to deflate often results in a temporal collapse where archaeological objects from multiple time periods can accumulate within a single layer.

SOUTH CREEK ALLUVIAL SOIL LANDSCAPE

The underlying geology of this landscape is that of the Wianamatta Group – Ashfield Shale – consisting of laminate and dark grey siltstone, Bringelly Shale and Hawkesbury Sandstone. The South Creek soil landscape is characterised by deep to very deep alluvial sediments, loams, and clays, susceptible to frequent flooding and erosion (Bannerman and Hazelton 1990:29-30). The flood and erosional susceptibility of these soils can have a negative impact on artefact survivability, as both erosion and flood events can cause artefacts to move resulting in the loss of contextual relationships and artefact loss.

3.2 Hydrology

First Ponds Creek, a third order stream, and an unnamed first order tributary traverse the study area. Several second order streams run to the south and east of the study area (Figure 3). Third order streams and above are likely to have permanent flow and/or waterholes. The unnamed tributary would have intermittent flow following rain events only and would have no defined drainage channel. There have been heavy modifications to the drainage system within the study area due to vegetation clearance causing siltation of the natural creeks. Disturbance from historical land use practice of dam construction to establish permanent water sources for the agriculture and pastoral activities had disrupted the natural hydrology.

3.3 Vegetation

The study area has largely been cleared of vegetation for residential and agricultural land use, though the previous vegetation would have consisted of forest red gum, narrow leaved ironbark, grey box and spotted gum. The vegetation of the South Creek soil landscape reflects its frequent inundation. Common tree species include *Angophora subvelutina* (broad-leaved apple), *Eucalyptus amplifolia* (cabbage gum) and *Casuarina glauca* (swamp oak). Still water species such as *Eleocharis sphacelata* (tall spike rush), *Juncus usitatus* and *Polygonum spp.* occur where channels are silted up. On more elevated streambanks a tall shrubland of *Melaleuca spp.* (paperbarks) and *Leptospermum spp.* (tea trees) may occur. However, much of this soil landscape has been previously cleared and is now dominated by exotic species such as *Rubus vulgaris* (blackberry) and other weeds.

3.4 Land use history

Dominant land use in the area consists of intensive residential, horticulture and animal husbandry and light and heavy industry. Some land is reserved for recreational use (playing fields, parks and reserves) or left unused. There have been large scale excavations for Sydney Water infrastructure during 2013-2015 and recent residential subdivision development.

The study area falls within an original 1000-acre land parcel formerly granted to Lieutenant-Colonel Maurice Charles O'Connell (Figure 4). The land parcel was provided by Governor Lachlan Macquarie in 1810, on the eve of O'Connell's marriage to Mary Putland, widowed daughter of deposed Governor William Bligh. O'Connell named the property 'Riverstone,' after his birthplace in Ireland (Riverstone Historical Society 2019).

The O'Connell's did not reside at Riverstone, however agricultural pursuits are known to have taken place under their ownership including land clearances, dairying, and farming. In 1846, the property, which had swelled to 3500-acres, was sold to the Australian Trust Company. In 1855, the Riverstone Estate was sold to Andrew McColloch, and between 1859, and the turn of the twentieth century, several subdivisions of the property took place (Riverstone Historical Society 2019). These subdivisions saw the present-day road alignments surrounding the study area consolidated.

The study area is known to have been incorporated into these subdivisions, which were largely occupied by tenant farmers. Aerial imagery from 1947 to the present-day would indicate that agricultural pursuits within the study area continued throughout this period (Figure 5 - Figure 8). Small farmsteads were constructed, whilst additional land clearances, livestock grazing, dam construction, and farming took place here. Rural development continues to define the study area.

3.5 Summary

Overall, the environmental characteristics of the study area present moderate sensitivity for evidence of Aboriginal occupation due to the location adjacent to First Ponds Creek, a major water course. It would have been a likely place for at least sporadic occupation for the fresh water and the natural resources that would have been present.

The soils are not conducive to *in situ* archaeological deposits due to the residual highly erosive nature of the Blacktown soil landscape and the South Creek soil landscape. The majority of the study area is low lying and prone to flooding. The few areas of elevation above the flood line are located along Clarke Street, this area of raised landform is the most likely place for evidence of Aboriginal occupation.

Widespread disturbances associated with the construction of residential buildings, land clearing, market gardening / intensive crop agricultural practices and pastoral land use with landscape modifications to dam the water course has occurred throughout the study area. This widespread past and current land use means it is unlikely there is *in situ* Archaeological potential within the study area.

As the majority of the study area has been extensively cleared of vegetation, very few trees remain, none of which appear to be old growth. There is no potential for culturally modified trees.

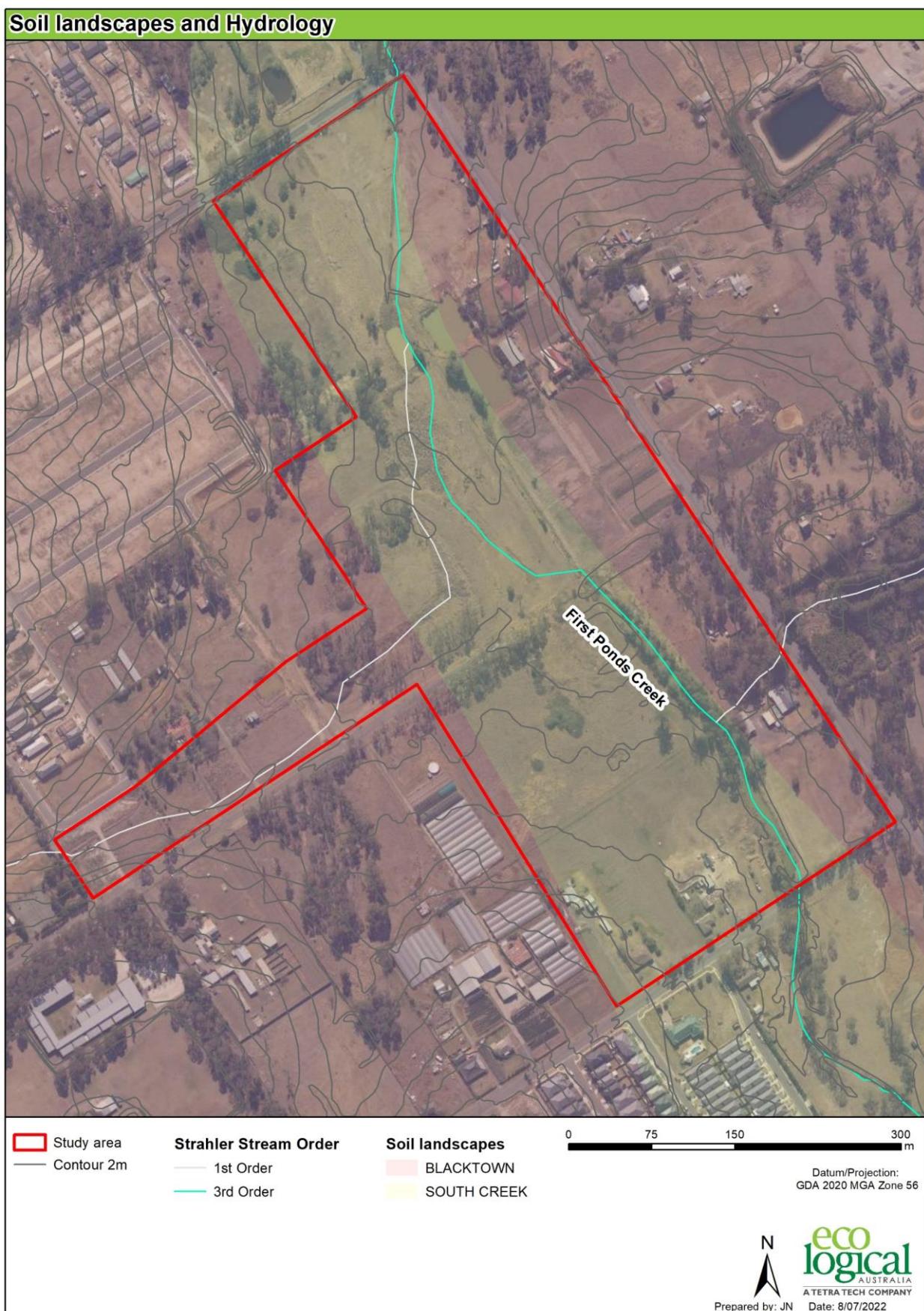


Figure 3: Soils and hydrology of the study area

Parish of Gidley, n.d.

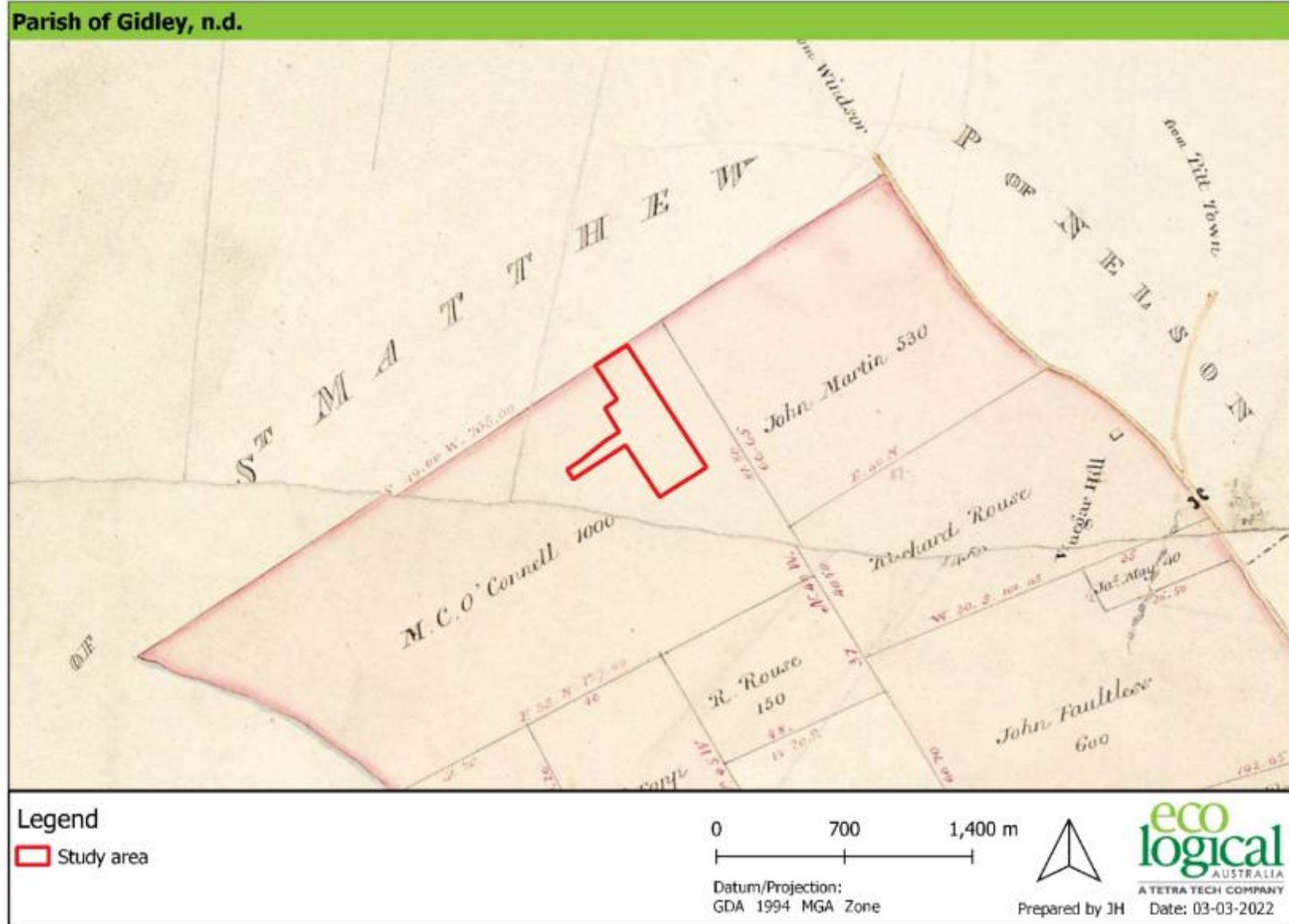


Figure 4: Gidley parish map, undated. Showing the study area within Maurice Charles O'Connell's original 1000-acre land grant (Source: HLRV)



Figure 5: 1947 aerial imagery showing several dams and widespread clearance and ploughing for agriculture (Source: NSW Govt. spatial portal)



Figure 6: 1975 aerial imagery showing more dams and infilled old dams, new residential structures and further ploughing and landscape modification (Source: NSW Govt. spatial portal)



Figure 7: 2014 aerial imagery showing new dams and more extensive agricultural land use, excavated pipeline for Sydney water infrastructure and compound SE corner (Source: NSW Govt. spatial portal)



Figure 8: 2015 aerial imagery showing further excavated works for Sydney Water Infrastructure along Regent Street and corner of Clarke and Garfield Road. (Source: NSW Govt. spatial portal) aerial imagery

4. Aboriginal context

4.1 Ethnohistory

An accurate reconstruction of past lifeways, technologies and land-use patterns of the Aboriginal people who inhabited the Blacktown region is often hindered by a lack of written records and an ethnocentric bias of European settlers. Oral histories by Aboriginal people provide valuable insights into the past, though these are not always available.

Aboriginal people have continuously occupied Australia for at least 65,000 years utilising the land and available resources. Dates of the earliest occupation of the continent by Aboriginal people are subject to continued revision as more research is undertaken. The earliest undisputed radiocarbon date from the Sydney region comes from a rock shelter site north of Penrith, Shaw's Creek, dated to around 14,700 BP (Attenbrow 2010). Alternate artefactual evidence found on the Nepean River suggests Aboriginal people have occupied the Sydney region for at least 40,000 years (Nanson *et al.* 1987; Stockton & Holland 1974).

Determining the population of Aboriginal people at the time of European contact is notoriously difficult. This is largely because Aboriginal people were mobile and largely avoided contact with Europeans and many Aboriginal people perished from introduced diseases such as smallpox and violent clashes with early settlers. Population estimates for the greater Sydney region, including the lower Blue Mountains, generally range from 4,000 – 8,000 at the time of European contact. The western Cumberland Plain population has been estimated to be between 500 – 1,000 people at that time, which translates to an approximate minimum population density of 0.5 people / km (Kohen 1995).

At the time of European settlement, the Cumberland Plain is thought to be close to the intersection of a number of tribal boundaries, though there is considerable debate over the extent and nature of these boundaries across the Sydney Basin region. This is due in part to the absence of accurate ethnographic and linguistic studies at the time of contact and the scarcity of adequate historical documentation and anthropological interest until after settlement of the region (McDonald 2006). Linguistic evidence from the Sydney region indicates the presence of five discrete language groups at the time of European contact (Capell 1970, Dawes 1970, Mathews 1901, Matthews and Everitt 1900, Tindale 1974).

As greater expanses of land were occupied by settlers towards the end of the eighteenth century, tensions boiled over and resistance to white settlement became increasingly violent. In 1790, station raids led by Koori leader Pemulwuy and his son Tedbury saw the use of arson to destroy buildings and burn crops, and numerous assaults on livestock and settlers themselves. A period of armed resistance by Aboriginal people in the Parramatta area and beyond began in 1799 and was known as the 'Black Wars'. The violence ended only with the death of Pemulwuy in 1802.

It was in the context of this conflict that in April 1814 William Shelley, a trader and former London Missionary Society missionary, wrote to Governor Macquarie with a proposal for educating Aboriginal people. Macquarie seized upon the proposal and commenced establishment of a 'Black Native Institution of NSW' at Parramatta. More children came to be educated at the Parramatta Institution over the coming years, with the school's enrolment reaching more than 20 students at some periods. During this time, Macquarie also made the first land grant to Aboriginal people, granting 30 acres to Colebee

and Nurragingy on Richmond Road in 1816. The settlement on and around the land grant flourished and by the 1820s it had become known as the 'Black Town' (OEH website: State Heritage Register listing, Blacktown Native Institution). In 1823, the Institution was moved by Governor Brisbane (who succeeded Macquarie as Governor on 1 December 1821) to land adjoining the new settlement along Richmond Road at Black Town. Whilst the structures no longer exist, the site of the former institution was listed on the SHR in November 2011.

4.2 Archaeological context

4.2.1 Database searches

HERITAGE DATABASE SEARCH

Searches of the Australian Heritage Database, the State Heritage Register (SHR) and Blacktown Local Environmental Plan (LEP) 2015 utilising the terms "Regent/Riverstone", were conducted on 23 February 2022 in order to determine if any places of Aboriginal or historical significance are located within proximity to the study area.

No places of Aboriginal heritage significance are located within study area. No heritage items will be impacted by the proposed works.

Several locally listed historic items, listed on the Blacktown LEP 2015, are located within the vicinity of the study area:

- House, 122 Regent Street. – Item I88
- Slab Building, Riverstone Highschool 71 McCulloch Street – Item I87
- House, Nu Welwyn, 4 Clarke Street – Item I71

Two items are listed on the State Environmental Planning Policy (SEPP) 2006, Sydney Region Growth Centre as being within the vicinity of the study area:

- Warrawong, 158 Riverstone Road – Significance: Local
- Rosebank, 213 Garfield Road – Significance: Local

AHIMS SEARCH

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

A search of the AHIMS database was conducted on 23 February 2022 to identify if any registered Aboriginal sites were present within the study area (Appendix A). The search covered a 2km area surrounding the study area to understand the known archaeological resource and provide an understanding of the types of features that might be present in the current landscape.

Table 3: Parameters for the AHIMS database search and results

| Search Parameters | | Search Result | |
|-------------------|-------------------|----------------------------|-----|
| GDA Zone | 56 | Aboriginal sites recorded | 111 |
| Eastings | 300850 - 304850 | Aboriginal places declared | 0 |
| Northings | 6269475 - 6273475 | | |
| Buffer | 0m | | |

The extensive search identified a total of 111 Aboriginal sites within the vicinity of the study area. The majority of Aboriginal sites within the search parameters are artefact scatters or isolated finds (79.82%).

Two sites, AHIMS ID 45-5-4084 and AHIMS ID 45-5-5264, have been listed as ‘not a site’ and three AHIMS sites (AHIMS ID 45-5-4671, AHIMS ID 45-5-4654 and AHIMS ID 45-5-5339) are reburial locations for salvaged sites. AHIMS ID 45-5-4482 is a duplicate recording of AHIMS ID 45-5-4457 bringing the total number of sites within the vicinity of the study area to 105. The distribution of recorded Aboriginal sites within the vicinity of the study area is shown in Figure 9. The frequencies of site types recorded within the AHIMS database search area are listed below.

Table 4: Frequencies of site types

| Site Features | Number | % |
|--|------------|------------|
| Artefact | 83 | 79 |
| Artefact; Ochre Quarry | 1 | 1 |
| Artefact; Potential Archaeological Deposit (PAD) | 11 | 10.5 |
| Artefact; PAD; Modified Tree (Carved or Scarred) | 1 | 1 |
| PAD | 9 | 8.5 |
| Total | 105 | 100 |

Two (2) Aboriginal sites have been identified by the AHIMS search as located within the study area (Figure 10; Table 5) and an additional five (5) sites are located in the immediate vicinity of the study area.

Table 5: AHIMS sites within the study area

| AHIMS ID | Site name | GDA 2020 z56 | Description |
|-----------|-----------------|--------------------------|--|
| 45-5-5339 | Cruikshank Cr | [REDACTED] | Is not an Aboriginal site, but is the reburial location for AHIMS ID 45-5-4849 |
| | Artefact Burial | [REDACTED] | |
| 45-5-5423 | Clarke AS3 | [REDACTED] [REDACTED] | Recorded by ELA 2020 as part of the Hambleton Road extension archaeological investigations undertaken for Blacktown City Council. The site is a low density artefact scatter identified in fill. |

Table 6: AHIMS sites adjacent to the study area

| AHIMS ID | Site name | Description |
|-----------|------------|--|
| 45-5-4849 | 218GRE | Recorded by Neville Baker (2016). Site is located at the rear of 218 Garfield Road East, Riverstone NSW. Site consists of stone artefacts identified through test excavation, including sparsedebitage, one broken backed artefact and one thick flake tool. |
| 45-5-4457 | A-5 | Site originally recorded by AECOM (2007) for the Aboriginal Heritage Assessment of the Alex Avenue and Riverstone Growth Centre Precincts. Site comprises one isolated, exhausted multi-platform silcrete core artefact. Located in a disturbed context on the edge of a shallow irrigation channel, determined to be of low significance. Later re-recorded by Alan Williams (AHIMS ID 45-5-4482) as site had not been lodged with AHIMS. |
| 45-5-4482 | | |
| 45-5-4065 | PAD 1003-6 | Recorded by Alan Williams (2010) as part of Aboriginal Heritage Impact Assessment North West Growth Centre. The area of PAD was subject to subsurface excavations. No Aboriginal objects were identified within the current study area. |
| 45-5-4083 | PAD 1022-6 | Recorded by Alan Williams (2010) as part of Aboriginal Heritage Impact Assessment North West Growth Centre. The area of PAD consists of a level terrace overlooking First Ponds Creek to the east. Both sides of Riverstone Road have undisturbed areas of level ground and two mudstone flaked pieces were located on the northern road verge. |
| 45-5-4082 | PAD 1021-6 | Recorded by Alan Williams (2010) as part of Aboriginal Heritage Impact Assessment North West Growth Centre. Site is located off Riverstone Road, after heading south for 100m. Area of PAD consists of a low alluvial flat directly to the east of First Ponds Creek and extends on either side of Riverstone Road following the eastern bank. Overall disturbance was considered to be low. |

AHIMS - Basin F1.1 Regent Street Riverstone

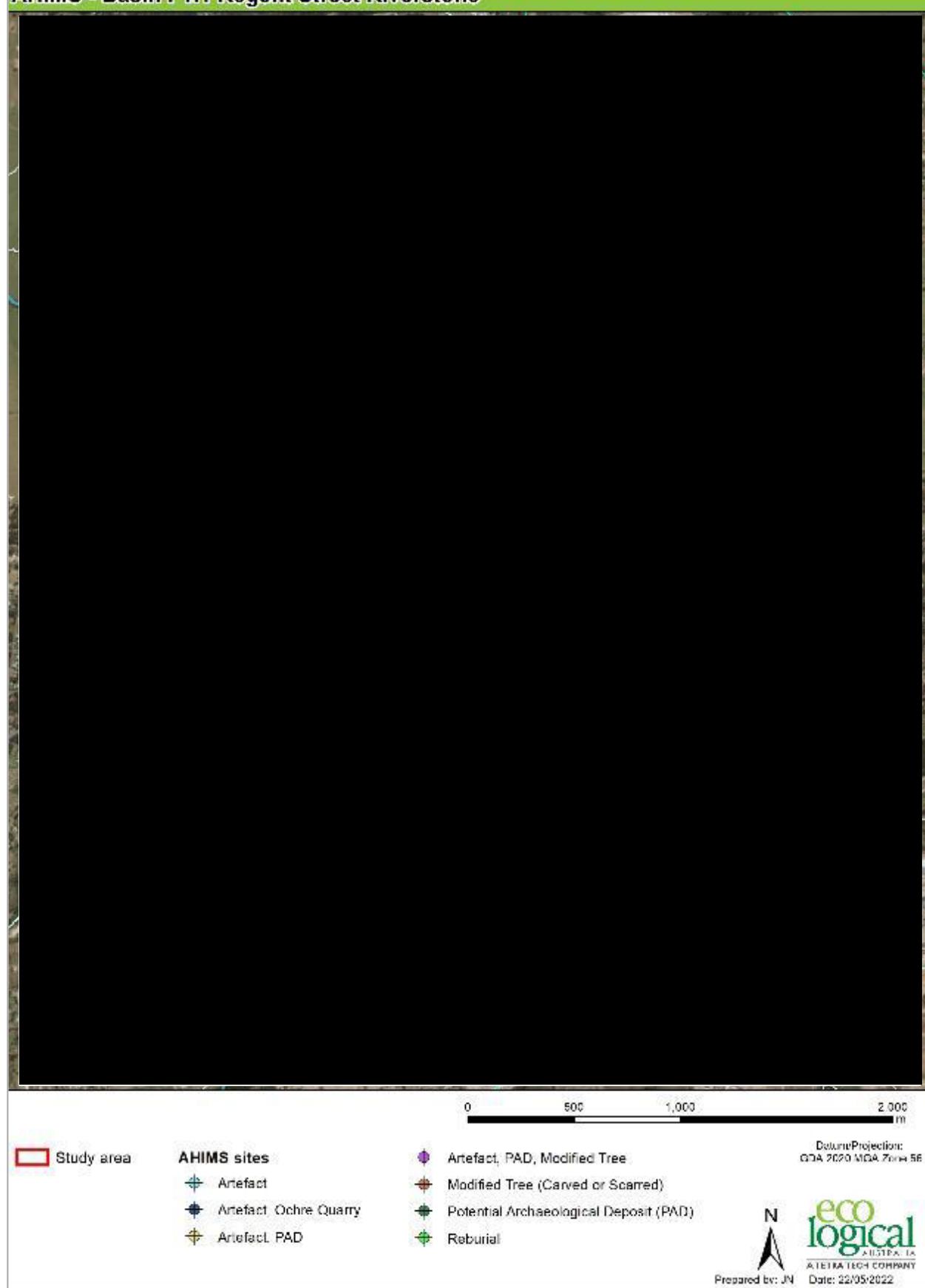


Figure 9: Regional overview of AHIMS sites surrounding the study area

AHIMS Sites

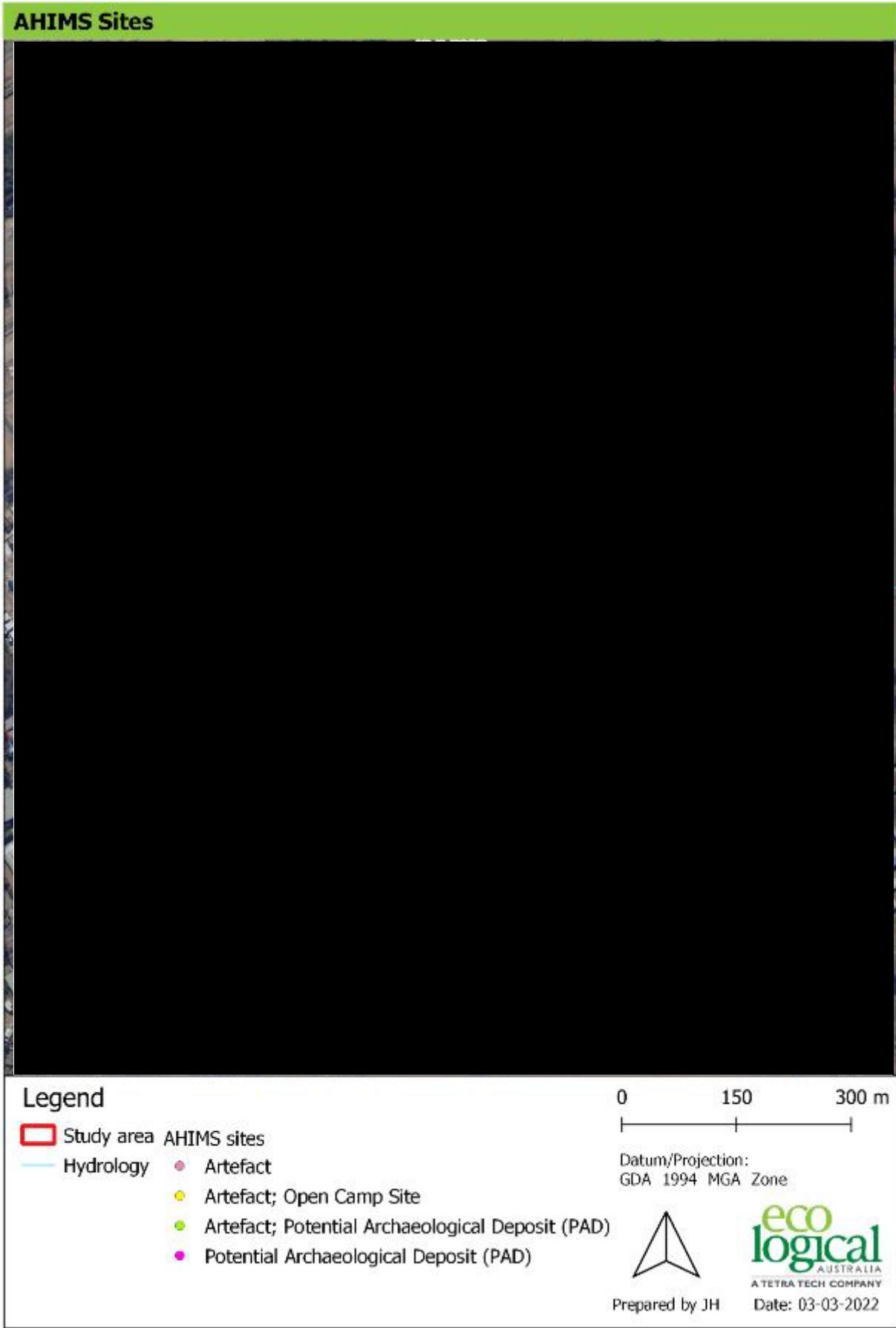


Figure 10: AHIMS sites within and in the proximity of the study area

4.2.2 Previous archaeological investigations within the vicinity of the study area

Several archaeological assessments have been carried out across the wider Greater Western Sydney region and in proximity to the study area over the past ten years in relation to an increasing number of residential and urban developments. The most relevant investigations to this project will be summarised below.

APEX ARCHAEOLOGY, 2017. 59 CUDGEONG ROAD, ROUSE HILL – ABORIGINAL CULTURAL HERITAGE ASSESSMENT REPORT. PREPARED FOR WICKWOOD PROPERTY GROUP.

Apex Archaeology was previously engaged by Wickwood Property Group to undertake an Aboriginal Cultural Heritage Assessment (ACHA) to support the proposed redevelopment of 59 Cudgeong Road, Rouse Hill, located approximately 4 km to the south of the current study area.

An initial desktop assessment, including an extensive search of the AHIMS database, identified one Aboriginal site (AHIMS ID 45-5-3934, an isolated find), within the study area. Fifty-four Aboriginal sites, forty-nine of which were artefact sites, were identified within 1km of the study area and a review of background information revealed the study area had previously been assessed as being an area of ‘high archaeological sensitivity’.

A survey of the study area found that surface visibility was limited by vegetation and building materials, including those associated with the constructed dam. Some small sandstone outcrops were noted in the southern boundary which were not found to be representative of grinding grooves or suitable for rock shelter formation. Ground disturbance across the study area was moderate and two permanent water sources, First Ponds and Second Ponds Creek were located within the vicinity of the study area. The registered AHIMS site (AHIMS ID 45-5-3934) was not relocated during the survey.

A test excavation was undertaken, with 29 50 x 50 cm test pits excavated across four transects. The study area was found to have been disturbed around the area where the dam had been constructed and along the southern boundary fence. There was evidence of disturbance throughout the test pits, and test pits were generally shallow. Six silcrete artefacts were recovered from one expanded test pit and have been registered as a new AHIMS site, AHIMS ID 45-5-4897.

Based on the results of the test excavation and the levels of disturbance noted throughout, the study area was assessed as having a low archaeological significance with a low potential for high density artefact scatters. However, the proposed works would harm two Aboriginal artefact sites, AHIMS ID 45-5-3934 and AHIMS ID 45-5-4897, the low-density artefact scatter that was identified during the excavation. As a result, recommendations included that an AHIP be sought for the impact area and Aboriginal community consultation continue to mitigate harm.

ARTEFACT HERITAGE, 2018. S94 STORMWATER INFRASTRUCTURE GORDON ROAD, SCHOFIELDS – ARCHAEOLOGICAL TECHNICAL REPORT. PREPARED FOR BLACKTOWN CITY COUNCIL.

Artefact Heritage were previously engaged by Blacktown City Council to prepare an Archaeological Technical Report to accompany an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the proposed construction of stormwater infrastructure to the south of Gordon Road in Schofields, NSW. This assessment was undertaken approximately 2.7 km to the south-east of the current study area.

An initial desktop assessment, including an extensive search of the AHIMS database, found no previously recorded Aboriginal sites within the study area. However, the study area had previously been identified as being in area of moderate archaeological potential due to its proximity to the First Ponds Creek.

A survey of the study area was undertaken in three survey units. Survey Unit 1, the Gordon Road corridor and the southern portion of 35 Oak Street, was found to be cleared of native vegetation and drainage ditches were found on the edges of the road. Visibility was noted to be low due to dense grass cover and no Aboriginal objects or areas of potential were identified. Survey Unit 2, comprised of 62 Gordon Road, was on a gently sloping terrace landform adjacent to First Ponds Creek. Visibility varied and no Aboriginal objects or areas of archaeological potential were identified. Survey Unit 3 encompassed 36 and 56 Gordon Road and lay on a gentle slope adjacent to First Ponds Creek with low visibility. The survey unit had undergone low disturbance, though there was some evidence of earthworks. Two new Aboriginal sites were identified in this survey unit, an isolated artefact (AHIMS ID 45-5-4969) and a PAD (AHIMS ID 45-5-4968).

Due to the PAD and isolated artefact find, test excavation on the area of PAD was recommended as the study area had an overall lack of disturbance and was in close proximity to a creek. Ten test pits were placed along the PAD in 1 x 1 m squares with 50 m spacing and each square comprised four 50 cm x 50 cm excavation units.

The test excavation resulted in the recovery of 156 artefacts which were dominated by silcrete (57.6%). All test pits had artefacts with the highest density of artefacts recovered from the north-eastern portion of the study area, on the mid slope, and the lowest in areas furthest from the creek line. The highest density of artefacts, 54, was recovered from test pit B1 in the northern portion of the study area, to the south of the isolated find. The soil profile was consistent throughout, with mixed silty loam overlaying clayey silt and depth average 220 mm, though some disturbance was noted in the north-eastern portion of the study area.

As a result of the test excavation, Gordon Road Artefact Scatter 1 (GR AS 01) (AHIMS ID 45-5-4968), a subsurface artefact scatter comprising 156 artefacts and one isolated artefact (GR ISO 1) (AHIMS ID 45-5-4969) were found to be located within the study area. The isolated find has been included as part of GR AS 01 (AHIMS ID 45-5-4968) as it likely to be associated with these subsurface finds. The PAD was identified as having moderate archaeological significance and recommendations included that an AHIP be sought for the impact area.

ECO LOGICAL AUSTRALIA, 2018. *STORMWATER/ROAD WIDENING CONSTRUCTION ON REGENT STREET, RIVERSTONE NSW – ABORIGINAL DUE DILIGENCE ASSESSMENT*. PREPARED FOR BLACKTOWN CITY COUNCIL.

Eco Logical Australia (ELA) was previously engaged by Blacktown City Council to conduct an Aboriginal Due Diligence Assessment to support the proposed stormwater construction and road widening of a 730 m section of Regent Street in Riverstone, NSW. In relation to the current study area, this assessment was undertaken to the immediate south.

The initial desktop assessment, including an extensive search of the AHIMS database, identified a total of 40 Aboriginal sites were located within 1km of the proposed study area. The majority of registered Aboriginal sites in the area were artefacts (70%), PAD (17.5%) and artefacts with PAD (7.5%). No sites had previously been recorded as being within the study area, though one site, AHIMS ID 04-5-0359, an

artefact, was located approximately 25m to the south of the proposed works boundary. The artefact was located in a separate lot and as such, was found to not be impacted by the proposed works.

A visual inspection was undertaken which revealed that the study area had been previously disturbed from previous works that had altered the landscape. These works included the original construction of Regent Street, the communication cable construction on both sides of the road and artificial drainage channels that had been installed along the southern edge of the study area. Ground surface modification was also observed related to slope cutting and subsurface excavations.

The study area had also been cleared of all woodland and most native vegetation for past agricultural land use and there was very limited surface exposure noted across the study area. No surface artefacts were observed in any areas of exposure and as such, the study area was assessed as having a low to nil sensitivity for Aboriginal objects.

As a result of the disturbance that had occurred across the study area and low likelihood for archaeological material, no further archaeological assessment was recommended, and works could proceed with caution.

4.2.3 Previous archaeological investigations within the study area

ENSR, 2008. ABORIGINAL HERITAGE ASSESSMENT – ALEX AVENUE AND RIVERSTONE GROWTH CENTRE PRECINCTS. UNPUBLISHED REPORT PREPARED FOR NSW GROWTH CENTRES COMMISSION.

ENSR conducted Aboriginal heritage assessments of two precincts within the Alex Avenue and Riverstone Precincts, which form part of the Northwest Growth Centre. The study identified 37 Aboriginal sites, 25 within the Riverstone Precinct and 12 in the Alex Avenue Precinct. The site types consisted of isolated finds, artefact scatters, potential archaeological deposits, natural silcrete occurrences, and two potentially scarred trees (ENSR 2008).

The assessment identified multiple sites of high archaeological significance, including the A7 Archaeological Complex site along First Ponds Creek (located within the current study area). ENSR also suggested that the areas of natural silcrete occurrences represented only a handful of areas where this raw material could be obtained in the Cumberland Plain and utilised by Aboriginal people for stone tool production (ENSR 2008).

The assessment registered AHIMS ID 45-5-4457 on the boundary of 167 Riverstone Road, Riverstone. The site is an isolated artefact located on the edge of an irrigation channel, a heavily disturbed context.

ARCHAEOLOGICAL AND HERITAGE MANAGEMENT SOLUTIONS PTY LTD, 2015. WATER RELATED INFRASTRUCTURE FOR THE NORTH WEST GROWTH CENTRE (NWGC) FIRST AND SECOND RELEASE PRECINCTS: ABORIGINAL ARCHAEOLOGICAL EXCAVATION REPORT. UNPUBLISHED REPORT FOR LEND LEASE/SYDNEY WATER.

AHMS was commissioned by Lend Lease on behalf of Sydney Water to undertake archaeological test and salvage excavation as part of the installation of the primary wastewater trunk located adjacent to First Ponds Creek (part of which is located within the current study area).

A two-phase program of excavation works was undertaken involving salvage of six entry/exit under bore locations, totalling 120 m² of excavation. This was followed by test excavation of another 20 m² along

the proposed under bore alignment to identify the presence or absence of archaeological material with the aim of reducing the length of the under bore required. A total of 1,823 artefacts were recovered from six salvage areas established for the excavation, with 1,166 artefacts were recovered from a 28 m² excavation located on a flat 35 m from First Ponds Creek channel.

The excavations investigated AHIMS ID 45-5-4065, test pits were placed at the proposed entry exit points within the area of PAD. Test pit 6 and 7 were located within the current study area and were found to be considerably shallow with no Aboriginal objects. The excavations for AHIMS ID 45-5-4065 within the study area reassessed the PAD from moderate significance to being low nil significance with no archaeological potential.

ECO LOGICAL AUSTRALIA, 2018. S94 STORMWATER INFRASTRUCTURE, CP20 REGENT STREET BASIN F1.1 AND RESERVE 917 – ABORIGINAL HERITAGE DUE DILIGENCE ASSESSMENT. PREPARED FOR BLACKTOWN CITY COUNCIL.

Eco Logical Australia (ELA) was previously engaged by Blacktown City Council to conduct an Aboriginal Heritage Due Diligence Assessment for the proposed S94 Stormwater Infrastructure development in Riverstone, NSW and comprising of the current study area.

The initial desktop assessment, including an extensive search of the AHIMS database, identified a total of 56 Aboriginal sites within the vicinity of the study area, including six sites located in the study area. These sites included:

- AHIMS ID 45-5-4457 and AHIMS ID 45-5-4482, an artefact
- AHIMS ID 45-5-4849, an artefact
- AHIMS ID 45-5-4065, a PAD

Registered sites within the vicinity of the study area included artefacts (75%), PAD (14.3%) and PAD with artefact (7.3%). The predictive model for the assessment indicated there was a moderate to high sensitivity for further archaeological material to be located within the study area as First Ponds Creek, a sensitive landform, traversed the study area.

A visual inspection was undertaken which found that ground surface exposure across the entirety of the study area was low to nil, with isolated areas of exposure closely inspected for Aboriginal objects. No previously unidentified Aboriginal sites were recorded during the visual inspection. Disturbances within the western portion of the study area were related to livestock grazing and soil mounding, and the paddock in the west was assessed as having the potential to contain an archaeological deposit as it was situated on a relatively undisturbed terrace landform to the east of the previously registered site, AHIMS ID 45-5-4849.

The portion of the study area directly east of Clarke Street was determined to have been significantly disturbed from land use, including market gardening, though a portion of the property at 5 Clarke Street was assessed as containing archaeological potential. The two PADs along Riverstone Road in the southern portion of the study area were reidentified and areas of disturbance to the north of Riverstone Road were noted. The portion of the study area within the Regent Street corridor was found to be disturbed by landscape use and the installation of a sewer line. Two areas of PAD were identified south of Regent Street, to the west of First Ponds Creek.

Most of the study area to the north of Regent Street and west of First Ponds Creek had been disturbed due to soil mounding, cutting, and scraping and the sewer easement crossing the central portion of the study area. One area of archaeological potential was identified in a cleared paddock to the west of the unnamed first order drainage line.

ECO LOGICAL AUSTRALIA, 2021. *HAMBLEDON ROAD EXTENSION – ABORIGINAL CULTURAL HERITAGE ASSESSMENT. PREPARED FOR BLACKTOWN CITY COUNCIL.*

Eco Logical Australia (ELA) was previously engaged by Blacktown City Council to prepare an Aboriginal Cultural Heritage Assessment for the proposed extension of Hambledon Road from Schofields Road to Garfield Road East in the suburbs of Schofields and Riverstone, NSW. The proposed works covered approximately 3.5 km of road within the vicinity of the current study area.

An initial desktop assessment, including an extensive search of the AHIMS database, identified seven AHIMS sites within the proposed study area. A site survey was undertaken which did not identify any previously unregistered Aboriginal sites but did identify areas of archaeological sensitivity and minimal disturbance, leading to the recommendation that a test excavation would be necessary to assess the cultural heritage values within the study area.

A test excavation was conducted at several locations across the study area, which included an investigation of three registered PADs within the study area, AHIMS ID 45-5-4311, AHIMS ID 45-5-4081 and AHIMS ID 45-5-4082. The test excavations identified nine previously unregistered artefact scatters within the study area and found that one registered PAD, AHIMS ID 45-5-4081, was ‘not a site’. The soil profile was found to be disturbed and all sites demonstrated signs of disturbance and low concentrations of artefacts. All sites, except AHIMS ID 45-5-4311, the A7 archaeological complex, were determined to be of low archaeological significance. AHIMS ID 45-5-4311 was assessed as having a moderate archaeological significance but would not be impacted by the proposed works.

As a result of the survey and subsequent test excavations, a total of sixteen Aboriginal sites were found to be located within the proposed extension area though low concentrations of artefacts were identified overall. As such, an AHIP would be sought for the impact area and no further assessment or mitigation was warranted.

4.3 Regional character

Previous archaeological assessments across the region provide important data on Aboriginal archaeological site distribution and typology from which an understanding of the archaeological landscape within the study area can be developed.

Aboriginal occupation in the Sydney region encompasses at least 20,000 years with dates of 13,000 Before Present (BP) at Shaws Creek in the Blue Mountain foothills; 11,000 BP for Mangrove Creek and Loggers Shelter and c. 20,000 BP at Burrill Lake on the South Coast (Attenbrow 2010). The majority of sites in the Sydney region have been dated to within the last 3,000 to 5,000 years, with many researchers proposing that occupation intensity increased from this period. This apparent intensity of occupation may have been influenced by rising sea levels which by about 6,500 years ago had risen to their present levels.

Open artefact sites and artefact scatters are the most common site types identified within the Cumberland Plain (Artefact 2012). These sites are most commonly found in landforms associated with permanent water sources, such as riverbanks and alluvial flats (White and McDonald 2010).

Large, concentrated assemblages are more likely to be located within resource rich areas (AMC 2014). Complex sites, containing multiple artefact types and archaeological features, are often located in close proximity (~150m) to permanent water sources (Niche 2020). The confluence of creek lines could provide focal points for occupation and the size of the stream's Strahler order could influence the size of the assemblages present (Niche 2020). The crests of hills and ridge tops also have the potential to contain larger sites (AMBS 2012).

Low density assemblages of artefacts are also located in close proximity to reliable water sources. Whilst these sites can represent smaller or less frequent instances of occupation, disturbances from historic land use and erosion can also affect artefact count (Niche 2020).

The majority of artefact assemblages are comprised primarily of unretouched flakes and debitage, with a smaller percentage of formal tool types being present (AMBS 2012). The most common raw material used to manufacture tools is silcrete (Niche, 2020, Artefact 2012), followed by tuff/chert (AMC 2014).

Areas with few or no sites identified on the surface have often been shown to contain subsurface archaeological deposits and the distribution of surface artefacts is not a reliable indicator of an area's archaeological potential (Niche 2012). PADs are most likely to be located along valley floors and low slopes and ridgelines between flat landforms (GML 2020) and possess low-to-moderate density archaeological deposits (AHMS 2005 in AMC 2014). Sites situated in the alluvial soils of the South Creek Soil Profile have the potential for stratified deposits (GML 2020), however; low-lying, flood prone areas are unlikely to have been used extensively for camping (Steele 2001 in AMC 2014).

4.4 Predictive models

A commonly utilised tool in the planning and management of Aboriginal cultural heritage are predictive models. These models aim to identify specific landforms and places within the landscape which may contain archaeological material. They usually begin as geographically broad models, constructed through extensive reviews of the available literature to determine basic patterns of site distribution, before being refined according to the specific landform and environmental characteristics of the study area.

Predictive models are almost solely based upon a cultural ecological perspective of the landscape: landforms and environmental characteristics provided a distinct set of subsistence constraints, meaning the landscape could only be occupied in particular ways in order to minimise distance to potable water, maximise biodiversity, and provide shelter from the elements. Accordingly, there is an expectation that land use patterns vary between separate environmental zones due to differing constraints and that this will manifest in alternate spatial distributions of archaeological material. While some social factors may have influenced communities to venture through certain landscapes, other social factors may have resulted in the avoidance of landscapes, regardless of environmental conditions. Due to this, to understand the cultural context of a certain landscape consultation with local Aboriginal knowledge holders and community members is essential.

4.4.1 Site types

There are several common Aboriginal cultural heritage site types that may be found in the study area.

Open camp sites / stone artefact scatters represent past Aboriginal subsistence and stone knapping activities and may include archaeological remains such as stone artefacts and hearths. This site type usually appears as surface artefact scatters in areas where vegetation is limited, and ground surface visibility is high. They are also often exposed by erosion, agricultural events (such as ploughing), and the creation of informal, unsealed vehicle access tracks and walking paths. Open campsites are often located on dry, relatively flat land along or adjacent to rivers and creeks. Sites that contain surface or subsurface deposits resulting from repeated or continuous occupation are more likely to occur on elevated ground near permanent, reliable water sources. Flat, open areas associated with creeks and their resource-rich environments would have offered ideal camping areas to the Aboriginal inhabitants of the local area.

Isolated artefacts may represent a single item discard event or the result of limited stone knapping activity. The identification of isolated artefacts may indicate the presence of a more extensive, subsurface *in situ* archaeological deposit, or a larger deposit obscured by low ground visibility. Isolated artefacts are likely to be located on landforms associated with a range of activities, such as ridge lines that would have provided ease of movement through the area and level areas with access to a water source. Artefact scatters and isolated artefacts are the most common site types found in association with fresh water and/or food resource gathering areas.

Potential Archaeological Deposit (PAD) are areas where there is no surface expression of stone artefacts, but, due to a landscape feature or isolated artefact, there is a strong likelihood that the area will contain subsurface *in situ* archaeological deposits. Landscape features that may indicate a PAD include proximity to reliable water sources, particularly terraces and flats, ridge lines and ridge tops, and sand dune systems.

Culturally modified trees exhibit evidence of the deliberate removal of the *periderm* (outer bark), *phloem* (inner bark), and, in some cases, the sapwood. These materials can be used to manufacture a variety of items, including shields, Coolamon (bowls or trays), watercraft, containers, and a range of wooden tools and implements. Trees may also have been scarred in order to gain access to food resources (such as cutting toe-holds so as to climb the tree and catch possums or birds) or to mark locations (such as tribal territories). In some instances, Aboriginal people marked important features or locations (such as ceremonial grounds) by carving patterns or motifs into the sapwood of established trees or bending and grafting the branches of saplings to create rings.

Grinding grooves are the physical evidence of tool making or food processing activities undertaken by Aboriginal people. The manual rubbing of stones against other stones creates grooves in the rock; these are usually found on flat areas of abrasive rock such as sandstone in close proximity to water courses.

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

Burials often took place in proximity to camp sites, as most people tended to die in or close to camp and it is difficult to move a body over a long distance. Soft, sandy soils on or close to rivers and creeks allowed for easier removal of earth for burial. Similarly, rock shelters or middens also provided accessible burial places. Burial sites may be marked by stone cairns, modified trees, or a natural landmark. They may also be identified through historic records or oral histories.

Contact / historical sites can include a wide variety of sites and may be identified through artefactual evidence or oral histories. Artefacts located at such sites may involve the use of introduced materials such as glass or ceramics or may have social significance regarding the interaction between Aboriginal people and European settlers.

4.4.2 Site occurrence

Based on the results produced from the landscape assessment, searches of the AHIMS and state heritage registers, and examination of the regional and local Aboriginal archaeological context, the below predictive model (Table 7) has been designed for the study area.

Table 7: Predictive model for the occurrence of archaeological site types in the study area

| Site Type | Description | Likelihood |
|--|---|------------|
| Open camp sites / stone artefact scatters / isolated finds | Artefact scatters and isolated artefacts are the most common site types found in association with fresh water, and/or food resource gathering areas. Artefact scatters and isolated finds are reported to be the most common archaeological site type in the study area. | High |
| Potential Archaeological Deposits | The study area is a landform that could be considered to be potentially archaeologically sensitive, and PADs have previously been recorded within the study area. Previous assessment sand historical imagery however has proven the study area is low lying, has been heavily disturbed historically and excavated soils have shown shallow profiles and Artefact sites identified in the vicinity exhibited disturbance and low density background scatter. | Low |
| Culturally modified trees | Culturally modified trees may be present wherever tree specimens of an appropriate age are present. Widespread land clearing has been undertaken within the study area indicating this is unlikely to occur. | Low |
| Axe grinding grooves | Although the study area is in proximity to a watercourse, the underlying geomorphology of the study area is not conducive to this site type and no grinding grooves have been recorded within the vicinity of the study area. | Nil |
| Bora grounds / ceremonial sites | There are no recorded ceremonial sites in proximity to the study area. | Low |
| Burials | There are no recorded burial sites in proximity to the study area. The Blacktown soils are shallow, and it is unlikely that this site type would be present. | Low |
| Contact / historical sites | There are no recorded contact sites in proximity to the study area though contact sites may occur in any area where Aboriginal people encountered early European settlers. | Low |

5. Archaeological survey

5.1 Purpose

The purpose of the survey was to assess the current condition of the Aboriginal sites identified within the study area and to identify any areas of disturbance and PAD.

5.2 Survey strategy

Archaeological survey of the study area was conducted on foot, in accordance with the *Code of Practice*. The overall strategy was to complete a full coverage survey, as the exact locations of the impacts are not yet known. A handheld Global Positioning System (GPS) was used to track the survey area covered and record the location of key features (disturbances, areas of archaeological sensitivity/potential). The coordinate system projection used for all site recording was GDA94 MGA 56.

The field survey methodology was as follows:

- Record the landform, general soil information, surface conditions and vegetation conditions encountered during the survey and how these impact on the visibility of objects
- Define the boundaries of any Aboriginal sites and areas of PAD based on landmarks and historical maps
- Reinspect previously identified Aboriginal sites and areas of archaeological potential within the study area
- Identify areas of disturbance which may have impacted the presence of intact soils and archaeological features
- Consultation with Aboriginal representatives to discuss the potential intangible cultural heritage values of the study area
- Collect information to ascertain whether further archaeological investigation is required.

All ground exposures were examined for Aboriginal objects (stone artefacts, imported shell, or other traces of Aboriginal occupation and old growth trees were examined for signs of cultural scarring and marking.

A photographic record was kept during the survey. Photographs were taken to record aspects of survey units including vegetation and disturbance. Scales were used for photographs where appropriate.

5.2.1 Site definition and recording

An Aboriginal site is generally defined as an Aboriginal object or place. An Aboriginal object is the material evidence of Aboriginal land use, such as 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 Heritage NSW guidelines state, in regard to site definition, that one or more of the following criteria must be used when recording material traces of Aboriginal land use:

- The spatial extent of the visible objects, or direct evidence of their location.

- Obvious physical boundaries where present, e.g., mound site and middens (if visibility is good), a ceremonial ground.
- Identification by the Aboriginal community on the basis of cultural information.

For the purposes of this study, an Aboriginal site would be defined by recording the spatial extent of visible traces or the direct evidence of their location.

5.2.2 Protocol for recording Potential Archaeological Deposits

Where areas of PAD are identified towards the margins of each survey unit, efforts must be made by the survey team to delineate each area of potential beyond the survey unit. Where the extent of the PAD extends beyond the survey unit, efforts must be made to map the extent of that feature up to approximately 70 m outside the survey unit. If it is likely that these PADs continue beyond that point, the survey team must justify that the distance is adequate to provide an accurate representation of the PAD with regard to future planning and design for the project.

5.3 Survey results

The field survey was conducted on 11 April 2022 by ELA Archaeologists Jennifer Norfolk and Kate Storan and field officer Steve Randall from Deerubbin LALC was not able to attend. Steve Randall has already walked the study area for the previous ELA assessment in 2018. The study area was covered by occupied properties and was sample surveyed due to the dense vegetation cover and widespread flooding. Survey results from the ELA 2018 survey have also been utilised to assist these survey results to cover the flooded areas and properties that could not be accessed.

The study area is described as two landform units, flat landform with and gentle lower slopes. The flat landform covers the majority of the study area and is represented by the fluvial alluvial channel of First Pond Creek. The remainder of the study area is slightly raised with a gentle slope, much of this landform has been subjected to the heaviest disturbance due to the alluvial soils and raised profile adjacent to the creek line. Several of the properties have constructed dams along and adjacent to First Ponds Creek and its minor tributaries to ensure permanent consistent water supply. Many of the low lying properties have also imported soils to raise levels and reduce the effect of flooding and waterlogging. The majority of study area is covered in dense grasses due to the recent rain. The heavy rains have emphasised the extent of the low lying, flood prone landscape. Much of the study area is not suitable for occupation. Extensive clearance of native vegetation has occurred across the entire study area, there are a few stands of native trees (new growth) and introduced species around previous residences and outbuildings. This dense vegetation cover has limited the visibility across the study area (2%). There were few exposures along Regent Street and Riverstone Road and large portions of properties on Clarke Street exhibited exposed clays and garden beds (10%).

There was evidence of high degrees of disturbance across the study area, minor disturbance from fencing, and land clearance has impacted the majority of the study area, there is moderate disturbance from potential irrigation, drainage mitigations and pastoral/ agricultural activities. There has been high disturbance along several properties from the construction of property access tracks/ roads, Sydney water infrastructure and from former dams. Soil exposure observed in a disturbed context and a thin, orange-brown soil profile on a shallow clay layer was visible in the cross section. No further Aboriginal sites were identified during the survey and no areas of potential to contain in situ archaeological deposits were observed.



Figure 11: Drainage line/ flat landform in Lot 11 DP712 and Lot 122 DP1240910; view south-west. Extensive flooding, disturbance and exposure. Raised development in the distance



Figure 12: Visibility and exposure of ground surfaces across 5 Clarke Street. View south across low lying study area surrounding First Ponds Creek in Lot 71-72 DP 1238721



Figure 13: Visible ground surface and soil exposure on bank of drainage line cut along the north boundary of Regent Street.



Figure 14: Limited visibility extensive low lying flooded ground surface view north towards Clarke Street along Regent Street. Raised landform along Clarke street.



Figure 15: Gently sloping landform, dense grass cover and small stands of trees; view south east. Undulating ground surface, earth mounds and residential buildings.



Figure 16: Low lying undulating landform of Lot 11-12 O DP712. Dense grass cover and small stands of trees; view east. Undulating ground surface, earth mounds and residential buildings.

Table 8: Survey unit description summary

| Address Lot and DP | Landform | Visibility, exposure and soils | Disturbance | Archaeological potential | AHIMS |
|---|--|--|--|--|--------------|
| Garfield Road East Lot 11/ N/ DP712 | Low lying flat landform with drainage line | High visibility, high exposure, exposed mixed clay loams | High disturbance -Excavated drainage line, Sydney water infrastructure and visible plough/ market lines. Residential development and landscape modification (dam). | No shallow mixed soils | No |
| 228 Garfield Road East Lot 122 DP1240910 | Low lying flat landform with drainage line Raised terrace to the west | Low visibility and exposure | High disturbance - Residential development (new) and landscape modification (dam, raised embankment). | No shallow mixed soils, landscape modification | Yes |
| 3 Clarke Street Lot 10/ N/ DP712 | Gently sloping landform east to west to First Ponds Creek | High visibility and exposure, mixed clay loams with fine gravels. | High disturbance - Residential development, intensive market gardens and landscape modification (dam). | No shallow mixed soils, landscape modification | No |
| 5 Clarke Street Lot 10/ O/ DP712 Lot 11/ O/ DP712 | Low lying flat landform with drainage line Raised terrace to the east | Low visibility and exposure | High disturbance - Residential development, intensive market gardens and landscape modification (artificial cut drainage line). Undulating surface and Sydney water infrastructure | No shallow mixed soils, landscape modification | No |
| 7 Clarke Street Lot 9/ O/ DP712 | Raised flat adjacent to First Ponds Creek | No visibility or exposure | High disturbance, previous excavations identified >500mm of mixed clay fill over grey heavy clays. | No, introduced fills over heavy clay | Yes |
| Regent Street Lot 12/ O/ DP712 | Low lying flat landform with drainage line | Low visibility and exposure | High disturbance - landscape modification (artificial cut dam). Undulating surface | No, landscape modification | No |
| Regent Street Lot 72-73 DP1238721 | Low lying flat landform with drainage line | Low visibility, exposure along Regent Street showing >500mmm of mixed clay loams | High disturbance -Excavated drainage line, Sydney water infrastructure on east boundary and southern boundary. | No, low lying flood prone, fluvial erosion | No |
| Regent Street Lot 71 DP1224329 | Low lying flat landform with drainage line. An artificial raised area in the centre with steep sides and excavated centre | Low visibility, exposure along Regent Street showing >500mmm of mixed clay loams | High disturbance -Excavated drainage line, Sydney water infrastructure on southern boundary. Large scale landscape modification from dam excavation and fill in the north and raised earth mound in the centre. | No, low lying flood prone, fluvial erosion landscape modification | No |

| Address Lot and DP | Landform | Visibility, exposure and soils | Disturbance | Archaeological potential | AHIMS |
|--|--|--|---|---|-------|
| Regent Street Lot 31 DP1246761 | Low lying flat landform with drainage line | Low visibility, exposure along Regent Street showing >500mmm of mixed clay loams | High disturbance -Excavated drainage line, Sydney water infrastructure on southern boundary. | No, low lying flood prone, fluvial erosion landscape modification | No |
| 159 Regent Street Lot 56 DP1247574 | Low lying flat landform with drainage line | High visibility and exposure, clay loams | High disturbance -Excavated drainage line, Sydney water infrastructure on southern boundary and recent drainage works (large drainage basin). | No, low lying flood prone, fluvial erosion landscape modification | No |
| Pina Road Lot 100 DP 1216455 | Low lying flat landform with drainage line | Low visibility, exposure along Regent Street showing >500mmm of mixed clay loams | High disturbance -Excavated drainage line, Sydney water infrastructure on southern boundary. | No, low lying flood prone, fluvial erosion landscape modification | No |
| 189 Riverstone Road Lot 8 / O / DP712 | Low lying flat landform with drainage line | High visibility but low exposure, dense grass cover over flat surface | High disturbance -Excavated drainage line, Sydney water infrastructure on Eastern boundary. Large scale landscape modification from dam excavation and flat landscape that has been ploughed | No, landscape modification | No |
| 181 Riverstone Road Lot 7 / O / DP712 | Low lying flat landform | High visibility but low exposure, dense grass cover over flat surface | High disturbance Large scale landscape modification undulating flat landscape that has been ploughed with residential and agriculture buildings | No, landscape modification | No |



Figure 17: Survey areas defined by residential lots

6. Impact assessment

The proposed study area is divided into two areas of proposed works, Area A north of Regent Street consists of all the CP20 (F13.1-F13.7) and F1.1 to F1.2 Regent Street Basin Works. Area B south of Regent Street consists of Reserve 917 and future Bioretention Works.

The proposed works in Area A will involve a culvert outlet structure with an earth embankment from Cruikshank Crescent to Clarke Street Across Lot 11/N DP712 and Lot 122 DP1240910. Below this culvert on Cruikshank Crescent will be an excavated Bioretention Basin and GPT structure. The remainder of Area A will involve landscape modification, wetland establishment with excavated drainage channels and small bioretention Basins.

Area A proposed works will potentially impact on AHIMS ID 45-5-5339, this Aboriginal site being a reburial location for AHIMS ID 45-5-4849.

The proposed future works in Area B involves future playing fields with amenities and parking along Regent Street. Along Clarke Street future Bioretention Basins will be excavated along the length of the properties between First Ponds Creek and Clarke Street.

Area B proposed future works will impact on AHIMS ID 45-5-5423, this Aboriginal site is a subsurface low density artefact scatter that was identified in a mixed clay loam introduced fill layer.

No potential archaeological deposits with moderate to high significance have been identified across the study area. There has been widespread heavy disturbance from past land use, if Aboriginal objects are present, they will not be in situ and will have low scientific significance.

Table 9: Impact assessment

| Site name (AHIMS ID) | Type of harm | Degree of harm | Consequence of harm |
|---|--------------|----------------|---------------------|
| Cruikshank Cr Artefact burial (AHIMS ID 45-5-5339) | Indirect | Total | Total loss of value |
| Clarke Street AS3 (AHIMS ID 45-5-5423) | Direct | Total | Total loss of value |

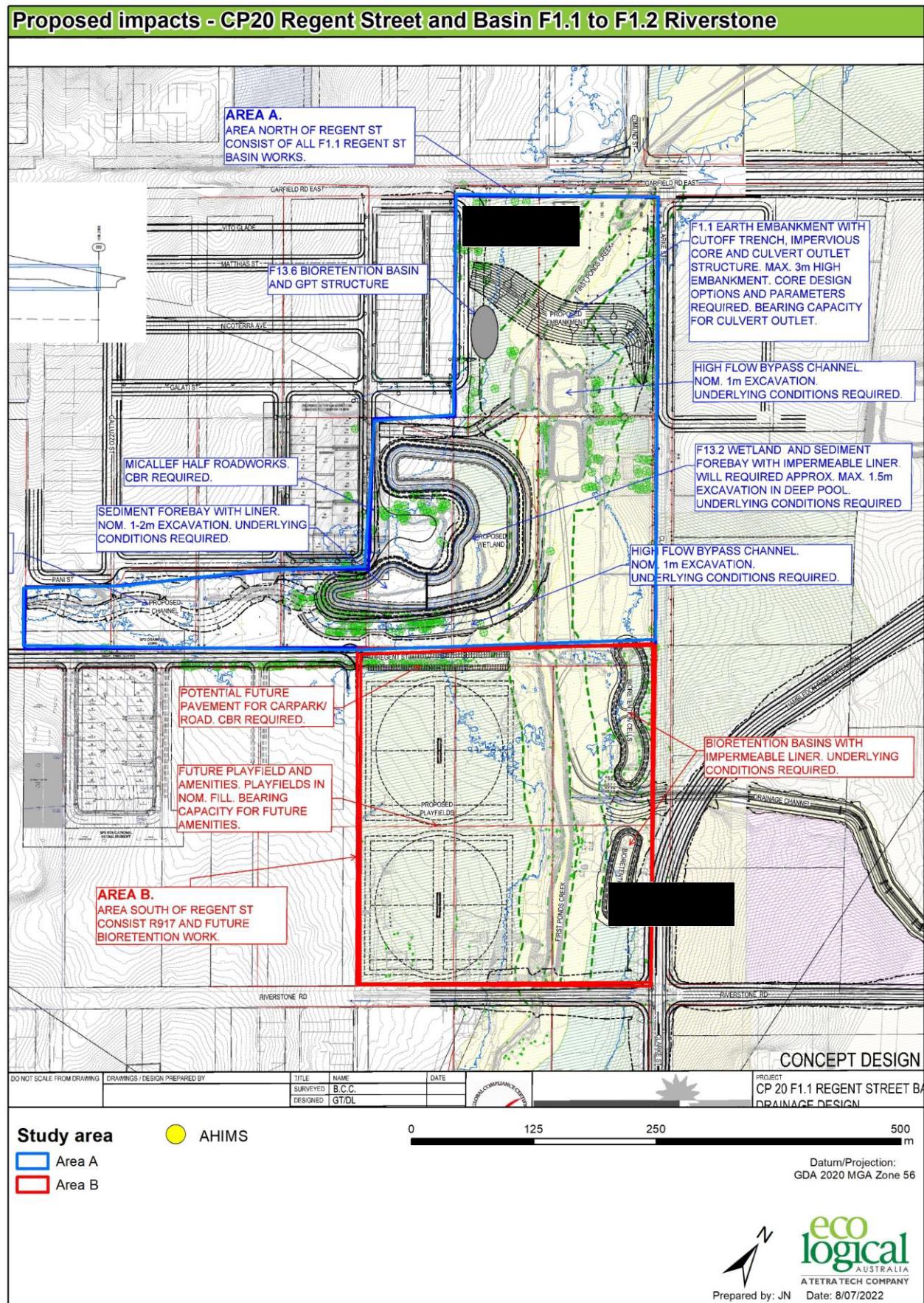


Figure 18: Potential impacts from the CP20 Regent Street, F1.1 Basin works and future bioretention works

7. Management and mitigation measures

7.1 Avoidance and conservation

The overall guiding principle for cultural heritage management is that where possible Aboriginal sites should be conserved, and attempts made to avoid impacts to Aboriginal sites. If conservation is not practicable, measures should be taken to mitigate against impacts to Aboriginal sites.

There are two Aboriginal sites registered within the study area, it is recommended that all attempts be made to avoid these sites. If impacts cannot be avoided, then mitigation measures will need to be implemented prior to impacts.

AHIMS ID 45-5-5339 (Cruikshank Crescent Artefact burial) is the chosen long term management option for the Aboriginal objects that were identified during an Aboriginal cultural heritage assessment for AHIMS ID 45-5-4849.

Management of AHIMS ID 45-5-5339 during the current proposed works:

- Ensure location of AHIMS site is flagged prior to commencing proposed works
 - GDA2020 zone56 [REDACTED].
 - See site card in Appendix B for exact location and depth measurements.
- Fence off the area with a 5m buffer to accommodate the error with GPS systems.
- Ensure all contractors working in the vicinity of the AHIMS site are aware of the significance of the site and to be made aware of what to monitor for.

If the AHIMS site is identified during the course of excavation works then all works in the vicinity need to cease and an application made for an AHIP to relocate the reburial site.

7.2 Aboriginal Cultural Heritage Assessment and Aboriginal Heritage Impact Permit

Aboriginal objects are protected under the NPW Act even if they are not *in situ*. An AHIP is most likely required to cover impacts of future works to Reserve 917.

An AHIP would be required for AHIMS ID 45-5-5423 for and supported by an ACHA in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011). If an AHIP is active prior to the commencement of proposed works for Area B, then the conditions of the active AHIP must be adhered to prior to impacts.

If an AHIP for AHIMS ID 45-5-5339 is required, it would cover impacts for movement of Aboriginal objects only. The Aboriginal site will have to be reburied in a location that will not be impacted by future works. This Aboriginal site has already been assessed in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011) and with consultation with the Aboriginal community. The AHIP application would have to be supported with evidence of Aboriginal community consultation on the requirement for its relocation.

Table 10: Recommendations

| Site name (AHIMS ID) | Impact | Recommended action |
|---|--------|--|
| Cruikshank Cr artefact burial (AHIMS ID 45-5-5339) | Area A | Avoidance – fence off the location of the Aboriginal site to avoid impacts during proposed works If impacts cannot be avoided - AHIP - required to allow for movement of Aboriginal objects only to be reburied outside the area of impact |
| Clarke Street AS3 (AHIMS ID 45-5-5423) | Area B | AHIP - Aboriginal heritage impact permit (AHIP) required prior to commencement of works for harm to Aboriginal objects. |

7.3 Unexpected finds

Aboriginal objects are protected under the NPW Act even if they are not *in situ*. On the basis of the predictive model outlined in Section 4.4 and the identification of registered Aboriginal objects within the study an AHIP should be sought to cover impacts.

If unexpected finds are identified during any phase of construction, works should cease and a qualified archaeologist should be sought to assess the finds and determine what steps should be taken next.

If suspected human skeletal remains are uncovered at any time throughout undertaking the proposed works, procedures outlined in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010a) would be followed. In all cases, the special importance of Aboriginal ancestral remains must be acknowledged and respected and the wishes of the Aboriginal community must be respected when making decisions regarding ancestral remains. To avoid doubt, the precautionary principle must be applied to all physical remains suspected to be Aboriginal ancestral remains.

If any human remains are disturbed in, on or under the land, you must:

- not further disturb or move these remains
- immediately cease all work at the particular location
- notify NSW Police
- notify Heritage NSW Environment Line on 131 555 as soon as practicable and provide available details of the remains and their location
- not recommence any work at the particular location unless authorised in writing by Heritage NSW.

8. Recommendations

The following recommendations are based on consideration of:

- Statutory requirements under the National Parks and Wildlife Act 1974.
- The results of the background research, site survey and assessment.
- The likely impacts of the proposed works.

It was found that:

- Two Aboriginal sites were identified within the study area through the desktop assessment.
- No Aboriginal sites were identified within the study area during the archaeological survey.
- All sections of the study area have been subjected to high levels of ground disturbance.
- All sections of the study area were found to have a low-nil archaeological sensitivity and did not contain moderate archaeological sensitivity as indicated in the DCP sensitivity mapping.
- No impacts are expected from the proposed works in Area A on AHIMS ID 45-5-5339, but if impacts are expected then an AHIP should be sought to relocate the Aboriginal site. This would require Aboriginal community consultation. And a new proposed burial site.
- Impacts area proposed for AHIMS ID 45-5-5423 in Area B, If the Aboriginal site is not covered by an AHIP then an ACHA would be required to support an AHIP application.

Based on the findings of this Aboriginal Heritage Assessment and the archaeological investigation the following is recommended:

Recommendation 1 – No further assessment required, works may proceed with caution

No further archaeological assessment is required for the study area (Area A and Area). Nor further assessment is required for Area A if AHIMS ID 45-5-5339 is protected. General measures will need to be undertaken; these general measures include:

- AHIMS ID 45-5-5339 is a reburial site. [REDACTED]. By fencing it off, impacts on the site would be avoided. No excavations should be done at this site. The site would not be harmed, if the measures given in sect 7.1 are followed. On completion of work the fencing will be removed. There is no need for an AHIP for the fenced off area. All contractors working the vicinity of the Aboriginal sites need to be inducted to ensure they are appropriately managed.
- If during works, potential impacts to AHIMS ID 45-5-5339 are perceived, then an AHIP will be required.
- It is recommended that future works within the Area A may proceed with caution.
- It is recommended that future works within the Area B may proceed with caution, except in Lot 9 O DP712.

UNEXPECTED FINDS POLICY

- Aboriginal objects are protected under the NPW Act regardless of if they are registered on AHIMS or not. If suspected Aboriginal objects, such as stone artefacts are located during future works, works must cease in the affected area and an archaeologist called in to assess the finds.
- If the finds are found to be Aboriginal objects, the Heritage NSW must be notified under section 89A of the NPW Act. Appropriate management and avoidance or approval under a section 90 AHIP should then be sought if Aboriginal objects are to be moved or harmed.
- In the extremely unlikely event that human remains are found, works should immediately cease, and the NSW Police should be contacted. If the remains are suspected to be Aboriginal, Heritage NSW may also be contacted at this time to assist in determining appropriate management of the human remains.

Recommendation 2 – Aboriginal Cultural Heritage Assessment (ACHA) and AHIP for Reserve 917

- AHIMS ID 45-5-5423 located in Area B (Lot 9 O DP712) will not be impacted under the current scope of works for F13.1 Drainage Channel, F13.2 Wetland and Frog Habitat, F13.3 to F13.7 Bioretention Basins (Figure 2).
- An AHIP *** will be required for AHIMS ID 45-5-5423 prior to future works for Reserve 917. The AHIP would be to harm the Aboriginal site.
- An Aboriginal Cultural Heritage Assessment (ACHA) will be required to support the application for an AHIP. The assessment will be done in accordance with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011).
- Consultation with the Aboriginal community will be required to inform the ACHA, this will be undertaken in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW 2010b)
- Following completion of the proposed works, a suitable location for reburial of the artefacts will be determined through consultation with council and the Aboriginal community.

***An AHIP to cover impacts to AHIMS ID 45-5-5423 is currently in progress for the proposed Hambleton Road Extension. If granted proposed works for Reserve 917 will need to abide by the conditions of the existing AHIP.

References

- AMBS, 2012. *Indigenous Heritage Assessment Project: Austral and Leppington North Precincts, South West Growth Centres*. Prepared for the NSW Department of Planning and Infrastructure.
- Apex Archaeology, 2017. 59 Cudgegong Road, Rouse Hill – Aboriginal Cultural Heritage Assessment Report. Prepared for Wickwood Property Group.
- Archaeological and Heritage Management Solutions Pty Ltd, 2015. Water Related Infrastructure for the North West Growth Centre (NWGC) First and Second Release Precincts: Aboriginal Archaeological Excavation Report. Unpublished report for Lend Lease/Sydney Water.
- Artefact Heritage, 2012. *The Northern Road upgrade from The Old Northern Road, Narellan to Mersey Rd, Bringelly – Aboriginal ASR*. Prepared for Roads and Maritime Services (RMS).
- Artefact Heritage, 2018. S94 Stormwater Infrastructure Gordon Road, Schofields – Archaeological Technical Report. Prepared for Blacktown City Council.
- Attenbrow, V. 2010. Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records. University of New South Wales Press Ltd. Sydney.
- Australian Museum Consulting 2014, *Environmental survey of Commonwealth land at Badgerys Creek: Aboriginal Heritage*. Consultancy report to SMEC Australia.
- Bannerman SM and Hazelton PA, 1990. *Soil Landscapes of the Penrith 1:100,000 Sheet map and report*. Soil Conservation Service of NSW, Sydney.
- Capell, A 1970. Aboriginal Languages in the south central coast, New South Wales. Fresh Discoveries. Oceania 41
- Dawes, W 1970 Grammatical forms of the language of N. S. Wales, in the neighbourhood of Sydney. Manuscript Marsden Collection.
- Department of Environment, Climate Change and Water (DECCW), 2010a. Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW, Hurstville, NSW.
- Department of Environment, Climate Change and Water (DECCW), 2010b. Aboriginal cultural heritage consultation requirements for proponents 2010. Hurstville, NSW.
- Department of Environment, Climate Change and Water (DECCW), 2010c. Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW, Hurstville, NSW.
- Eco Logical Australia, 2018. Stormwater/Road Widening Construction on Regent Street, Riverstone NSW, Aboriginal Due Diligence Assessment. Prepared for Blacktown City Council.
- Eco Logical Australia, 2018. S94 Stormwater Infrastructure, Loftus Street, Riverstone NSW - Archaeological Technical Report. Unpublished report prepared for Blacktown City Council.

Eco Logical Australia, 2021. *Hambledon Road Extension – Aboriginal Cultural Heritage Assessment*. Prepared for Blacktown City Council.

ENSR, 2008. Aboriginal Heritage Assessment – Alex Avenue and Riverstone Growth Centre Precincts. Unpublished report prepared for NSW Growth Centres Commission.

GML Heritage, 2020. *Badgerys Creek Aboriginal Heritage Report*. Unpublished report prepared for Lend Lease

Kohen, JL 1995. Aboriginal Environmental Impacts. UNSW Press, Sydney

Mathews, RH 1901. The Thurrawal Language (including the Gundungurra and Dharruk Languages, with vocabularies). Journal and Proceedings of the Royal Society of NSW 35

Mathews, RH and Everitt, MM 1900. The organisation, language and initiation ceremonies of the Aboriginal of the south-east coast of N. S. Wales. Journal and Proceedings of the Royal Society of NSW

McDonald, J., 2006. *Aboriginal Archaeological Assessment: Western Sydney Parklands – Phase I, Bungarribee Precinct and Interface Lands*. Report to APP.

Nanson, G.C., Young, R.W. and Stockton, E.D., 1987. 'Chronology and palaeoenvironment of the Cranebrook Terrace (near Sydney) containing artefacts more than 40,000 years old', *Archaeology in Oceania*, vol. 22 no.

New South Wales Department of Planning, Industry and Environment, *Sydney Basin – subregions*, accessed 22 February 2021 <https://www.environment.nsw.gov.au/bioregions/SydneyBasin-Subregions.htm>

New South Wales Government, 1974. *National Parks and Wildlife Act 1974*

Niche Environment and Heritage, 2020. Aboriginal Cultural Heritage Assessment Report South Creek West Precinct (South-West) Release Area Rezoning, The Northern Road Bringelly, NSW. Prepared for BHL Group

Office of Environment and Heritage. 2011. Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW.

Riverstone Historical Society, 2019. 'A brief history of Riverstone.' *Riverstone & District Historical Society & Museum*. Accessed online 4 March 2022, https://www.riverstonehistoricalsociety.org.au/blog/?page_id=193

Stockton, E.D. and Holland, W., 1974. 'Cultural sites and their environment in the Blue Mountains', *Archaeology & Physical Anthropology in Oceania*, vol. 9 no. 1

Tindale, N. B. 1974. *Aboriginal Tribes of Australia: Their Terrains, Environmental Controls, Distribution, Limits, and Proper Names*. Canberra, Australia: Australian national University Press.

White and McDonald (2010) *Lithic Artefact Distribution in the Rouse Hill Development Area, Cumberland Plain, New South Wales* Published in *Australian Archaeology* no.70

Appendix A – AHIMS Search Results



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 2150C 20686

Client Service ID : 662120

| SiteID | SiteName | Status | Zone | Latitude | Longitude | Context | SiteStatus ^{**} | SiteFeatures | SiteTypes | Reports |
|----------------|-----------------------------------|--------|------|------------|------------|-----------|--------------------------|---|----------------|--------------------|
| 45-5-0500 | Riverside 4 Riversedge | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Open Camp Site | 521,1018,9318 7 |
| Contact | | | | | | | | | | |
| 45-5-0516 | Riverside Artefacts 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Permits | |
| Contact | | | | | | | | | | |
| 45-5-4082 | PAD 1021 6 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) :- | Permits | 4516 |
| Contact | | | | | | | | | | |
| 45-5-5012 | Bridge Street ART 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- Potential Archaeological Deposit (PAD) :- | Permits | |
| Contact | | | | | | | | | | |
| 45-5-4712 | High Street Isolated PAD 2 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Permits | |
| Contact | | | | | | | | | | |
| 45-5-4928 | Crown Street PAD 1 (S1A01) | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) :- | Permits | |
| Contact | | | | | | | | | | |
| 45-5-2590 | C/91 | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Permits | 4300 |
| Contact | | | | | | | | | | |
| 45-5-3444 | S/91/1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Permits | |
| Contact | | | | | | | | | | |
| 45-5-4461 | AAA 5 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Permits | |
| Contact | | | | | | | | | | |
| 45-5-5127 | Lobus Street Riverside 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Permits | |
| Contact | | | | | | | | | | |
| 45-5-4869 | North Street ART 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Permits | |
| Contact | | | | | | | | | | |
| 45-5-2610 | SEC1 - Schofields Eastern Creek 1 | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Permits | 9804739048 |
| Contact | | | | | | | | | | |
| 45-5-0025 | Riverside Bowl 1B 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artifact :- | Permits | 4075 |
| Contact | | | | | | | | | | |
| 45-5-3030 | Tallawong Road UCI | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artifact :- | Permits | 104252 |
| Contact | | | | | | | | | | |
| 45-5-0899 | Tr-Ax 01 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Permits | 4511 |
| Contact | | | | | | | | | | |
| 45-5-1956 | Riverside Road 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Permits | 1255 |
| Contact | | | | | | | | | | |

Report generated by AHIMS Web Service on 23/02/2022 for Kate Stewart for the following area at Datum : GDA, Zone : 56, Eastings : 300850.0 - 304850.0, Northings : 6269475.0 - 6273475.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 111.

This information, and/or any associated maps or plans, is the copyright of NSW State Heritage Office and is only to be used internally by NSW State Heritage Office staff for the purpose of assessing heritage values and determining heritage significance.

Page 1 of 10



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 21SYD 20686

Client Service ID : 662120

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status ** | SiteFeatures | Sitetypes | Reports |
|-----------|---|---------|-----------|---|------------|-----------|----------------|--|----------------|---------|
| | | Contact | Recorders | Eco Logical Australia Pty Ltd - Sydney - Individual users,Mr.Taylor Beale | | | | Permits | 4689 | |
| 15-5-5622 | Clarke AS2 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :-, Potential Archaeological Deposit (PAD) :- | | |
| 15-5-1081 | PAD 1020-6 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) :- | 103781 | |
| 45-5-4088 | Scarred Tree 1019-7 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | 103781 | |
| 45-5-4467 | RAA12 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | | |
| 45-5-5421 | Clarke AS1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | | |
| 45-5-4944 | HF 012 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | | |
| 45-5-4266 | SFB1a | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | | |
| 45-5-4710 | Bligh Street Isolated Find 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | 3695 | |
| 45-5-4925 | Crown Street Artifact Scatter 1 (GS AS 1) | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | | |
| 45-5-2531 | LC OS 6 | ALD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Open Camp Site | 98187 |
| 45-5-4760 | RL 5 | UDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | | |
| 45-5-2021 | RTT_ | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | | |
| 45-5-3633 | ISF3 Riverstone Meatworks | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | | |
| 45-5-3632 | ISF3 Riverstone Meatworks | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | | |
| 45-5-2532 | FC-OS-4 | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact :- | Open Camp Site | 98187 |
| 15-5-1003 | PAD 1022-6 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) :- | | |

Report generated by AHIMS Web Service on 23/02/2022 for Kate Storan for the following area at Datum :GDA, Zone : 56, Eastings : 300850.0 - 304850.0, Northings : 6269475.0 - 6273475.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 111.

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

Page 2 of 8



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 21SYD 20686

Client Service ID : 662120

| SiteID | SiteName | Datum | Zone | Easting | Northing | Contact | Site Status ** | SiteFeatures | SiteTypes | Reports |
|-----------|--|-------|------|------------|------------|------------------|---|--|----------------|---------|
| | Contact | | | | | Recorders | Extent Heritage Pty Ltd - Pyrmont - Individual users; Doctor Alan Williams | | Permits | |
| 45-5-5424 | Clarke AS4 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | | | | | Recorders | Eco Logical Australia Pty Ltd - Sydney - Individual users; Ms Jennifer Norfolk | | Permits | 4751 |
| 45-5-4466 | RAA10 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Partially Destroyed | Artefact :- | | 103781 |
| | Contact | | | | | Recorders | AECDM Australia Pty Ltd - Sydney | | Permits | 4848 |
| 45-5-5455 | Riverstone Road AFT 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :-, Potential Archaeological Deposit (PAD) :- | | |
| | Contact | | | | | Recorders | Mr Matthew Kelleher, Kelleher Nightingale Consulting Pty Ltd (Generic users) | | Permits | |
| 45-5-4955 | Fest Ponds 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1 | | |
| | Contact | | | | | Recorders | Eco Logical Australia Pty Ltd - Sydney - Individual users; Mr Tyler Beebe | | Permits | 4274 |
| 45-5-4464 | RAA 8 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) :- | | |
| | Contact | | | | | Recorders | AECDM Australia Pty Ltd - Sydney | | Permits | |
| 45-5-4924 | Crown Street Artifact Scatter 7 (CTU AS 2) | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | | | | | Recorders | Artifact - Cultural Heritage Management - Pyrmont; Mr Ryan Taddeucci | | Permits | 4308 |
| 45-5-4923 | Crown Street Isolated Find 1 (CS IF1) | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | | | | | Recorders | Artifact - Cultural Heritage Management - Pyrmont; Mr Ryan Taddeucci | | Permits | 4308 |
| 45-5-4759 | RL 4 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1 | | |
| | Contact | | | | | Recorders | Barwon-Lia | | Permits | |
| 45-5-5029 | Gerfield Road East IF 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artefact :- | | |
| | Contact | | | | | Recorders | Kelleher Nightingale Consulting Pty Ltd; Ms. Cristany M. Licich, Mr. Matthew Kelleher | | Permits | 4349 |
| 45-5-4066 | 1004-46 artifact scatter PAD | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :-, Potential Archaeological Deposit (PAD) :- | | 102300 |
| | Contact | | | | | Recorders | Extent Heritage Pty Ltd - Pyrmont - Individual users; Doctor Alan Williams | | Permits | |
| 45-5-4835 | GR-01 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) :-, Artefact :- | | 103781 |
| | Contact | | | | | Recorders | Niche Environment and Heritage; Niche Environment and Heritage; Mr. Balazs Hanyi | | Permits | 4182 |
| 45-5-5016 | Gerfield-1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1 | | |
| | Contact | | | | | Recorders | Eco Logical Australia Pty Ltd - Sydney - Individual users; Mr. Tyler Beebe | | Permits | 4590 |
| 45-5-4485 | BS_RASIN_E103_AS | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artefact :- | | |
| | Contact | | | | | Recorders | Mr. David Murray | | Permits | 3759 |
| 45-5-3167 | Riverstone Artefacts 2 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | | | | | Recorders | Artifact - Cultural Heritage Management - Pyrmont; Mr. Michael Lever | | Permits | 4516 |

Report generated by AHIMS Web Service on 23/02/2022 for Kate Storan for the following area at Datum : GDA, Zone : 56, Eastings : 3000050.0 - 304030.0, Northings : 6269475.0 - 6273475.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 111

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

Page 3 of 8

**AHIMS Web Services (AWS)**

Extensive search - Site list report

Your Ref/PO Number : 21SYD 20686

Client Service ID : 662120

| SiteID | SiteName | Datum | Zone | Eastings | Northings | Context | Site Status | Site Features | Site Types | Reports |
|-----------|---|------------------|---|------------|------------|-----------|-------------|--|------------|---------|
| 45-5-4475 | 8V30 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) :-, Artefact :- | | |
| | Contact | Recorders | Kelleher Nightingale Consulting Pty Ltd, AECOM Australia Pty Ltd - Sydney, Artefact | | | | | Permits | | |
| 45-5-5339 | Cruikshank Cr Artefact Burial | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | McNeville Baker Sydney Water Parramatta | | | | | Permits | | |
| 45-5-4457 | A S | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | AECOM Australia Pty Ltd - Sydney | | | | | Permits | | |
| 45-5-4482 | A S | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | Doctor Alan Williams | | | | | Permits | | |
| 45-5-4968 | Gordon Road Artefact Scatter (GR AS) 01 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | Artefact - Cultural Heritage Management - Pyrmont, Artefact - Cultural Heritage Ma | | | | | Permits | 4311 | |
| 45-5-4907 | RZ2 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | Mary Dulus Consulting Archaeologists (MDCA), Ms.Tamika Goward | | | | | Permits | | |
| 45-5-2529 | EU-US-1: | AUD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | Mrs.Robynne Mills | | | | | Permits | 3993 | |
| 45-5-4654 | SH-Reburial-2013 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | Mr.Gændie Oakes, AECOM George Street Sydney | | | | | Permits | 4025 | |
| 45-5-4758 | R1, 3 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | Darwala-Lia | | | | | Permits | | |
| 45-5-4646 | 110 Boundary Rd AS1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artefact :- | | |
| | Contact | Recorders | Artefact - Cultural Heritage Management - Pyrmont, Mr.Alex Timms | | | | | Permits | 4041 | |
| 45-5-5418 | Guntawong IF1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | Eco Logical Australia Pty Ltd - Sydney - Individual users,Ms.Jennifer Norfolk | | | | | Permits | 4751 | |
| 45-5-4465 | RAA 9 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | AECOM Australia Pty Ltd - Sydney | | | | | Permits | | |
| 45-5-5011 | Deneck Road AFT 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | Kelleher Nightingale Consulting Pty Ltd,Ms.Cristany Millich | | | | | Permits | | |
| 45-5-0359 | QH 3 Quakers Hill | AUD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact :- | | |
| | Contact | Recorders | Mary Dulus Consulting Archaeologists (MDCA) | | | | | Permits | | |
| 45-5-4849 | ZIBURF | AUD | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artefact :- | | |
| | Contact | Recorders | Mr.Neville Baker Sydney Water Parramatta | | | | | Permits | 4331 | |
| 45-5-5028 | Garfield Road East AFT 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artefact :- | | |
| | Contact | Recorders | Kelleher Nightingale Consulting Pty Ltd,Ms.Cristany Millich,Mr.Matthew Kelleher, | | | | | Permits | 4349 | |

Report generated by AHIMS Web Service on 23/02/2022 for Kate Storan for the following area at Datum :GDA, Zone : 56, Eastings : 300850.0 - 304850.0, Northings : 6269475.0 - 6273475.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 111.

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

Page 4 of 8



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 21SYD 20686

Client Service ID : 662120

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status ^a | SiteFeatures | SiteTypes | Reports |
|----------------|------------------------------|-------|------|------------|------------|-----------|--------------------------|--|----------------|--------------------|
| 45-5-4311 | A7 Archaeological Complex | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Partially Destroyed | Artefact: 1, Potential Archaeological Deposit (PAD) : 1, Modified Tree (Carved or Scarred) : | | 103791 |
| Contact | | | | | | | | | | |
| 45-5-5417 | Schliefelds Hambleden AS1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact: -, Potential Archaeological Deposit (PAD) : - | | |
| Contact | | | | | | | | | | |
| 45-5-5128 | Lotus Street Riverstone 2 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact: 1 | | |
| Contact | | | | | | | | | | |
| 45-5-5129 | Lotus Street Riverstone 3 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact: 1 | | |
| Contact | | | | | | | | | | |
| 45-5-4035 | PAD 1037-6 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) : - | | |
| Contact | | | | | | | | | | |
| 45-5-4064 | PAD 1002-6 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) : - | | |
| Contact | | | | | | | | | | |
| 45-5-4463 | RAA 7 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact: - | | |
| Contact | | | | | | | | | | |
| 45-5-5027 | Clarke Street AFT 2 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artefact: - | | |
| Contact | | | | | | | | | | |
| 45-5-5419 | Guntawong AS2 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact: - | | |
| Contact | | | | | | | | | | |
| 45-5-4084 | PAD 1023-6 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Not a Site | Potential Archaeological Deposit (PAD) : - | | |
| Contact | | | | | | | | | | |
| 45-5-0360 | Q14 Quakers Hill | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact: - | Open Camp Site | 260,364,1018,981d9 |
| Contact | | | | | | | | | | |
| 45-5-3425 | Guntawong AS1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact: - | | 4040 |
| Contact | | | | | | | | | | |
| 45-5-4711 | Bligh Street Isolated Find 3 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact: - | | |
| Contact | | | | | | | | | | |

Report generated by AHIMS Web Service on 23/02/2022 for Kate Sturan for the following area at Datum :GDA, Zone : 56, Eastings : 300050.0 - 304850.0, Northings : 6269475.0 - 6273475.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 111

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

Page 5 of 8



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PD Number : 21SYD 20686

Client Service ID : 662120

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status | Site Features | Site Types | Reports |
|-----------|---|-----------|--|----------------------|------------|-----------|-------------|--|----------------|---------|
| 45-S-4063 | Isolated Object 1801-5 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : 1 | | |
| | Contact | Recorders | Extent Heritage Pty Ltd - Pyrmont - Individual users | Doctor Alan Williams | | | | Permits | | |
| 45-S-4462 | RAA 6 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : - | | |
| | Contact | Recorders | AECOM Australia Pty Ltd - Sydney | | | | | Permits | 4017 | |
| 45-S-5110 | BR II-1 (boundary Road Isolate End 1) | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : - | | |
| | Contact | Recorders | Artifact - Cultural Heritage Management - Pyrmont,Ms.Jason for Norfolk | | | | | Permits | | |
| 45-S-5024 | Riverstone Road APT 2 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artifact : - | | |
| | Contact | Recorders | Kelleher Nightingale Consulting Pty Ltd,Ms.Cristany Kilicich,Mr.Mathew Kelleher, | | | | | Permits | 4549 | |
| 45-S-2527 | EC-05-5 | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : - | Open Camp Site | 98187 |
| | Contact | Recorders | Mrs.Robynne Mills | | | | | Permits | 4090 | |
| 45-S-4610 | WS-01 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artifact : - | | |
| | Contact | Recorders | Niche Environment and Heritage,Mr.Balasz Hansel,Mr.Balazs Hansel | | | | | Permits | 3904 | |
| 45-S-4865 | PAD 1803-6 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) : - | | 102500 |
| | Contact | Recorders | Extent Heritage Pty Ltd - Pyrmont - Individual users | Doctor Alan Williams | | | | Permits | | |
| 45-S-5225 | Edmund Street PAD 1 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) : - | | |
| | Contact | Recorders | Artifact - Cultural Heritage Management - Pyrmont,Ms.Anna darby | | | | | Permits | 4516 | |
| 45-S-3637 | Vineyard 1 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : - | | |
| | Contact | Recorders | Ms.Laila Haghjed | | | | | Permits | 39914040 | |
| 45-S-1494 | BS-AS-01 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : - | | |
| | Contact | Recorders | Kayandel Archaeological Services | | | | | Permits | 4095 | |
| 45-S-4483 | A 4 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : -, Potential Archaeological Deposit (PAD) : - | | |
| | Contact | Recorders | Doctor Alan Williams | | | | | Permits | | |
| 45-S-5026 | Clarke Street AFT 1 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artifact : - | | |
| | Contact | Recorders | Kelleher Nightingale Consulting Pty Ltd,Ms.Cristany Kilicich,Mr.Mathew Kelleher, | | | | | Permits | 4549 | |
| 45-S-5018 | CS AD 01 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : - | | |
| | Contact | Recorders | Apex Archaeology,Ms.Jean Bates | | | | | Permits | 4586 | |
| 45-S-4969 | Gordon Road Isolated End 01 (CR ISO 01) | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : - | | |
| | Contact | Recorders | Artifact - Cultural Heritage Management - Pyrmont,Ms.veronica norman | | | | | Permits | 4511 | |
| 45-S-4945 | HT OC1 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : - | | |
| | Contact | Recorders | Murray Brown,Mr.Paul Irish | | | | | Permits | | |
| 45-S-5130 | Loftus Street Riverstone 4 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artifact : 1 | | |
| | Contact | Recorders | Eco - Connections,Mr.Andrew Crisp | | | | | Permits | | |

Report generated by AHIMS Web Service on 23/02/2022 for Kate Storan for the following area at Datum : CDA, Zone : 56, Eastings : 300850.0 - 304850.0, Northings : 6269475.0 - 6273475.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 111

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

Page 6 of 8



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PD Number : 21SYD 20686

Client Service ID : 662120

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status | Site Features | Site Types | Reports |
|----------------|--------------------------------------|-------|------|------------|------------|-----------|-------------|---|----------------|----------------|
| 45-5-2533 | EC-07-2 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Potential Archaeological Deposit (PAD) : - , Artefact : - | Isolated Find | 98187,102500 |
| Contact | | | | | | | | | | |
| 45-5-5808 | Schofields PS | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1, Ochre Quarry : 1 | Permits | 3991 |
| Contact | | | | | | | | | | |
| 45-5-4361 | QH 5 Quakers Hill | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : - | Open Camp Site | 260,1018,98187 |
| Contact | | | | | | | | | | |
| 45-5-2525 | EC-05-2 | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : - | Open Camp Site | 98187 |
| Contact | | | | | | | | | | |
| 45-5-0210 | Eastern Creek | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : - | Open Camp Site | 98187 |
| Contact | | | | | | | | | | |
| 45-5-2530 | EC-05-3 | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : - | Open Camp Site | 98187 |
| Contact | | | | | | | | | | |
| 45-5-1065 | Artifact Scatter PAD 1024-45 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Potential Archaeological Deposit (PAD) : - , Artefact : - | Permits | 4040 |
| Contact | | | | | | | | | | |
| 45-5-4754 | BS-AS-02 | CDA | 56 | 303245 | 6273066 | Open site | Valid | Artefact : 1 | Permits | 4096 |
| Contact | | | | | | | | | | |
| 45-5-4763 | RI 8 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1 | Permits | 4095 |
| Contact | | | | | | | | | | |
| 45-5-5423 | Clarke AS3 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : - | Permits | |
| Contact | | | | | | | | | | |
| 45-5-5264 | Fallowang Scarred Tree (incl a site) | GDA | 56 | [REDACTED] | [REDACTED] | Open site | No. a Site | Scarred Tree (Carved or Scarred) : - | Permits | 4751 |
| Contact | | | | | | | | | | |
| 45-5-4957 | Riversstone Road 2 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1 | Permits | |
| Contact | | | | | | | | | | |
| 45-5-5420 | Clarke Gantawong AS1 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : - , Potential Archaeological Deposit (PAD) : - | Permits | 4686 |
| Contact | | | | | | | | | | |
| 45-5-4671 | Reburied Artefacts of 45-5-4489 | CDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : - | Permits | 4751 |
| Contact | | | | | | | | | | |

Report generated by AHIMS Web Service on 23/02/2022 for Kate Storan for the following area at Datum :GDA, Zone : 56, Eastings : 300850.0 - 304850.0, Northings : 6269475.0 - 6273475.0 with a Buffer of 0 meters.. Number of Aboriginal sites and Aboriginal objects found is 111

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

Page 7 of 8



AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PD Number : 21SYD 20686

Client Service ID : 662120

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status ** | Site Features | Site Types | Reports |
|-----------|---------------------------|-----------|---|------------|------------|-----------|----------------|---------------|---------------|---------|
| 45-S-5131 | Lotus Street Riverstone 5 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1 | | |
| | Contact | Recorders | Eco - Connections,Mr Andrew Crip | | | | | Permits | | |
| 45-S-4459 | RAA 2 | LDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1 | | |
| | Contact | Recorders | AECOM Australia Pty Ltd - Sydney | | | | | Permits | | |
| 45-S-4762 | RL 7 | LDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1 | | |
| | Contact | Recorders | Darvalla-Lia | | | | | Permits | 4296 | |
| 45-S-2528 | EC-17-1 | AGD | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1 | Isolated Find | 50187 |
| | Contact | Recorders | Mrs.Bahyune Mills | | | | | Permits | 3991 | |
| 45-S-4921 | Edmund Street ISO 1 | GDA | 56 | [REDACTED] | [REDACTED] | Open site | Destroyed | Artefact : 1 | | |
| | Contact | Recorders | Artefact - Cultural Heritage Management - Pyrmont,Artefact - Cultural Heritage M. | | | | | Permits | 4195 | |
| 45-S-4753 | RS-IP-012 | LDA | 56 | [REDACTED] | [REDACTED] | Open site | Valid | Artefact : 1 | | |
| | Contact | Recorders | Kayandel Archaeological Services | | | | | Permits | 4095 | |

**** Site Status**

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

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

Partially Destroyed - The site has been partially impacted or removed usually as consequence of permit activity but some may still remain in situ. There might be parts or sections of the original site still present on the ground.

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

Report generated by AHIMS Web Service on 23/02/2022 for Kate Storan for the following area at Datum : GDA, Zone : 56, Eastings : 300850.0 - 304850.0, Northings : 6269475.0 - 6273475.0 with a Buffer of 0 meters. Number of Aboriginal sites and Aboriginal objects found is 111

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

Page 1 of 8

Appendix B – Site Cards



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID: 45-5-5339

Date recorded: 06-08-2020

Site Location Information

Site name: Cruikshank Cr Artefact Burial

Easting: [REDACTED] Northing: [REDACTED] Coordinates must be in GDA (MGA)

Horizontal Accuracy (m): 3

Zone: 56

Location method: Client GIS or CAD system

Recorder Information

(The person responsible for the completion and submission of this form)

| Title | Surname | First name |
|---------------|---------------------------------------|---|
| Mr. | Baker | Neville |
| Organisation: | Baker Archaeology | |
| Address: | 6/51 York Road, Jamisontown, NSW 2750 | |
| Phone: | 0428378939 | E-mail: neville.baker@bakerarchaeology.com.au |

Site Context Information

Land Form Pattern: Undulating Plain Land Use: Residential

Land Form Unit: Flat Vegetation: Cleared

Distance to Water (m): 40 Primary Report: Baker Archaeology 2017 218-228 Garfield Road East, ACHAR

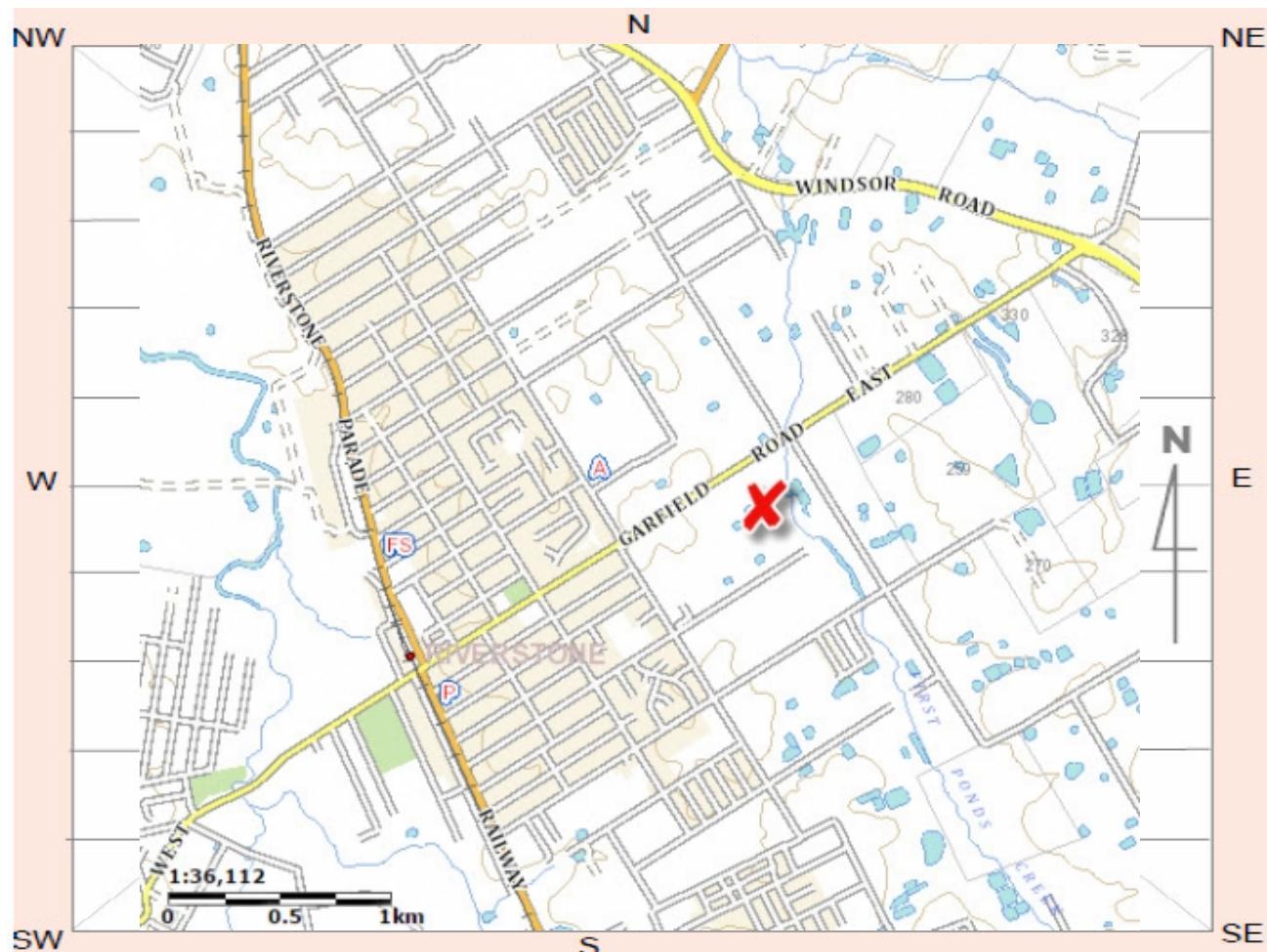
How to get to the site:

[REDACTED]

Other site information:

[REDACTED]

Site location map



Site contents information

open/closed site: Open

Site condition: Disturbed

Scarred Trees

Features:

| | Number of features | Length of feature(s) extent (m) | Width of feature (s) extent (m) | Scar Depth (cm) | Regrowth (cm) | Scar shape | Tree Species |
|--|--------------------|---------------------------------|---------------------------------|-----------------|---------------|------------|--------------|
|--|--------------------|---------------------------------|---------------------------------|-----------------|---------------|------------|--------------|

1.

Artefact

47

1

1

Description:

Burial of artefacts from 2017 test excavations as documented in Baker Archaeology 2017 "218-228 Garfield Road East Riverstone Aboriginal Cultural Heritage Assessment" Report to Castle Group

Scarred Trees

Features:

| | Number of features | Length of feature(s) extent (m) | Width of feature (s) extent (m) | Scar Depth (cm) | Regrowth (cm) | Scar shape | Tree Species |
|--|--------------------|---------------------------------|---------------------------------|-----------------|---------------|------------|--------------|
|--|--------------------|---------------------------------|---------------------------------|-----------------|---------------|------------|--------------|

2.

Description:

Features:

3.

| Number of features | Length of feature(s) extent (m) | Width of feature (s) extent (m) |
|--------------------|---------------------------------|---------------------------------|
|--------------------|---------------------------------|---------------------------------|

| Scarred Trees | Scar Depth (cm) | Regrowth (cm) | Scar shape | Tree Species |
|---------------|-----------------|---------------|------------|--------------|
|---------------|-----------------|---------------|------------|--------------|

Description:

Features:

4.

| Number of features | Length of feature(s) extent (m) | Width of feature (s) extent (m) |
|--------------------|---------------------------------|---------------------------------|
|--------------------|---------------------------------|---------------------------------|

| Scarred Trees | Scar Depth (cm) | Regrowth (cm) | Scar shape | Tree Species |
|---------------|-----------------|---------------|------------|--------------|
|---------------|-----------------|---------------|------------|--------------|

Description:

Features:

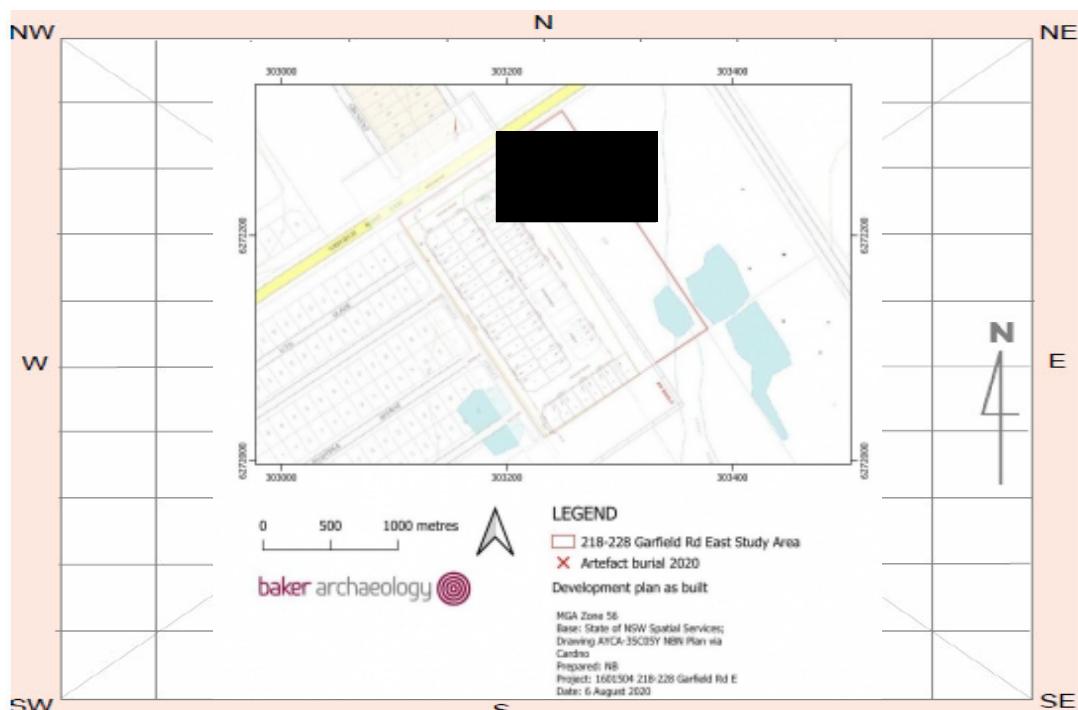
5.

| Number of features | Length of feature(s) extent (m) | Width of feature (s) extent (m) |
|--------------------|---------------------------------|---------------------------------|
|--------------------|---------------------------------|---------------------------------|

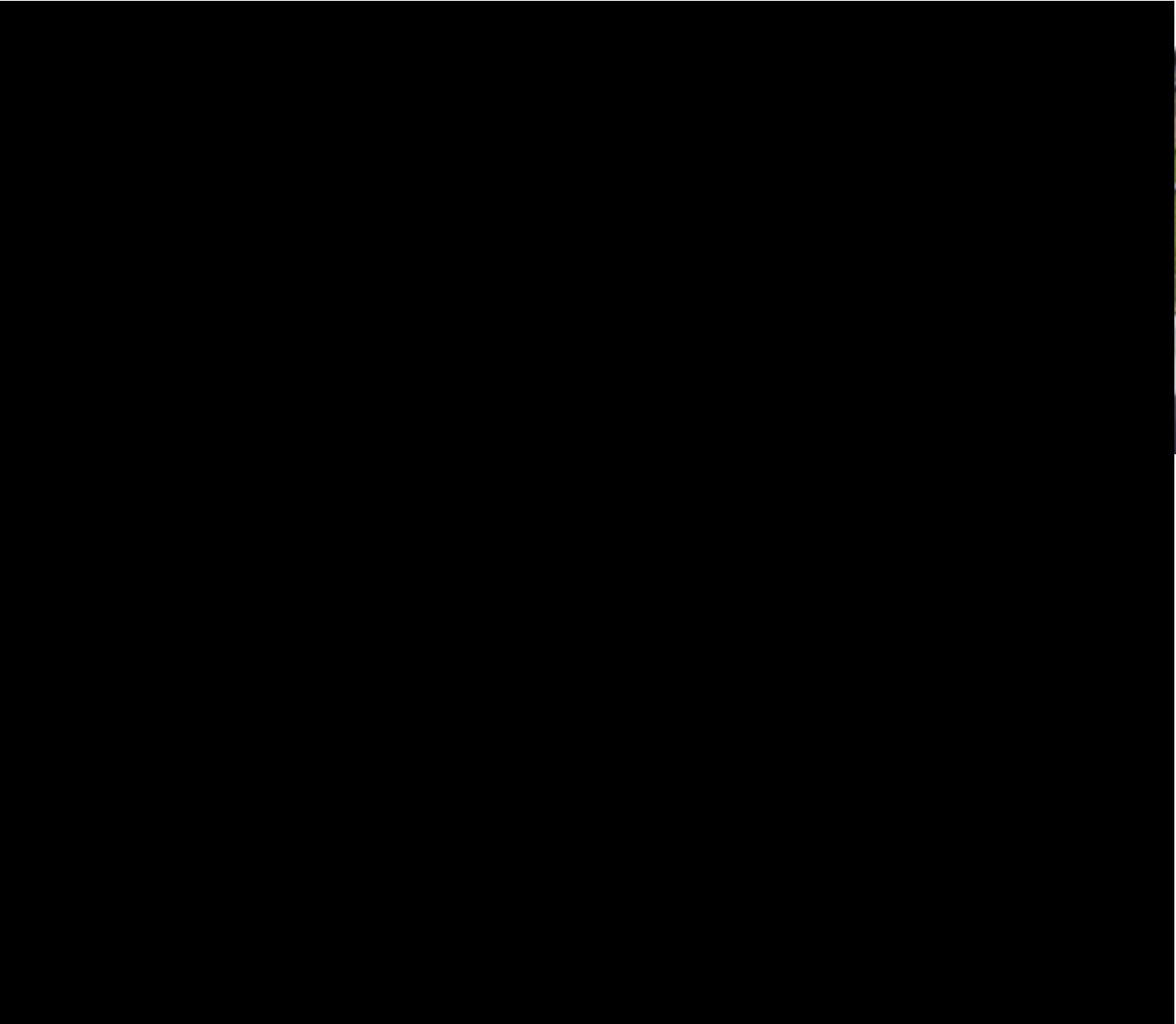
| Scarred Trees | Scar Depth (cm) | Regrowth (cm) | Scar shape | Tree Species |
|---------------|-----------------|---------------|------------|--------------|
|---------------|-----------------|---------------|------------|--------------|

Description:

Other Site Info:

Site plan

Site photographs



Site restrictions

Do you want to
Restrict this site?:

Gender General Location

Why is this site restricted?:

Further information contact

| | | |
|----------------------|----------------------|------------------------------|
| Title | Surname | First name |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Organisation: | <input type="text"/> | |
| Address: | <input type="text"/> | |
| Phone: | <input type="text"/> | E-mail: <input type="text"/> |



Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville 2220 NSW

AHIMS site ID: 45-5-5423

Date recorded: 05-01-2021

Site Location Information

Site name: Clarke AS3

Easting: [REDACTED] Northing: [REDACTED] Coordinates must be in GDA (MGA)

Horizontal Accuracy (m): 5

Zone: 56

Location method: Non-Differential GPS

Recorder Information

(The person responsible for the completion and submission of this form)

| Title | Surname | First name |
|---------------|------------------------------------|--|
| Ms. | Norfolk | Jennifer |
| Organisation: | [REDACTED] | |
| Address: | 101 Sussex Street, Sydney NSW 2000 | |
| Phone: | 0466312832 | E-mail: jennifer.norfolk@ecoaus.com.au |

Site Context Information

Land Form Pattern: Undulating Plain Land Use: Pastoral/Grazing

Land Form Unit: Stream Bank Vegetation: Cleared

Distance to Water (m): 10 Primary Report: [REDACTED]

How to get to the site:
[REDACTED]

Other site information:
[REDACTED]

Site location map



Site contents information

open/closed site:

Site condition:

Features:

| | Number of features | Length of feature(s) extent (m) | Width of feature (s) extent (m) | Scar Depth (cm) | Regrowth (cm) | Scar shape | Tree Species |
|-------------|--------------------------------|---------------------------------|---------------------------------|----------------------|----------------------|----------------------|----------------------|
| 1. Artefact | <input type="text" value="3"/> | <input type="text" value="10"/> | <input type="text" value="10"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Description:

two silcrete artefacts and one fine grained siliceous were excavated from two test pits, located in contest soils below a layer of introduced fill

Features:

| | Number of features | Length of feature(s) extent (m) | Width of feature (s) extent (m) | Scar Depth (cm) | Regrowth (cm) | Scar shape | Tree Species |
|----|----------------------|---------------------------------|---------------------------------|----------------------|----------------------|----------------------|----------------------|
| 2. | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Description:

Features:

3.

Number of
featuresLength of
feature(s)
extent (m)Width of
feature (s)
extent (m)Scarred Trees
Scar Depth (cm)
Regrowth (cm)

Scar shape Tree Species

Description:

Features:

4.

Number of
featuresLength of
feature(s)
extent (m)Width of
feature (s)
extent (m)Scarred Trees
Scar Depth (cm)
Regrowth (cm)

Scar shape Tree Species

Description:

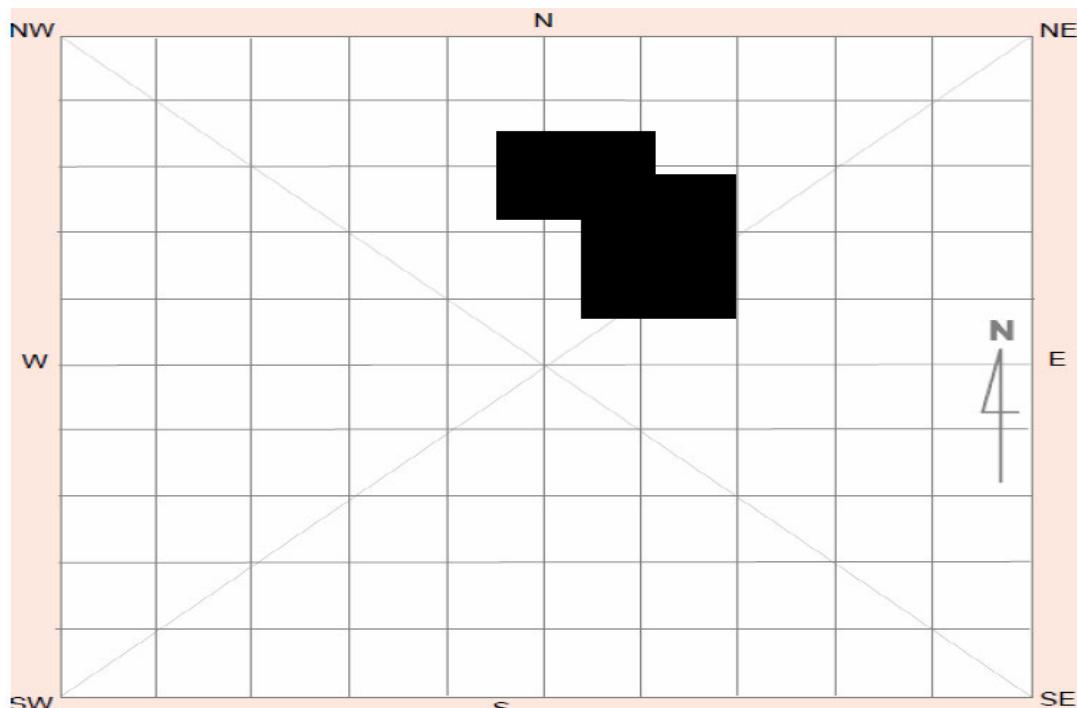
Features:

5.

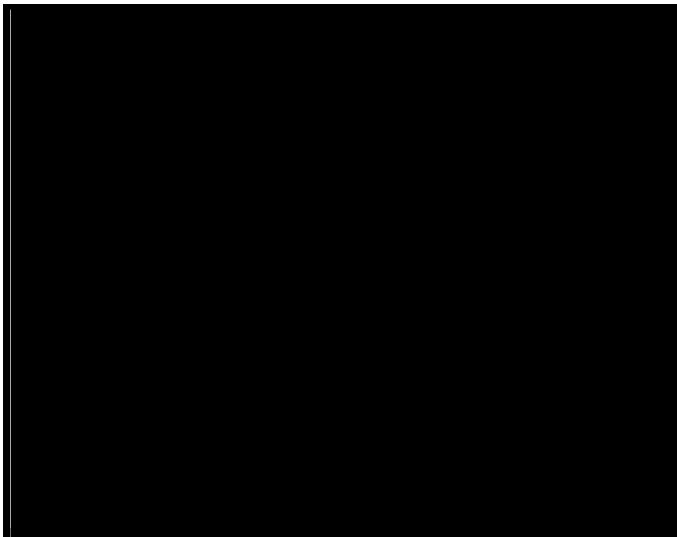
Number of
featuresLength of
feature(s)
extent (m)Width of
feature (s)
extent (m)Scarred Trees
Scar Depth (cm)
Regrowth (cm)

Scar shape Tree Species

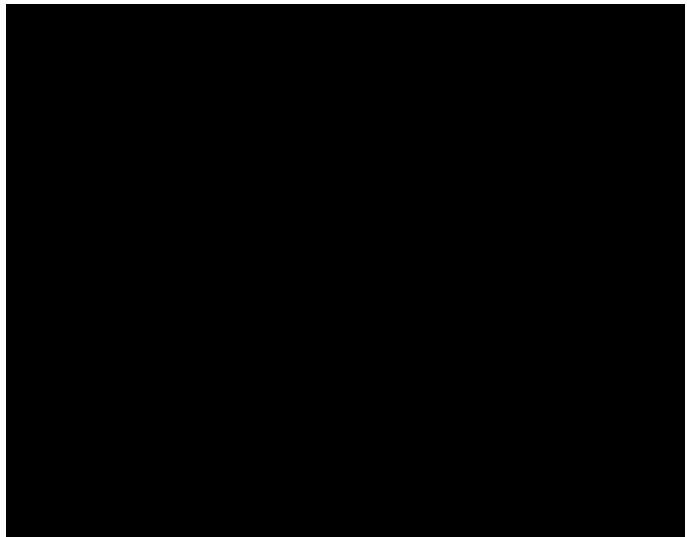
Description:

Other Site
Info:
Site plan

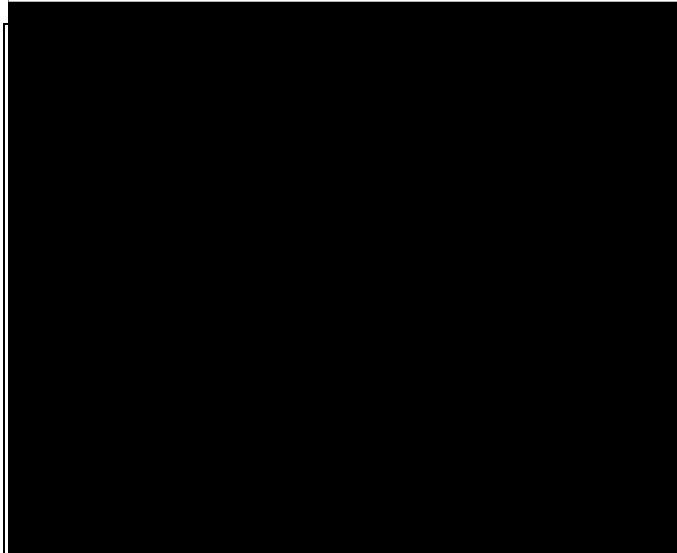
Site photographs



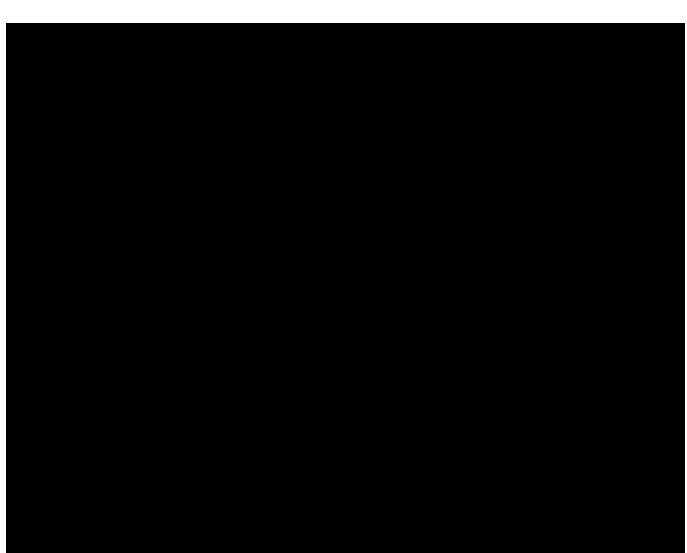
Description:



Description:



Description:



Description:

Site restrictions

Do you want to
Restrict this site?:

Restriction type: Gender General Location

Why is this site restricted?:

Further information contact

| | | |
|------------------------------------|-------------------------------|----------------------------------|
| Title: <input type="text"/> | Surname: <input type="text"/> | First name: <input type="text"/> |
| Organisation: <input type="text"/> | | |
| Address: <input type="text"/> | | |
| Phone: <input type="text"/> | E-mail: <input type="text"/> | |

Appendix C – Basic Heritage induction sheets

Cultural Heritage Induction Sheet

ECO LOGICAL AUSTRALIA PTY LTD
ABN 87 096 512 088
www.ecoaus.com.au



Aboriginal cultural heritage and archaeology

Heritage places and items are valued by our local community, our state, our country and even the world. Heritage consists of those things we have inherited and want to keep and pass on to future generations.

Aboriginal cultural heritage consists of places, stories and items that were used by Aboriginal people in the past and are important to Aboriginal and non-Aboriginal people in the present. Aboriginal cultural heritage sites include;

- Shell middens
- Rock shelters
- Rock paintings
- Rock engraving
- Stone artefacts including open camp sites and isolated finds
- Axe grinding grooves
- Bora or ceremonial ground
- Burials
- Scarred Tree
- Stone or ochre quarry
- Fish trap
- Stone arrangement

The most common Aboriginal objects that will be found on this site will comprise of stone artefacts.

Management

365-405 Denham Court Road was surveyed archaeologically tested in 2018 by ELA. 35 flaked lithic artefacts were recovered from 19 test pits representing a very low level density. The site was found to be extensively disturbed and artefacts were assessed as having low scientific and archaeological significance. An Aboriginal Heritage Impact Permit (AHIP) dated 19 March 2019 (AHIP number C0004682 duration 5 years) now covers the entire property. No areas of archaeological conservation remain on the property. All artefacts can be destroyed under this AHIP. Refer to conditions of the AHIP.

Human Remains

In the unlikely event that suspected human remains are found all work must cease, the site should be secured and the NSW Police should be notified to advise on a course of action. If remains are found to be archaeological, the OEH should be contacted to assist in determining appropriate management.

Contact details:

Karyn McLeod
Principal Archaeologist, Eco Logical Australia
Ph: (02) 9259 3728
E: KarynM@ecoaus.com.au

Aboriginal Archaeological items



Rock engraving



Stone blades



Grinding grooves



Axe head

Note: Penalties exist under the Act for non-compliance.

Cultural Heritage Induction Sheet



Historical heritage and archaeology

Heritage places and items are valued by our local community, our state, our country and even the world. Heritage consists of those things we have inherited and want to keep and pass on to future generations.

Historical heritage usually consists of places, structures and items that were used by people in the past. It can include:

Buildings - including anything from a timber slab hut to a stone mansion, church, shop, school, farm, military installations, industrial items such as kilns and factories.

Archaeological sites - relics such as artefacts, wells, building remains, post holes, fences, paths, yards, drains.

Works -such as bridges, streets and towns, industrial and infrastructure items, quarries and mines.

Landscapes - rural landscapes, historic gardens, cultural plantings, fence lines and property boundaries.

Movable items – such as furniture and household items, machinery, tools, personal items, farming equipment.

Stories and oral history.

Ship wrecks.

Management

There are no historical archaeological sites in the study area and background research demonstrates that the land was vacant until construction of the current houses. The land was formerly part of a much larger pastoral property. There is low to no potential for significant historical archaeological features or deposits to be present on the site.

All historical archaeology is protected by the *Heritage Act 1977*. If historical relics or items are discovered during works, works must cease in the affected area and ELA can be contacted to identify remains, advise on the appropriate management steps and assist with any approvals if required. If the find is considered to be significant, the Heritage Division of the Office of Environment and Heritage (OEH) will also be contacted.

Contact details:

Karyn McLeod
Principal Archaeologist, Eco Logical Australia
Ph: (02) 8536 8673
E: karynm@ecoaus.com.au

Examples of historical archaeology that may be present on the site.



Early stone lined well



Brick and stone foundations



Variety of ceramics



A range of bottles

Note: Penalties exist under the Heritage Act for non-compliance.



eco
logical
AUSTRALIA
A TETRA TECH COMPANY



1300 646 131
www.ecoaus.com.au