



GLENDENNING ROAD DATA CENTRE (SSD-73761707)

*2 Glendenning Road, Blacktown, NSW*

# Historical Archaeological Research Design and Excavation Methods

*Final | November 2024*

Prepared for LCI Consultants

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Cover design: Cake

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### *Document controls*

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<b>Local Government Area:</b>	Blacktown LGA
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### *Acknowledgement of Country*

Virtus Heritage acknowledges the Traditional Custodians of the land on which this project was undertaken and pays respect to Elders past, present and emerging.

### *Content Warning*

Aboriginal and Torres Strait Islander people are warned that this publication may contain names and images of deceased people, descriptions of traumatic historic events and parts of Country that have been impacted by development.

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This report is limited to the project area as defined in this report on Figure 1 as the area of assessment. It does not include any impacts outside of this project area boundary for consideration for mitigation and management.

Information contained in the Report is current as at the date of the Report and may not reflect any event or circumstances which occur after the date of the Report.

All queries related to the content, or to any use of this report must be addressed to Dr Mary-Jean Sutton.

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## Definitions

Abbreviations	Description
HAA	Historical Archaeological Assessment
HNSW	Heritage NSW
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
RAP	Registered Aboriginal Party
ARDM	Archaeological Research Design and Methodology
SHI	State Heritage Inventory
SHR	State Heritage Register
SSD	State Significant Development
The Burra Charter	The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance, 2013 (Australia ICOMOS 2013)

# 1. Introduction

LCI Consultants has engaged Virtus Heritage Pty Ltd to prepare the following historical archaeological research design and excavation method (ARDM) for a proposed State Significant Development Application (SSD-73761707) for a data centre at 2 Glendenning Road, Glendenning NSW 2761 (the subject site). In October 2024, Virtus Heritage compiled the *Glendenning Road Data Centre Historical Archaeological Assessment* (HAA), to inform a broader Environmental Impact Statement (EIS) for the development application, in line with industry specific Planning Secretary's Environmental Assessment Requirements (SEARs).

The HAA determined that there are no statutory or non-statutory listed heritage items in, or in the vicinity of, the subject site. However, archival research determined that there is potential for historical archaeological resources in the project area relating to the following three items:

- A potential workers' cottage built prior to 1894
- A potential workers' cottage, built c.1909
- The Owen farm (possible poultry producer) constructed c.1920 onwards.

These three sites were assessed for significance and found to meet the threshold for relics; the HAA found that these three items were at risk of being adversely impacted by the proposed works and that mitigation measures were necessary to meet the current regulatory requirements of the *Heritage Act 1977* (Heritage Act).

As part of these mitigation measures, an archaeological test excavation will be carried out to determine the presence and integrity of relics. This will be done under a section 139(4) excavation permit exception, as defined by the Heritage Act. Exception 2(d) allows for the archaeological testing of relics of local heritage significance, with the condition that State-significant relics will not be impacted. Archaeological test excavation is the process of verifying and assessing site conditions to establish the integrity, extent, and significance of relics and to determine appropriate further action.

This report provides one aspect of the necessary ARDM to ensure the test excavation meets regulatory requirements. As such, it has been written to fulfill the guidelines stipulated by Heritage NSW in '*Relics of local heritage significance: A guide for archaeological test excavation*' (2022). In addition to this report to guide the archaeological test excavation, the archaeological activities will also be recorded on the 'Section 139(4) Exception Record of Use Form' (Attachment A).

A description of the proposed works and their impact on archaeological resources is provided in the Virtus Heritage HAA. This ARDM should be read in conjunction with the HAA.

## 1.1 SITE LOCATION

The subject site is located at 2 Glendenning Road, Glendenning and is legally described as Lot 2 DP1137162 (Figure 1). It is zoned E4 General Industrial under the *Blacktown Local Environmental Plan 2015* (LEP).

The subject site comprises a total area of 10.44 ha and exhibits a primary frontage to Glendenning Road at the western boundary for approximately 295 m. A secondary frontage to Woodstock Avenue is located along the southern boundary, for a length of approximately 335 m.

The subject site comprises three (3) existing warehouse buildings that undertake various operations, including storage and logistics and a transport vehicle centre. The buildings are positioned toward the Glendenning Road frontage and cover approximately one half of the total area of the lot. The remainder of the lot to the rear is vacant and contains a mix of grass, native vegetation and a sparse covering of trees. A



patch of mature native vegetation exists along the southern boundary, which is identified as possessing outstanding biodiversity value. An established landscaping strip is located along the Glendenning Road frontage, providing some screening of the existing buildings.

For the purposes of the test excavation, the historical archaeological works area (Figure 2) is defined based on the following:

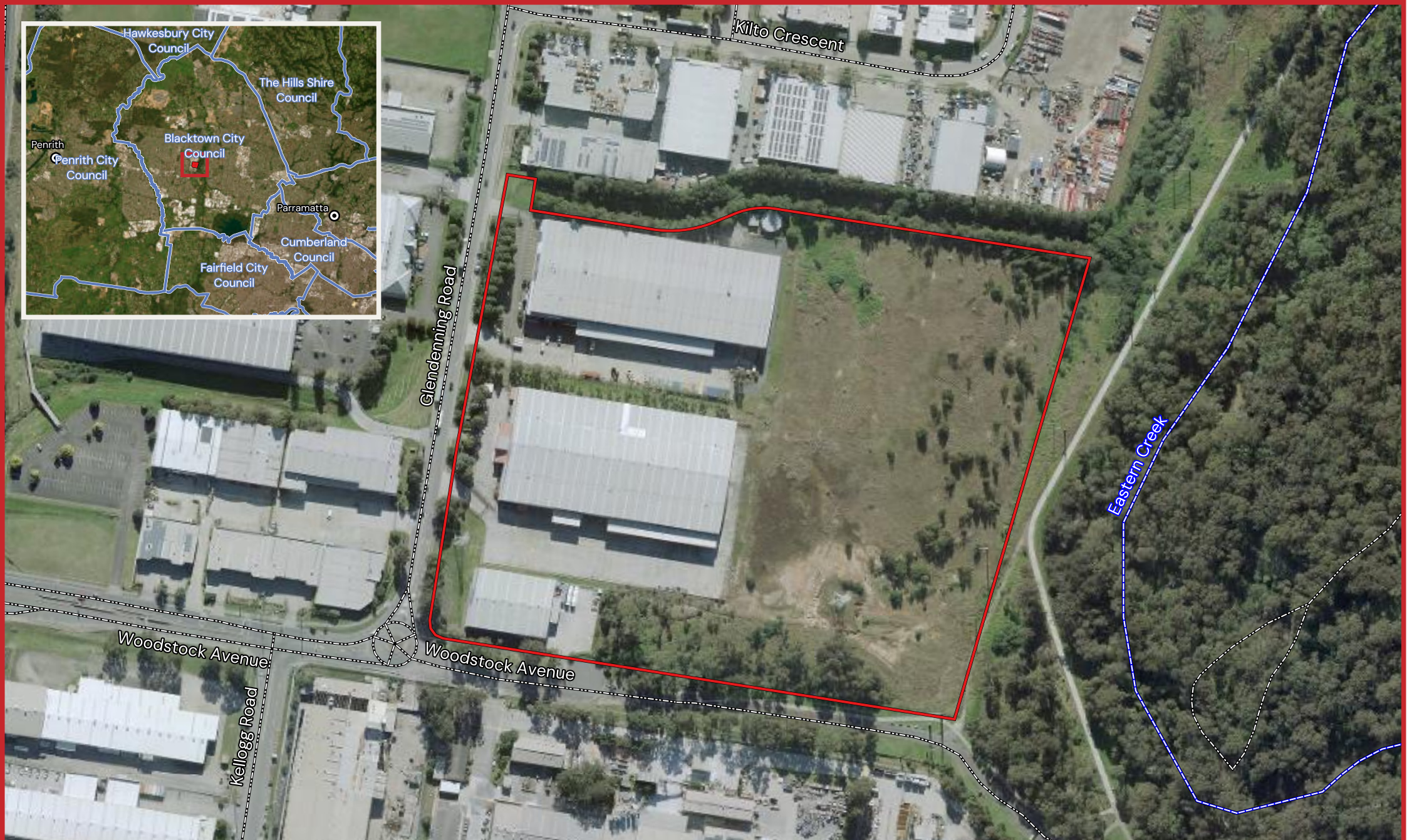
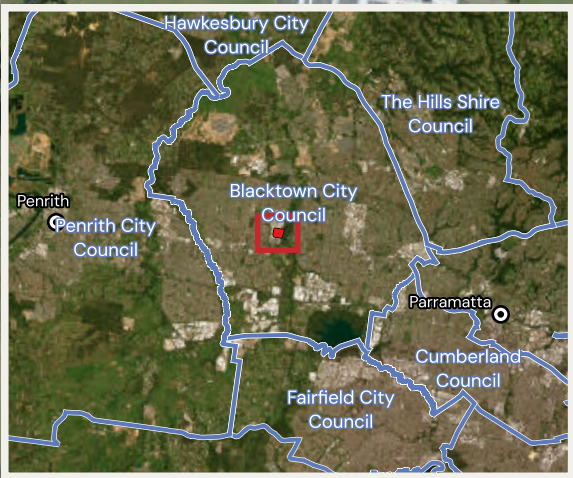
- The works area: that is, the area of potential impact
- Predicted historical archaeological sites or features.

## 1.2 A I M S

The aims of this ARDM are to:

- Mitigate the impacts of the proposed works on the potential archaeological resource and heritage values in the subject site.
- Provide an appropriate excavation method to detect, assess and record the selected areas of potential archaeological resource to inform the necessity for subsequent management.

The ARDM has been developed based on the likely impacts of the proposed project as provided by LCI Consultants and our current understanding of the archaeological potential of the subject site.

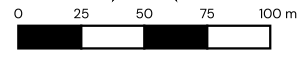
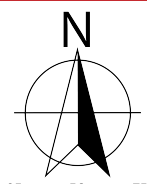


518 Glendenning Road Data Centre  
 Blacktown, NSW  
 Figure 1. Project Area and Locality

Author: Shaun Sewell  
 Date: 05/11/2024  
 Scale: 1:3000 @ A4  
 Datum: GDA2020 / MGA zone 56  
 Source: ©Department of Customer Service - Spatial Services 2024

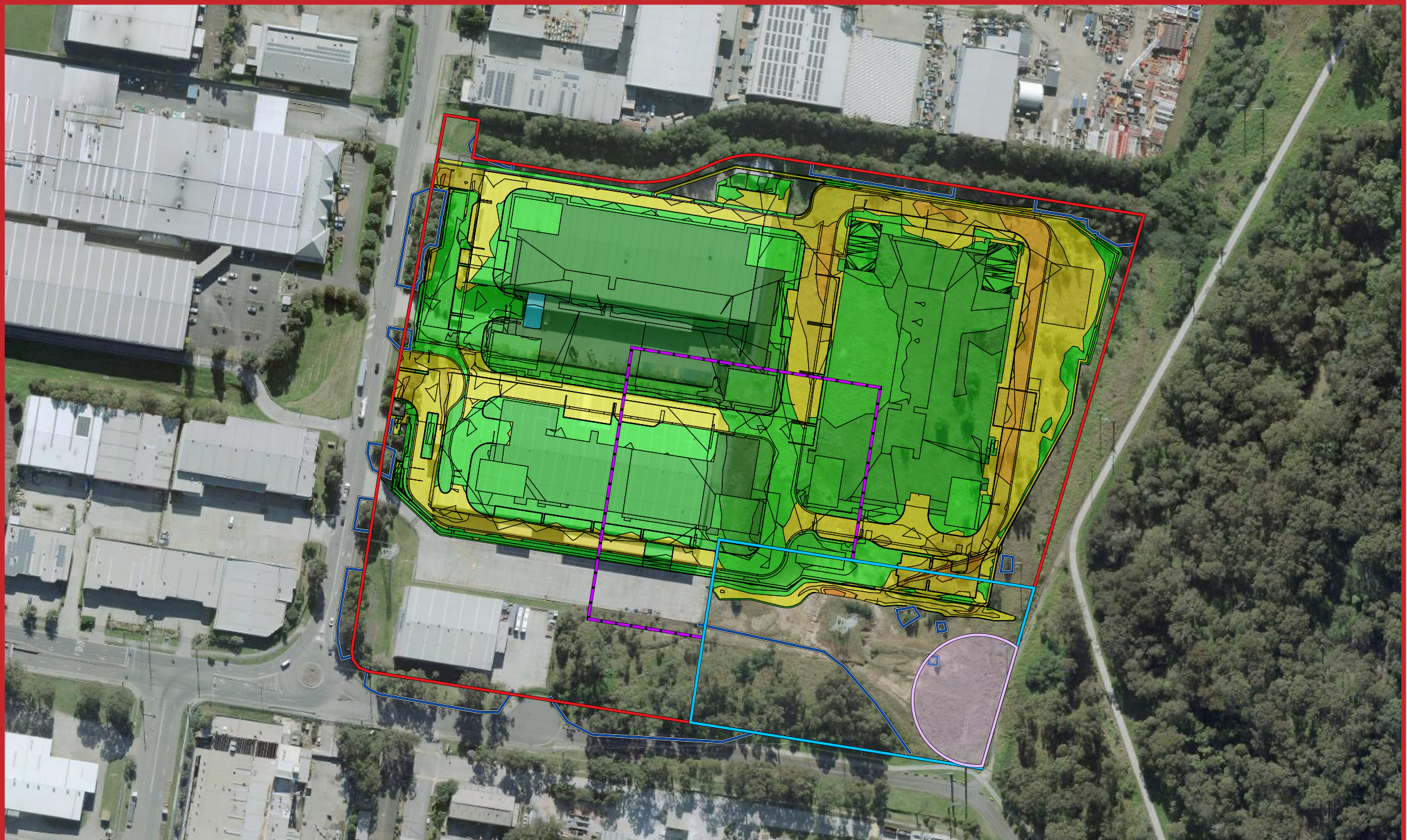
Legend

- Project Area
- Roads
- Local Government Areas
- Cities
- Watercourses



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Maps and figures contained within this document may be based on third party data, may not be to scale and are intended for use as a guide only. Virtus Heritage does not warrant the accuracy of such maps or figures.



518 Glendenning Road Data Centre  
 Blacktown, NSW  
 Figure 2. Project Impacts and Historic Heritage Potential

Author: Shaun Sewell  
 Date: 05/11/2024  
 Scale: 1:2500 @ A4  
 Datum: GDA2020 / MGA zone 56  
 Source: Capability Green Consulting (2024), ©Department of Customer Service – Spatial Services 2024

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**Legend**

- Project Area
- Owen Family House and Poultry Sheds (Post-1918)\*
- Possible Second Cottage (Post-1909)\*
- Workers Cottage (Pre-1894)\*

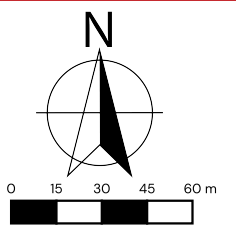
**Amount of Cut or Fill**

- Arborist Proposed Fencing
- 0m to -0.5m
- 0m to 0.5m
- 0.5m to 1m
- 1m to 1.5m
- 1.5m to -2m
- 1m to -1.5m
- 0.5m to -1m
- 1.5m to 2m
- 2m to 2.5m
- 2.5m to 3m
- 3m to 3.5m

\*Indicative Area only. Possible deposits related to these sites are likely to be found outside of the indicative boundaries shown.



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## 2. Historical background

### 2.1 INTRODUCTION

The HAA provides a detailed historical background for the project area and a significance assessment for potential archaeological resources. The report was based on extensive historical research, including review of archival records, historical aerial photographs, historical land title searches, review of parish maps and relevant heritage studies. This section provides a brief historical summary of the project area, with relevant phases of occupation.

### 2.2 SUMMARY

In 1802, Governor King reserved 38,728 acres of land including Rooty Hill, for use as a stock run to build up the colony's supply of livestock. By 1815, The Rooty Hill and surrounds had been cleared for the grazing of cattle and crop raising as part of the operations of the Government stock farm and station residence (Knox & Partners 2003: 7). As the surrounding land was granted away during the administrations of governors Macquarie and Brisbane, the stock reserve was reduced in area. In December 1828, Governor Darling closed the Rooty Hill government farm and transferred the land, by then reduced to about 8,138 acres (3,293 hectares (ha)) to the Trustees of the new Church and School Corporation. It continued to be used for grazing (Knox & Partners 2003: 15).

The new Corporation proved unviable and was abolished in 1832. The land reverted to the government and was leased for grazing purposes for several decades until it was offered for sale in 1865 (Knox & Partners 2003:15). Industrialist and politician Walter Lamb purchased extensively from the 1860's and 1870's sales after retiring from mercantile affairs and turning to pastoral interests. According to lands records, a 165-acre (67 ha) plot of crown land, which encompasses the current project area, was sold to Walter Lamb on 13 May 1872. He was listed as a grazier at the time and paid £165 for the property (Vol. 152, Fol. 161).

Lamb bred shorthorn cattle on his Woodstock estate at Rooty Hill until the drought of 1875–76 forced him to sell his horses and cattle and turn to fruit-growing and canning. Walter Lamb planted his Woodstock estate with fruit trees following the drought and fruit growing was to become one of the principal activities in Rooty Hill and Plumpton by the 1880s (Knox & Partners 2003: 16). Despite his prominent position as a successful businessman, Lamb's fortunes took a downturn in the depression of 1893 and the Woodstock cannery was abandoned (Knox & Partners 2003: 22–23).

The allotment would soon become part of a huge swathe of Lamb land to undergo subdivision c. 1894, with the proposed subdivision of 'Homestead Farm' into 10-acre farm and orchard blocks. A subdivision advertisement from 1894 provides the earliest depiction of a structure located in or near the project area (Figure 3). A 'cottage' is depicted on the creek side of Lot 60, and this is consistent with the print advertisement which states, 'several of the lots have cottages on'. The cottage may have been a caretaker's cottage or home to one of the many families who maintained orchards in the area to supply Lamb's cannery.

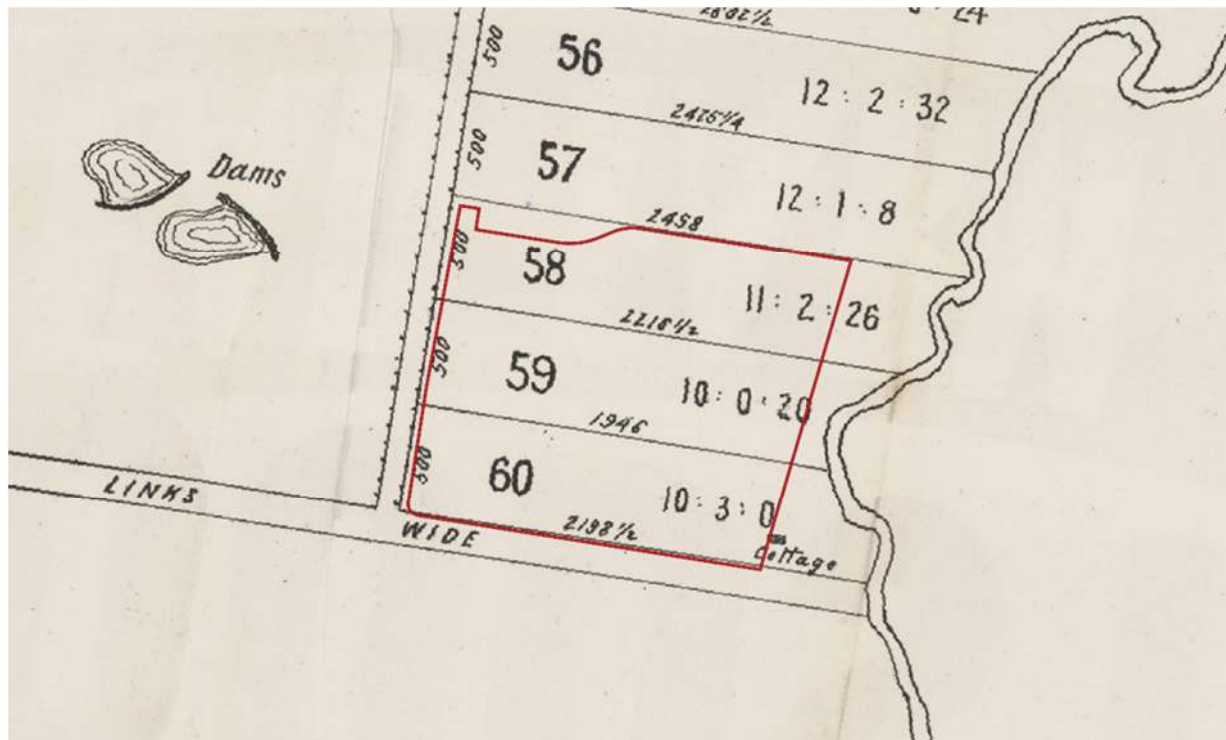


Figure 3: Woodstock Homestead Farm Subdivision (c.1894) advertisement showing a cottage in the southeastern portion of Lot 60. Project area depicted in red.<sup>12</sup>

The subdivided lot changed hands several times in the early twentieth century, which is detailed in the HAA. The eastern portion of Lot 60 (where the cottage was) was transferred to Danish immigrant farmer, Mathew Johnson (Johanson), in 1909 (Vol.1980, Fol.93). His will states that he owned about 5 acres (2 ha) of land on Woodstock Avenue, which included a cottage. It is not known if the cottage Johnson is referring to in his will is the same cottage depicted in the 1894 subdivision map, or if it was a newer dwelling, which he built sometime after 1909 when he acquired the land. There is a possibility that two cottages were on the eastern portion of Lot 60.

By the early 1920s, Hugh Williams Owen owned Lot 58, Lot 59 and the western portion of Lot 60. It is highly likely that the Owen farm was used for commercial poultry farming, as this was the main agricultural activity at Rooty Hill and Plumpton from around 1912, when the profitability of fruit growing declined. By 1930, poultry farming was the most common occupation in the Rooty Hill district (Knox & Partners 2003: 19).

<sup>1</sup>J. M. Cantle, *Woodstock Homestead Farm subdivision, Rooty Hill* (n.d.). Blacktown Memories, Retrieved August 21, 2024.

### 2.3 RELEVANT HISTORICAL PHASES OF OCCUPATION

The following table provides an overview of the relevant phases of occupation applicable to this test excavation, and the associated archaeological potential. As this test excavation is concerned with historical archaeology, pre-1788 Aboriginal Cultural Heritage has not been included in the phasing. There is no evidence of early interaction between the Indigenous community and colonisers/settlers within the project area, which would trigger requirements under the *Heritage Act 1977*.

*Table 1: Phases of historical occupation and archaeological potential in the project area*

Phase	Date/Period	Description	Archaeological Potential
Phase 1	<b>1788 – 1802</b> British exploration of area.	Exploration by British officers as efforts were made to expand the colony and open-up the interior.	<b>Low potential</b>
Phase 2	<b>1802 – 1827</b> Operation of the Government Farm at Rooty Hill.	38,728 acres (15,673 ha) of land put aside for the purpose of pasturage for government stock. Rooty Hill was one of three large allotments for this purpose. The Rooty Hill government farm included a residence for the superintendent and the principal overseer.	<b>Low Potential</b> – Structures relating to the Government Farm, including the overseer's house and associated buildings were located approximately 1.6 km south-west of 2 Glendenning Road.
Phase 3	<b>1827 – 1865</b> Land transferred to the Church and School Corporation and then leased to private individuals.	Land was divided up into smaller allotments for agricultural leases. Would have been used for farming, predominantly grazing.	<b>Low Potential</b> – the project area is situated in a portion of land leased by Edward Western, a prominent land holder in the area. There is no indication in the historical record of structures existing in the project area during this time.
Phase 4	<b>1865 – 1894</b> Church and School Estate is subdivided and auctioned in broad acreage allotments in the 1860s and 1870s.	The project area is part of 2,321 acres (939 ha), purchased by Walter Lamb in 1872. From 1872 until approximately 1894, the project area was part of Walter Lamb's grazing lands and then, later, part of his property for orcharding to supply his fruit cannery at Plumpton.	<b>Moderate Potential</b> – an 1894 subdivision map depicts a cottage bordering the project area (Figure 3). This was likely a workers cottage associated with Walter Lamb's orcharding operations and there is medium potential for relics associated with this structure.
Phase 5	<b>1894 – 1950</b>	Lamb's Woodstock Homestead Estate was	<b>Low Potential</b> for relics and foundations relating to the

Subdivision of Walter Lamb's Woodstock Homestead Estate. Small-scale agricultural use.

subdivided in 1894, with the project area divided into three lots (58, 59 and 60). The first of these three lots sold in 1901. The lots changed hands numerous times in the 1910s and 1920s. By the 1920s, Hugh Owen owned most of the land in the project area and a small-scale family farm was established, most likely producing poultry.

Owen family farm in the centre of the project area, due to significant site disturbance.

**Moderate Potential** in the southeastern portion of the project area for relics relating to a cottage c.1909, however this cottage may have been the same cottage depicted in the 1894 map.

#### 2.4 ARCHAEOLOGICAL POTENTIAL SUMMARY

It is unlikely that archaeological resources exist at the site relating to Phase 1 to 3. There is no indication in the historical record that specific features relating to the Government Farm, or the Church and School Estate existed in the subject site. Taking into consideration the general disturbance across the site, and the subsequent historical periods of small-scale agriculture, the potential for relics relating to Phase 1 to 3 would be **low to nil**.

There is moderate potential for archaeological evidence relating to Phases 4 and 5. Stone or brick foundations relating to the c. 1894 cottage may survive, alongside evidence of wells, rubbish pits, bottle dumps, post holes and other items relating to agriculture and domestic life in a worker's cottage in the late nineteenth century. Such structures do not appear to have been well researched in the Rooty Hill area; therefore, such finds would have research potential. If the c.1894 cottage is, in fact, the same cottage referred to in the 1928 will of Mathew Johnson, then there is the potential for archaeological elements relating to the continuous occupation of a nineteenth century workers' cottage and at least 40 years of small-scale farming on the project area.

Alternatively, if the 1928 will of Mathew Johnson is referring to a different cottage on the eastern portion of Lot 60, then there is moderate potential across that area for artefacts relating to a cottage constructed post-1909. Archaeological elements relating to the farming life of an immigrant family could be expected.

In relation to the Owen family farm, it is unlikely that significant archaeological resources would survive from this phase of occupation due to the substantial earthworks and construction which have occurred at the subject site. Footings, services and building materials relating to the demolition of the weatherboard cottage and the poultry sheds may survive; however, these items are unlikely to have research potential.

#### 2.5 GEOTECHNICAL REVIEW

In 2023, AECOM completed a suite of environmental reports, including a Geotechnical Desktop Review and Environmental Site Assessments (ESA) (Phases 1 and 2). The Phase 1 ESA evaluated prior geotechnical investigations at the site, including a program of soil sampling from 25 test pits excavated in 2022, as part of a detailed site investigation (DSI). These pits were excavated in the eastern, cleared portion of the site to a maximum depth of 2 m below ground surface. This investigation found shallow fill materials comprising brown silty clays with root, road base and ironstone gravel inclusions between 0.2–0.5 m. Deeper fill materials were noted to comprise brown–grey silty clays with brick, concrete and sandstone gravels, roots and plastic debris inclusions between 1.4–2.0 m (AECOM 2023b: 13). The Geotechnical Desktop Review found the fill present on site is associated with previous site construction and earthworks; however, the

lateral extent, depth, and nature of the fill from recent geotechnical boreholes is undulating and not clear (AECOM 2023a: i). LCI Consultants has advised that approximately three metres of fill is present across the site, but the exact placement and nature of the fill has not been determined.

The Phase 2 ESA included the excavation of 11 stockpiles and nine test pits for soil investigation. Stockpiles included a range of dumped materials in the eastern portion of the site, such as building waste (tiles/bricks), gravel, plastics, concrete and timber, with asbestos found in one of the stockpile samples. The general subsurface soil profile encountered during test pitting spanned fill natural soils (sandy clays and clays) to fill materials (silty sands and reworked clays). General results from this program of test pitting are shown in Table 2.

*Table 2: Generalised lithology from Phase 2 ESA test pitting (AECOM 2023c:15)*

<b>Depth (m)</b>	<b>Lithology</b>
0.0 – 0.2	Sandy clay: brown, soft, dry, low plasticity
0.0/0.2 – 1.5	Fill: brown silty sands and sands with gravels. Brown reworked clays, low plasticity. Anthropogenic inclusions (bricks, glass, timber, tiles) noted in fill
0.0/0.7 – 2.0	Clay: brown to red with grey/red mottle, stiff, dry to moist, low plasticity, gravel inclusions

### 3. Relevant archaeological investigations

When developing an ARDM, it is important to analyse similar archaeological investigations which are thematically and/or geographically relevant to the project area. A review of documents obtained from the Heritage NSW library, University of Sydney archaeology grey literature collection, and online searches, was undertaken to obtain copies of previous archaeological investigations from the general Blacktown area, to assist with this ARDM. The findings from the following reports provide an indication of the possible archaeological resources which may be found in the subject site (Table 3).

*Table 3: Review of previous archaeological investigations in the Blacktown area*

Investigation and Author	Locality	Findings
The Rooty Hill and Morreau Reserve Conservation Plan  <i>Knox &amp; Partners, 2003</i>	Blacktown, NSW	The researchers state that a variety of undocumented archaeological features and deposits associated with the earliest periods of Rooty Hill's European history could occur, including cess pits, wells and deposits such as rubbish pits. Agricultural features could include fence-lines, ground furrows and introduced plantings. Features such as these are not usually mapped on historical plans and can be found in lands associated with cottages, homesteads and houses.
Archaeological Investigation Stage 1 Subdivision Cavenah Way  <i>Wendy Thorpe, 2007</i>	Kellyville, NSW	Nine kilometres northeast of the current project area, an archaeological investigation was undertaken at a site associated with the state-significant Merriville House, the location of the state's first tobacco crops. Small remnants of post and rail fences were found as well as three post holes. A disassembled farm wagon was also uncovered.
Former Government Depot, Dunsmore Street, Rooty Hill – Final Archaeological Report  <i>Austral Archaeology, 2023</i>	Rooty Hill, NSW	Austral's study is relevant to the current project area, as 2 Glendenning Road was once part of the extensive lands of the Government Farm in the early nineteenth century. Austral undertook test excavations which identified archaeological potential at the Dunsmore Street site, especially related to the remains of the former overseer's house and associated outbuildings. A trench inside the house structure exposed a brick box drain and brick paving. A trench in the garden area recorded the general presence of nineteenth century artefacts including ceramic fragments.
Excavations at the Workers' Cottages, Barrack Lane, Parramatta  <i>Wendy Thorp, 1991</i>	Parramatta, NSW	There are few comparative examples of workers cottages which align with the time-period of the cottage at 2 Glendenning Road (c.1872-1894). Thorp carried out an excavation of a group of mid-nineteenth century workers cottages located in Barrack Lane, Parramatta. The only nineteenth century feature uncovered was a well, constructed from hand-formed bricks to a depth of 3 m. A line of reused bricks formed the foundation of a former fence.



Investigation and Author	Locality	Findings
Augusta Street Warehouse and Distribution Centre Blacktown – Statement of Heritage Impact  <i>Coast History and Heritage, 2023</i>	Blacktown, NSW	This site had also been part of the Church and School Estate in the early nineteenth century. This assessment predicted low potential for archaeological relics relating to the Church and School Estate to survive in the project area due to the disturbance that had occurred during subsequent development of the site. Similarly to the subject site, from the 1870s, the Augusta Street site was used for small scale agriculture including market gardening, poultry and pig farming and orchards.

## 4. Research Design

This ARDM has been devised after a review of the background research contained in the HAA, which was drawn from numerous sources including the NSW State Library, Blacktown Memories online collection, the State Archives and Trove online newspaper resources.

### 4.1 RESEARCH QUESTIONS

The following research questions have been developed, taking into consideration the background history of the site, similar archaeological investigations in western Sydney (Table 3) and the archaeological potential determined in the HAA. Additionally, the research questions follow the guidelines set out in Heritage NSW's *'Relics of local heritage significance: A guide for archaeological test excavation'* (2022).

1. Do any historical structural remains (foundations, outbuildings, paths, fence lines, wells, drainage etc) relating to the former cottages and/or the Owen farm survive at the site?
2. Do any historical artefacts (bottles, pipes, ceramics, nails etc) relating to the historical occupants of the site survive?
3. When were these features or deposits created?
4. How do they fit in with the historical phasing of the site?
5. How do these relics compare to those from similar sites?
6. Does the significance of these relics indicate the need for a salvage or sampling excavation?

## 5. Excavation methods

To mitigate the impacts from the proposed works on the potential archaeological resource, as described in the HAA, the proposed methodology for a test excavation comprises the following stages:

- Stage 1: Mechanical sub-surface testing (under direct archaeological supervision)
- Stage 2: Manual excavation (if relics are identified)
- Stage 3: Post excavation analysis and reporting
- Stage 4: Archiving of artefacts in an appropriate repository (if required).

### 5.1 TEST EXCAVATION METHOD

The purpose of archaeological test excavation is to understand the level of sub-surface preservation of potential material culture. This would include relics associated with the former cottages and the Owen farm. To achieve this, test trenches will be mechanically excavated, with manual excavation to be employed if relics are detected. The archaeological test excavation program will be undertaken in accordance with the guidelines for test excavations under a section 139(4) excavation permit exception.

#### 5.1.1. *Stage 1: Mechanical Excavation*

The use of mechanical test trenching for subsurface investigation is designed to determine the extent and integrity of potential archaeological deposits. A Registered Aboriginal Party (RAP) representative will be in attendance during this process to monitor for Aboriginal Cultural Heritage.

Under the supervision of a qualified archaeologist:

- The first trench will be located where it is predicted that no archaeology survives for the purposes of excavating to the clay horizon to understand the natural stratigraphic sequence. Stepping, benching, or shoring of pits may be required to maintain integrity of the pit to depth.
- An excavator with a smooth-edged bucket will be used to scrape a series of 3 trenches approximately 2 m in width and approximately 5 m in length.
- If cultural layers/deposits/fabric are not uncovered, the trenches will be excavated (mechanically via scrapes) stratigraphically, until the sterile clay layer/bedrock (B/C horizon) is reached; this is to ensure that later fill/dumped deposits are fully removed over what may be cultural deposits.
- The location of the trenches will be surveyed, planned and illustrated. The exact location of the trenches will be demarcated by the excavation director/s.
- The test excavation process will be recorded using digital photography, to archival standards, and the final cross sections of each trench will be illustrated, noting any stratigraphy. A full site plan showing the location of all trenches and excavated features (if any) will be created.
- If the area selected for archaeological excavation is covered by spoil heaps, a bobcat or backhoe with a flat-edged bucket will remove it so that the natural ground can be reached. An archaeologist will monitor the spoil for any potential deposits, particularly redeposited Aboriginal objects (refer to the Aboriginal Heritage ARDM). Once the spoil heap is removed, mechanical scrapes (as detailed above) would be excavated in stratigraphic sequence, to a depth deemed sufficient for test excavation results by the excavation director.

If any artefacts or cultural features are identified, then Stage 2 manual excavation will be triggered. If no cultural features are identified in these test trenches, then investigations will cease.

### 5.1.2. *Stage 2: Manual (Hand) Excavation*

If relics are identified, mechanical excavation will be replaced by manual excavation, using the following method by qualified archaeologists:

- Hand clear to clarify what is archaeological in appearance and record the depths of the archaeological context
- Manually excavate a *limited* amount of the site, record and then bag. Artefacts will be bagged and labelled according to their context. To meet the objectives of a test excavation, the archaeologists will only excavate enough to understand the archaeological context of the site.
- Munsell analysis will be undertaken for each stratigraphic unit in each test trench.
- At least one section drawing will be completed for each test trench.
- If relics or archaeological features are encountered, there will be an option to use drone recording and photogrammetry to complement the more traditional methods of site recording such as drawings and photos.

If relics are found, the proponent's consultant archaeologist will notify the Heritage Council in accordance with section 146 of the Heritage Act. If relics of possible state significance are encountered, the test excavation will cease, and Heritage NSW will be notified. In this case, the area containing the relic or archaeological feature will need to be secured and works must be postponed, pending direction from Heritage NSW.

If the test excavation identifies that further archaeological work is required, e.g. a salvage excavation, then a section 140 excavation permit may be necessary.

### 5.1.3. *Stage 3: Post excavation analysis and reporting*

A short archaeological test excavation report will be produced following the test excavation, outlining the process undertaken and the results. If subsequent archaeological investigation is necessary, the archaeological test excavation report will be expanded to support an application for an excavation permit under section 140 of the Heritage Act.

If no further archaeological work is required, this report will be lodged with Heritage NSW and the local studies library relevant to the project area. As part of the report, section plans, photography, profiles and the results of analysis of salvaged artefacts and other materials will be summarised and the significance of these results interpreted against the research questions posed as part of this ARDM.

The report will include:

- Artefact report and artefact catalogue if applicable
- Photo log and images relating to test excavation phases
- Plans and context sheets
- All photography will meet archival recording standards

#### 5.1.4. *Stage 4: Archiving of artefacts in an appropriate repository (if required)*

If artefacts of local significance are located, the Blacktown & District Historical Society will be consulted regarding appropriate options for repository and/or display. This decision would be made in consultation with Heritage NSW and the general contractor at the conclusion of the post-excavation analysis.

## 6. Unexpected Finds

A heritage induction for onsite personnel will be provided to construction personnel and contractors prior to the commencement of the test excavation. The heritage induction will outline the archaeological excavation program and obligations. It will also include what to do in case of unexpected heritage finds during the works program after the archaeology team has left the site. Heritage 'toolbox talks' highlight the archaeological requirements for specific construction activities as required.

If an unexpected historical find is encountered during the works program, activities in the immediate area must cease and the archaeological feature or relic cordoned off. An archaeologist must be notified immediately, and a site visit would be undertaken as soon as practicable.

If unexpected finds which are Aboriginal objects are encountered, work in the immediate area will cease temporarily and the unexpected finds protocol will be enacted following the Virtus Heritage, Archaeological Research Design and Methodology for Aboriginal cultural heritage prepared for this project.

Excavations will cease if suspected human remains are encountered, and the area will be secured for the human skeletal remains protocol will be enacted. Based on previous archaeological research within the region, consultation date and previous land use history it is not predicted that burials will occur in the project area. If unexpected human remains are located during works:

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:

1. Do not further disturb or move these remains
2. Immediately cease all work at the location and within vicinity of these remains and ensure this location is secured and protected
3. Notify NSW Police immediately, who will contact the NSW Coroner to undertake an investigation
4. Notify (DPE's) Environment Line on 131 555 as soon as practicable and provide available details of the remains and their location
5. No work can recommence at the location, unless authorised in writing by Heritage NSW and NSW Police Corner, and in consultation with RAPs

If human remains are unexpectedly encountered and they are thought to be Aboriginal, all RAPs must be notified. Recording of Aboriginal ancestral remains must be undertaken by, or be conducted under the direct supervision of, a specialist physical anthropologist and other suitably qualified person. In cases of Aboriginal ancestral remains, the sensitivity and significance of Aboriginal ancestral remains must be acknowledged and respected and the wishes of the Aboriginal community must be the primary determinant of decisions made regarding the management of ancestral remains.

Archaeological reporting of Aboriginal ancestral remains must be undertaken by, or review by, a specialist physical anthropologist or other suitably qualified person, with the intent of using respectful and appropriate language and treating the ancestral remains as the remains of Aboriginal people rather than as scientific specimens.



An appropriately qualified archaeologist/anthropologist must be on call for all works.

## 7. Personnel and Timeframes

This test excavation will be carried out under the direction of a suitably qualified and experienced archaeologist to meet Heritage NSW's Excavation Director requirements for local heritage significance. At least two archaeologists will assist the Excavation Director. The Excavation Director will be on site during ground disturbing works as outlined in this proposed ARDM and would oversee the excavation of scrapes for identification and assessment of potential archaeological features and artefacts in situ, and if required, manual excavation of any features which may become exposed by the mechanical trenches.

It is estimated that the test excavation would take approximately 5 days to complete, with a personnel of 3 archaeologists, including the excavation director.



## 8. References

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