

Elizabeth Enterprise Precinct, Stage 1

Non-Aboriginal Statement of Heritage
Impact (SoHI)

Report to Mirvac Projects Pty Ltd

March 2025

Penrith LGA



 artefact

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EXECUTIVE SUMMARY

This Statement of Heritage Impact (SoHI) has been prepared by Artefact Heritage Services Pty Ltd (Artefact Heritage) on behalf of Mirvac Projects Pty Ltd (the proponent) to support an approval for a concept masterplan and Stage 1 development at 1669 –1732 Elizabeth Drive, Badgerys Creek as part of the Elizabeth Enterprise Precinct (EEP). Mirvac is seeking the approval for a concept masterplan under State Significant Development (SSD -19618251) provisions of the *NSW Environmental Planning Act 1974*.

On 15 June 2021 the Secretary's Environmental Assessment Requirements (SEAR 1295) was issued, by the Department of Planning, Industry and Environment (DPIE) which outlined the requirements for the Environmental Impact Statement (EIS) including a requirement to prepare a Statement of Heritage Impact (SoHI). Artefact Heritage Service Pty Ltd (Artefact Heritage) have been engaged by Mirvac to prepare the SoHI for the project to support the EIS for the SSDA (SSD-19618251).

The aim of this SOHI is to identify any heritage items and archaeological remains which may be impacted by the proposed works, determine the level of heritage significance for nearby heritage items, assesses the potential impacts to those items, and recommend measures for managing further archaeological research and test excavation. This SoHI will identify the SSDA scope of work and address all assessment conditions outlined in the SEARs issued for the project.

This SOHI is supported by the previous S139 Test Excavation Report (2019), Historical Archaeological Test Excavation Report (2020), and the S140 salvage Archaeological Research Design Report (ARD) (2020) These reports outline the results of previous survey and test excavations which have been conducted within the study area and outline the archaeological values of the study area.

This SoHI has made the following conclusions:

- James Badgery received a land grant, which included the current study area, in 1809. Badgery established a working farm and dairy with the assistance of government-allotted convict labour
- Badgery built his first substantial house on the property between 1810 and 1812, a brick homestead called Exeter Farm. Two potential locations for this homestead were identified from historical research. The location was unable to be verified during a site visit and test excavation program involved in the 1973 excavation of the first Exeter house and archaeological test excavation in 2020
- Later landowners constructed a second Exeter Farm homestead, probably in the late nineteenth century, which became the primary residence of the property. This building was demolished in 2006.
- Historical test excavation completed in 2020 identified intact archaeology associated with the second Exeter house and remains of a later 20th century farm building
- The testing program did not identify remains associated with first Exeter house (historical Phase 1) in the location determined to be most likely to contain such resources. However, the site retains nil-low potential to contain evidence of this phase below the remains of the second Exeter house

- Proposed ground disturbing works would entirely remove all areas of predicted significant archaeological potential. The proposal would result in a major impact to potential archaeological remains.
- The proposed earthworks are likely to have negligible visual impacts on nearby heritage items.
- Two Aboriginal glass artefacts were identified during an Aboriginal test excavation program (Artefact Heritage 2019), indicating post-1788 Aboriginal use of the site

The following recommendations will aid in mitigating impact to potential archaeological remains and nearby heritage items:

- A program of archaeological monitoring and salvage should be carried out within the study area prior to subsurface excavations.
- If archaeological remains of State significance, or locally significant remains not identified in the SoHI or ARD, are unexpectedly identified during the archaeological salvage program, works in the affected area would cease and Heritage NSW, DPC would be notified. Additional assessment and further approval may be required prior to the recommencement of excavation
- Should State significant remains associated with early nineteenth century convict accommodation and workshops be identified significantly intact during test excavation work, opportunities for retaining these remains *in situ* and redesigning works to avoid impacts should be considered.

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ABBREVIATIONS AND GLOSSARY

Acronym	Description
ARD	Archaeological Research Design
DCP	Development Control Plan
DPC	Department of Premier and Cabinet
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ICOMOS	International Council on Monuments and Sites
LEP	Local Environmental Plan
LGA	Local Government Area
NHL	National Heritage List
NSW	New South Wales
OEH	Office of Environment and Heritage
Relic	Any deposit, artefact, object or material evidence that relates to the settlement of the area that comprised New South Wales, not being Aboriginal settlement, and is of State or local significance
SEAR	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SSD	State Significant Development
SSDA	State Significant Development Application
SHI	State Heritage Inventory
SHR	State Heritage Register
UNESCO	United Nations Educational, Scientific and Cultural Organisation
Works	Evidence of significant infrastructure that may be buried and archaeological in nature
WHL	World Heritage List

1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction and project framework

Mirvac is seeking approval for a concept masterplan and Stage 1 development at 1669 –1732 Elizabeth Drive, Badgerys Creek (the study area) as part of the EEP. The development comprises a SSDA and the approval under SSD -19618251 provisions of the *NSW Environmental Planning Act 1974*. Subsequently, a SEARs was issued on the 15 June 2021 to accompany the SSDA.

On the 15th of June 2021 the project was issued SEARs 1295 which outlined the requirements for the EIS including a requirement to prepare a Statement of Heritage Impact (SoHI). Artefact Heritage have since been engaged by Mirvac to prepare a SoHI for the EEP Stage 1 development to support the EIS for SSD-19618251.

The proposal for Stage 1 EEP includes a concept masterplan and Stage 1 development for the site for proposed future development lots and building footprints, as well as consent for works which will include construction of an initial warehouse building and associated infrastructure required to be constructed for the development to operate, including road intersections, internal road construction and other associated on-site utilities

The aim of this SOHI is to identify any heritage items and archaeological remains which may be impacted by the proposed works, determine the level of heritage significance for nearby heritage items, assesses the potential impacts to those items, and recommend measures for managing further archaeological research and test excavation. This SoHI will identify the SSDA scope of work.

This SOHI is supported by the previous S139 Test Excavation Report (2019), Historical Archaeological Test Excavation Report (2020), and an S140 salvage Archaeological Research Design Report (ARD) (2020) These reports outline the results of previous survey and test excavations which have been conducted within the study area and outline the archaeological values of the study area. The S140 salvage ARD from 2020 will be provided in Appendix 1, as a complimentary report to this SoHI.

Future stages of the EEP developments, including subsequent warehouse and industrial buildings, will be subject to separate development application.

1.2 Study area

The study area is located north of Elizabeth Drive, at 1669-1723 Elizabeth Drive, Badgerys Creek (Lot 5 DP 860456) and Lot 741 DP810111 (Stage 2). The study area is within the Penrith Local Government Area (LGA) and the Western Sydney Priority Growth Area. The study area is located within the parish of Claremont within the county of Cumberland.

The study area is approximately 54.41 hectare (ha) and is presently occupied by a rural property as shown in Figure 1. The study area forms part of a sub-precinct of the broader EEP that covers an area of approximately 240ha. The broader EEP extends further to the north (Stage 2) and east (Stages 3 and 4) within the adjacent Mamre Road Precinct. This SoHI assess the works for EEP Stage 1 and a portion of Stage 2 works only.

The study area was rezoned as part of the gazettal of the State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 (Aerotropolis SEPP). The study area has been zoned as Enterprise for the area comprising the Badgerys Creek Precinct, with the Wianamatta-South Creek Precinct portion of the site zoned as Environment and Recreation.

1.3 Description of works

Mirvac proposed to develop the study area as part of Stage 1 of the EEP. The EEP is strategically placed to accommodate future flexible employment uses associated with the airport in Western Sydney.

The proposed plan is to convert the EEP into a development for general industry and warehouse distribution centres under a SSDA.

The SSDA is seeking approval for the following proposed preparation works:

- Demolition and removal of existing rural structures;
- Heritage salvage works (if applicable);
- Creation of roads and access infrastructure, including a signalised intersection with Elizabeth Drive;
- Clearing of existing vegetation on the subject site and associated dam dewatering and decommissioning;
- Realignment of existing creek;
- On-site bulk earthworks including any required ground dewatering;
- Importation, placement and compaction of soil material;
- Construction of boundary retaining walls;
- Delivery of catchment level stormwater infrastructure, trunk service connections, utility infrastructure;

The SSDA is seeking approval for the following proposed works:

- Construction and fit out of a warehouse and distribution building (@41,480m²) in Stage 1 which will operate 24 hours/day, seven days/week;
- Ancillary office building(@1,037m²)
- Boundary stormwater management, fencing and landscaping;
- Internal road network;
- Subdivision of Stage 1; and
- Signage.

1.4 Background to this report

In 2019 Artefact Heritage were engaged by Mirvac to prepare a Statement of Heritage Impact (SoHI) report for Stage 1 of the Elizabeth Enterprise Precinct for a Waste Disposal Facility.¹ The SoHI assessment found that the study area was once the property of James Badgery, an early settler in the Colony of New South Wales, and that his original homestead “Exeter Farm”, was once located on the property. The SoHI concluded that there was the potential for State and locally significant archaeological remains related to Badgery’s “Exeter Farm” homestead to be located in the study

¹ Artefact, 2019a. Elizabeth Enterprise Precinct, Stage 1: Non-Aboriginal Statement of Heritage Impact. Report prepared for Mirvac.

area and recommended further archaeological management of these resources prior to ground disturbing works conducted at the site.

As a result, Mirvac engaged Artefact to prepare a non-Aboriginal ARD to provide a detailed assessment of the potential and significance of any archaeological remains in the study area, and to outline an archaeological methodology for managing these remains.² The ARD was provided in support of an application for a s139 exception under the NSW *Heritage Act 1977* (Heritage Act) to undertake an archaeological test excavation to assess the degree of preservation and significance of any predicted non-Aboriginal remains associated with James Badgery's early nineteenth century Exeter Farm. The s139 exception was approved by Heritage NSW and DPC on 8 January 2020 (DOC19/1036338).

The test excavation program identified an intact archaeological resource associated with the second Exeter Farm House (c. late 1800s, locally significant) and a post-1920 farm building (did not reach the local significance threshold). No evidence of state significant archaeological remains associated with the early development of the site were identified, including the wattle and daub cottage (first house of Badgery Family, 1809–1810/1812) and the first brick Exeter Farm House (constructed c. 1810). Consequently, the test excavation report recommended that a s140 excavation permit should be sought from Heritage NSW, DPC to approve archaeological salvage excavations at the study area. As such, Artefact Heritage prepared an ARD to support the s140 excavation permit in July 2020 to support the application.

In 2021, Mirvac changed their proposed Stage 1 of the Elizabeth Enterprise Precinct from a Waste Disposal Facility to a development for general industry and warehouse distribution centres. In addition, Mirvac are seeking to expand the size of the project area, by adding an area approximately 50m wide and 800m long, north of the Stage 1 study area. The updated proposal includes development for the purposes of warehouse and distribution centres with a capital investment value of 30 million. As such the development is considered a SSD under Clause 12, Schedule 1 of the SEPP (Regional Development) 2011.³ As such, the SSD will need to be undertaken in accordance with the SEARs issued by the DPIE.

Mirvac have since engaged Artefact Heritage to prepare an updated SoHI pertaining to the SSD-1961825 to address the SEARs (1295).

1.5 Secretary's Environmental Assessment Requirements 1295

The DPIE SEARs (1295) for the project was issued on the 15th of June 2021. The requirements specific to non-Aboriginal heritage and where these are addressed in this report, are outlined in Table 1.

Table 1: Relevant non-Aboriginal SEARs

Requirements	Report reference
Heritage	
An assessment of non-Aboriginal cultural heritage items and values of the site and surrounding area;	This report assesses the non-Aboriginal cultural heritage items and values within and surrounding the study area. Section 7.0 assesses the significance of the heritage items within the vicinity of the subject

² Artefact, 2019b. Elizabeth Drive Non-Aboriginal Archaeological Research Design Report. Report prepared for Mirvac.

³ EEP by Ethos Urban 2021 p. 3

Requirements	Report reference
	site. Section 7.4 assesses the significance of the subsequent archaeological findings and potentials.
Measures to avoid, reduce or mitigate impacts on non-Aboriginal heritage items;	This report provides recommendations to help mitigate, avoid, or reduce the impact that the proposed works may have on any non-Aboriginal items within or within close proximity to the subject site. Section 9.2 assess the impact of the proposed works, this is succinctly summarised in the Statement of Heritage Impact in Section 8.3. Conclusions and recommendations to help mitigate, avoid, or reduce these impacts are outlined in Section 9.0.

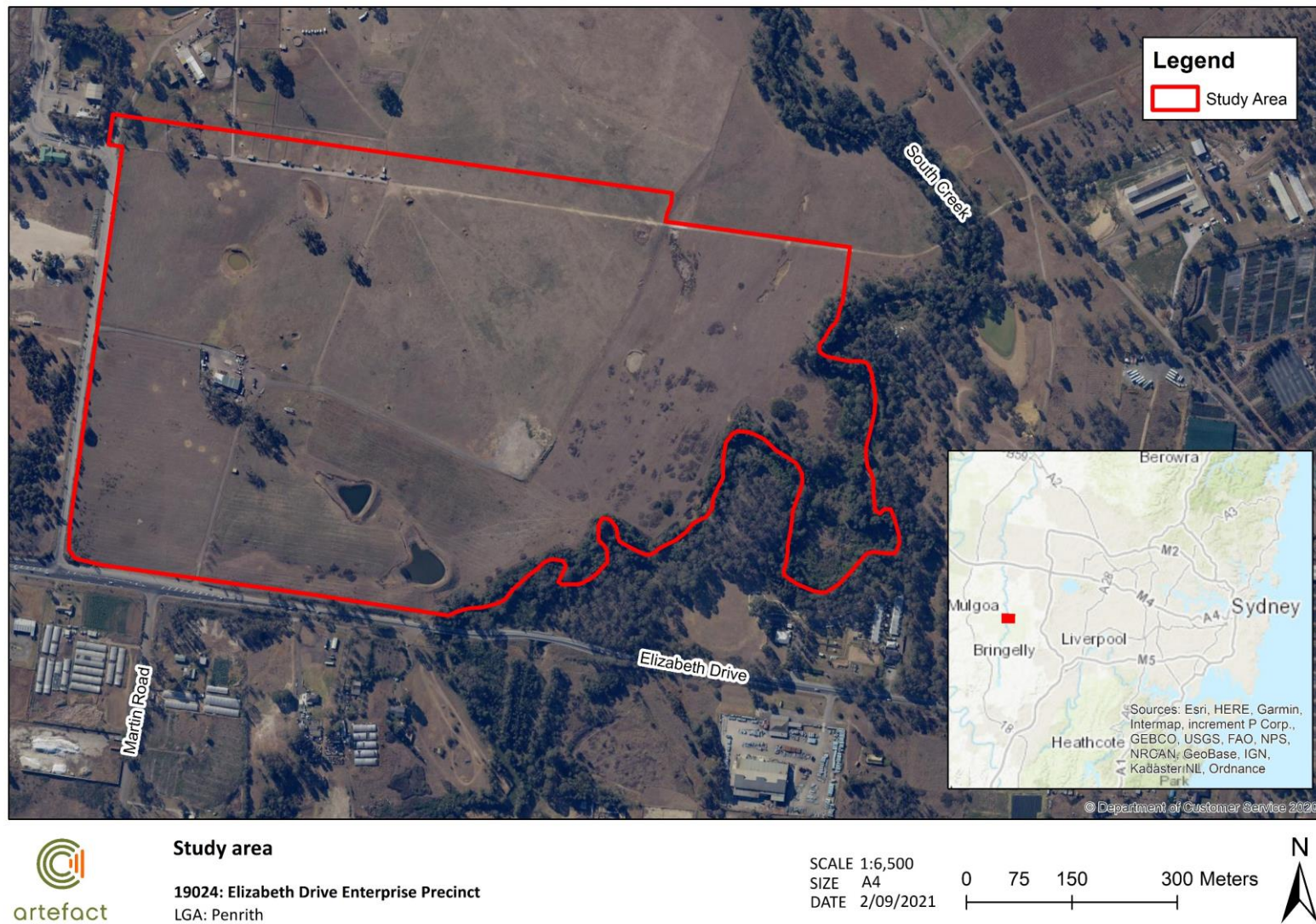


Figure 1: Location and extent of study area

2.0 METHODOLOGY

2.1 Identification of heritage listed items

Heritage listed items within the study area and buffer of each site were identified through a search of relevant state and federal statutory and non-statutory heritage registers:

- World Heritage List
- Commonwealth Heritage List
- National Heritage List
- State Heritage Register
- Local Environmental Plans (LEPs):
 - Penrith LEP 2010
 - Liverpool LEP 2008
- Section 170 Heritage and Conservation Registers for Sydney Water, Roads and Maritime, RailCorp, Ausgrid and Department of Housing
- NSW State Heritage Inventory database.

Items listed on these registers have been previously assessed against the NSW Heritage Assessment guidelines (as outlined in Section 2.2.1). Statements of heritage significance, based on the NSW Heritage Assessment guidelines, as they appear in relevant heritage inventory sheets and documents, are provided in this assessment.

2.2 Archaeological assessment

This SoHI includes an archaeological assessment. Historical archaeological potential is defined as the potential of a site to contain historical archaeological remains. The assessment of historical archaeological potential is based on the identification of former land uses and evaluating whether subsequent actions (either natural or human) may have impacted on archaeological evidence for these former land uses. Knowledge of previous archaeological investigations, understanding of the types of archaeological remains likely to be associated with various land uses, and the results of site excavation program are also taken into consideration when evaluating the potential of an area to contain archaeological remains.

This document also contains an assessment of significance for identified archaeological remains. This has been assessed against the NSW Heritage Assessment Criteria. The assessment is informed by the NSW Heritage Division's 2009 guidelines *Assessing Significance for Historical Archaeological Sites and Relics*.

2.2.1 NSW Heritage assessment guidelines

Determining the significance of heritage items or a potential archaeological resource is undertaken by utilising a system of assessment centred on the *Burra Charter* of Australia ICOMOS. The principles of the charter are relevant to the assessment, conservation and management of sites and relics. The assessment of heritage significance is outlined through legislation in the Heritage Act and implemented through the *NSW Heritage Manual* and the *Archaeological Assessment Guidelines*.

If an item meets one of the seven heritage criteria, and retains the integrity of its key attributes, it can be considered to have heritage significance. The significance of an item or potential archaeological site can then be assessed as being of local or state significance. If a potential archaeological resource does not reach the local or state significance threshold, then it is not classified as a relic under the Heritage Act.

‘State heritage significance’, in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.

‘Local heritage significance’, in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.⁴

The overall aim of assessing archaeological significance is to identify whether an archaeological resource, deposit, site or feature is of cultural value. The assessment will result in a succinct statement of heritage significance that summarises the values of the place, site, resource, deposit or feature. The heritage significance assessment criteria are as follows:

Table 2: NSW heritage assessment criteria

Criteria	Description
A – Historical Significance	An item is important in the course or pattern of the local area’s cultural or natural history.
B – Associative Significance	An item has strong or special associations with the life or works of a person, or group of persons, of importance in the local area’s cultural or natural history.
C – Aesthetic or Technical Significance	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.
D – Social Significance	An item has strong or special association with a particular community or cultural group in the local area for social, cultural or spiritual reasons.
E – Research Potential	An item has potential to yield information that will contribute to an understanding of the local area’s cultural or natural history.
F – Rarity	An item possesses uncommon, rare or endangered aspects of the local area’s cultural or natural history.
G - Representativeness	An item is important in demonstrating the principal characteristics of a class of NSW’s cultural or natural places of cultural or natural environments (or the cultural or natural history of the local area).

2.2.2 Research potential for archaeological remains

In 1984, Bickford and Sullivan examined the concept and assessment of archaeological research potential; that is, the extent to which archaeological resources can address research questions. They developed three questions which can be used to assess the research potential of an archaeological site:

- Can the site contribute knowledge that no other resource can?

⁴ This section is an extract based on the NSW Heritage Branch Assessing Significance for Historical Archaeological Sites and Relics 2009:6.

- Can the site contribute knowledge that no other site can?
- Is this knowledge relevant to:
 - General questions about human history?
 - Other substantive questions relating to Australian history?
 - Other major research questions?

In the 2009 guidelines *Assessing Significance for Historical Archaeological Sites and 'Relics'*, the NSW Heritage Division has since provided a broader approach to assessing the archaeological significance of sites, which includes consideration of a site's intactness, rarity, representativeness, and whether many similar sites have already been recorded, as well as other factors. This document acknowledges the difficulty of assessing the significance of potential subsurface remains, because the assessment must rely on predicted rather than known attributes.⁵

A site can have high potential for archaeological remains, and yet still be of low research potential if those remains are unlikely to provide significant or useful information.

2.3 Assessment of heritage impact

This Heritage Impact Assessment has been prepared using the document *Statement of Heritage Impact* 2002, prepared by the NSW Heritage Office, contained within the *NSW Heritage Manual*, as a guideline.

Impacts on heritage are identified as either:

- Direct impacts, resulting in the demolition or alteration of fabric of heritage significance
- Indirect impacts, resulting in changes to the setting or curtilage of heritage items or places, historic streetscapes or views
- Potential direct impact, resulting in impacts from vibration and demolition of adjoining structures.

Specific terminology and corresponding definitions are used in this assessment to consistently identify the magnitude of the project's direct, indirect or potentially direct impacts on heritage items or archaeological remains. The terminology and definitions are based on those contained in guidelines produced by the International Council on Monuments and Sites (ICOMOS)⁶ and are shown in Table 3. It is assumed that all direct and potential direct impacts are a result of construction. Indirect impacts are assumed to be operational unless specified as temporary in which case they are related to construction.

Table 3: Terminology for assessing the magnitude of heritage impact.

Magnitude	Definition
Major	<p>Actions that would have a long-term and substantial impact on the significance of a heritage item. Actions that would remove key historic building elements, key historic landscape features, or significant archaeological materials, thereby resulting in a change of historic character, or altering of a historical resource.</p> <p>These actions cannot be fully mitigated.</p>

⁵ NSW Heritage Branch 2009

⁶ Including the document *Guidance on Heritage Impact Assessments for Cultural World Heritage Properties*, ICOMOS, January 2011.

Magnitude	Definition
Moderate	<p>This would include actions involving the modification of a heritage, including altering the setting of a heritage item or landscape, partially removing archaeological resources, or the alteration of significant elements of fabric from historic structures.</p> <p>The impacts arising from such actions may be able to be partially mitigated.</p>
Minor	<p>Actions that would results in the slight alteration of heritage buildings, archaeological resources, or the setting of an historical item.</p> <p>The impacts arising from such actions can usually be mitigated.</p>
Negligible	<p>Actions that would results in very minor changes to heritage items.</p>
Neutral	<p>Actions that would have no heritage impact.</p>

2.4 Limitations and Constraints

This report provides an assessment of non-Aboriginal (historical) heritage values only. An assessment of Aboriginal archaeological and cultural heritage values have been prepared separately in an Aboriginal Heritage Cultural Assessment Report (ACHAR), Artefact 2021.

2.5 Authorship

This report was prepared by Josh Symons (Principal, Artefact Heritage), Jenny Winnett (Principal, Artefact Heritage), and Jacob Mark (Historian, Artefact Heritage). Dr Sandra Wallace (Director, Artefact Heritage) provided management input and review.

This report was amended in August 2021 by Sarah Ryan (Heritage Consultant). Julia McLachlan (Senior Heritage Consultant) provided management and review. Josh Symons (Principal) has provided final review.

3.0 HERITAGE MANAGEMENT FRAMEWORK

3.1 Introduction

There are several items of heritage legislation in NSW that are relevant to the current study for the proposed works. A summary of these Acts and the potential legislative implications follow.

3.2 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) provides a legislative framework for the protection and management of matters of national environmental significance, that is, flora, fauna, ecological communities and heritage places of national and international importance. Heritage items are protected through their inscription on the World Heritage List, Commonwealth Heritage List or the National Heritage List.

The EPBC Act stipulates that a person who has proposed an action that will, or is likely to, have a significant impact on a World, National or Commonwealth Heritage site must refer the action to the Minister for Sustainability, Environment, Water, Population and Communities (hereafter Minister). The Minister will then determine if the action requires approval under the EPBC Act. If approval is required, an environmental assessment would need to be prepared. The Minister would approve or decline the action based on this assessment.

A significant impact is defined as “an impact which is important, notable, or of consequence, having regard to its context or intensity.” The significance of the action is based on the sensitivity, value and quality of the environment that is to be impacted, and the duration, magnitude and geographic extent of the impact. If the action is to be undertaken in accordance with an accredited management plan, approval is not needed and the matter does not need be referred to the Minister.

3.2.1 Commonwealth Heritage List

The Commonwealth Heritage List has been established to list heritage places that are either entirely within a Commonwealth area, or outside the Australian jurisdiction and owned or leased by the Commonwealth or a Commonwealth Authority. The Commonwealth Heritage List includes natural, Indigenous and historic heritage places which the Minister for Sustainability, Environment, Water, Population and Communities is satisfied have one or more Commonwealth Heritage values.

There are no listed sites within or near the study area that are included on the Commonwealth Heritage List.

3.2.2 National Heritage List

The National Heritage List has been established to list places of outstanding heritage significance to Australia. It includes natural, historic and Indigenous places that are of outstanding national heritage value to the Australian nation.

There are no listed sites within or near the study area that are included on the National Heritage List.

3.3 Heritage Act 1977

The *Heritage Act 1977* (NSW) (Heritage Act) is the primary item of State legislation affording protection to items of environmental heritage in NSW. The Heritage Act is designed to protect both listed heritage items, such as standing structures, and potential archaeological remains or relics. Under the Heritage Act, 'items of environmental heritage' include places, buildings, works, relics, moveable objects and precincts identified as significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values. State significant items are listed on the NSW State Heritage Register (SHR) and are given automatic protection under the Heritage Act against any activities that may damage or affect its heritage significance.

To carry out activities within the curtilage of an item listed on the SHR, approval must be gained from the Heritage Council by securing a Section 60 permit. In some circumstances, under Section 57(2) of the Heritage Act, a Section 60 permit may not be required if works are undertaken in accordance with the NSW Heritage branch document *Standard Exemptions for Works Requiring Heritage Council Approval*⁷ or in accordance with agency specific exemptions. This includes works that are only minor in nature and will have minimal impact on the heritage significance of the place.

3.3.1 State Heritage Register

The SHR was established under Section 22 of the Heritage Act and is a list of places and objects of particular importance to the people of NSW, including archaeological sites. The SHR is administered by the Heritage Division of the Office of Environment and Heritage (OEH). This includes a diverse range of over 1,500 items, in both private and public ownership. To be listed, an item must be deemed to be of heritage significance for the whole of NSW.

There are no SHR-listed items within the study area.

3.3.2 Section 170 registers

Under the Heritage Act all government agencies are required to identify, conserve and manage heritage items in their ownership or control. Section 170 requires all government agencies to maintain a Heritage and Conservation Register that lists all heritage assets and an assessment of the significance of each asset. They must ensure that all items inscribed on its list are maintained with due diligence in accordance with State Owned Heritage Management Principles approved by the Government on advice of the NSW Heritage Council. These principles serve to protect and conserve the heritage significance of items and are based on NSW heritage legislation and guidelines.

There are no s170 register listed items within the study area.

3.3.3 Archaeological relics

Part 6 Division 9 of the Heritage Act protects archaeological 'relics' from being exposed, moved, damaged or destroyed. This protection extends to situations where a person has reasonable cause to suspect that archaeological remains may be affected by the disturbance or excavation of the land. It applies to all land in NSW that is not included in the SHR. Section 4(1) of the Heritage Act (as amended 2009) defines 'relic' as follows:

⁷ Heritage Council of New South Wales 2009

“relic means any deposit, artefact, object or material evidence that:

(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and

(b) is of State or local heritage significance.”

Sections 139-145 of the Heritage Act prevent the excavation or disturbance of land known or likely to contain relics, unless in accordance with an excavation permit. Excavation permits are issued under Section 140 of the Heritage Act, or Section 60 for sites listed on the SHR. Excavation Permit Applications must be supported by an Archaeological Research Design. Section 146 of the Heritage Act requires that any discovery or location of a ‘relic’ is reported to the Heritage Council.

If the proposed works are minor and would have minimal impact on the heritage significance of the place or site, they may be granted an exception or exemption under Section 139 (4) or Section 57 (2) of the Heritage Act.

3.3.4 Archaeological ‘works’

The Heritage Act identified ‘works’ as being in a separate category to archaeological ‘relics.’ ‘Works’ refer to past evidence of infrastructure. ‘Works’ may be buried, and therefore archaeological in nature, however, exposure of a ‘work’ does not trigger reporting obligations under the Heritage Act. ‘Works’, as items of cultural heritage, have the potential to provide information that contributes to our knowledge of past practices, and good environmental practice recognises this. Roads and Maritime, for example, uses its *Standard Management Procedure: Unexpected Heritage Items* to manage the discovery of such works (Roads and Maritime 2015).

3.4 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) establishes the framework for cultural heritage values to be formally assessed in the land use planning and development consent process. The EP&A Act requires that environmental impacts are considered prior to land development; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits. The EP&A Act requires that Local Governments prepare planning instruments (such as Local Environmental Plans [LEPs] and Development Control Plans [DCPs]) in accordance with the Act, to provide guidance on the level of environmental assessment required.

Part 4.7 of the EP&A Act specifies that a State Environmental Planning Policy may declare any development, or any class or description of development, to be SSD by the Minister, by a Ministerial planning order.

Under Part 4.41 the following relevant authorizations are not required for SSD that is authorized by a development consent granted after the commencement of this Division (and accordingly the provisions of any Act that prohibit an activity without such an authority do not apply):

1c) an approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977,

Under Part 4.39, in addition to any other matters for or with respect to which regulation may be made under that Part, the regulations may make provision for or with respect to the procedures and other matters concerning SSD, including the following

- (a) *The environmental impact statements to accompany development applications in respect of SSD*
- (b) *The requirements for the preparation of those environmental impact statements, including consultation requirements with respect to government agencies and other affected persons*

3.5 State Environmental Planning Policies

State Environmental Planning Policies (SEPP) are a series of instruments that address specific planning issues on a state level. The following SEPPs are relevant to the EEP:

3.5.1 State Environmental Planning Policy (State and Regional Development) 2011

EEP is subject to the SEPP (State and Regional Development) 2011, by virtue of the project being a regional development. The EEP is considered SSD by virtue of Clause 12 of Schedule 1 of the SEPP (State and Regional Development) 2011.

3.5.2 State Environmental Planning Policy (Western Sydney Aerotropolis) 2020

The EEP is subject to the SEPP (Western Sydney Aerotropolis) 2020, by virtue of its location. According to the Land Use Table under Part 2, section entitled Enterprise Zone of the SEPP, the proposed works of a warehouse and distribution centre would be permissible.

3.6 Local Environmental and Development Control Plans

3.6.1 Penrith LEP 2010

The current study area falls within the boundaries of the Penrith Local Government Area (LGA) and is subject to the Penrith LEP 2010. Schedule 5 of the Penrith LEP includes lists of identified heritage items, heritage conservation areas and archaeological sites within the Penrith LGA.

There are no heritage items, archaeological items, or heritage conservation areas listed on the Penrith LEP 2010 which are either within or in the immediate vicinity of the study area.

There are two listed heritage items within 650 – 1000 metres from the study area. These include:

- “McGarvie-Smith Farm” (LEP item no. 857) is an item of local heritage significance. It is located approximately 650 metres west of the study area.
- “The Fleurs Radio Telescope Site” (LEP item no. 832) is an item of local heritage significance. It is located approximately 1,000 metres north of the study area.

The location of these items is shown in Figure 2

3.6.2 Penrith DCP 2014

The Penrith DCP 2014 is a non-statutory supporting document that compliments the provisions contained within the Penrith LEP 2010. Section C7 of the Penrith DCP 2014 provides controls and guidelines for the assessment of Aboriginal and non-Aboriginal (historical) heritage within the Penrith LGA. The purpose of the DCP's heritage provisions is to conserve the heritage significance of the natural and built environment and ensure new development is sympathetic with the identified

heritage values. Heritage controls of the DCP aim to ensure that future development takes place in a way that does not detract from the heritage values of the Penrith area.

Whilst there are no listed items on the Penrith LEP 2010 within the study area, the DCP provides guidelines for assessment and management of development in the vicinity of a heritage items, archaeological sites, and potential heritage items:

7.1.5. Development in the Vicinity of a Heritage Item or Conservation Area

A. Background

A development in the vicinity of a heritage item or a heritage conservation area must be assessed to determine whether it will have any impact on the significance and visual setting of that item or conservation area.

B. Objectives

To ensure that the development of land or a building in the vicinity of a heritage item or heritage conservation area is undertaken in a manner that complements the heritage significance of the site or area.

C. Controls

- 1) A Heritage Impact Statement shall be lodged with a development application for buildings or works in the vicinity of a heritage item or heritage conservation area. This clause extends to development that:*
 - a) May have an impact on the setting of a heritage item or conservation area, for example, by affecting a significant view to or from the item or by overshadowing; or*
 - b) May undermine or otherwise cause physical damage to a heritage item; or*
 - c) Will otherwise have any adverse impact on the heritage significance of a heritage item or any heritage conservation area within which it is situated.*
- 2) The following issues must be addressed in the Heritage Impact Statement:*
 - a) The impact of the proposed development on the heritage significance, visual curtilage and setting of the heritage item;*
 - b) Details of the size, shape and scale of, setbacks for, and the materials to be used in, any proposed buildings or works; and*
 - c) Details of any modification that would reduce the impact of the proposed development on the heritage significance of the heritage item.*

7.1.6. Archaeological Sites

A. Background

This section of the DCP provides guidance to applicants regarding development that involves archaeological sites. For the purposes of this section an archaeological site means the site (as listed in Schedule 5 – Environmental Heritage of Penrith LEP 2010) of one or more relics.

B. Objectives

- a) To ensure that development is undertaken in a manner that acknowledges and protects sites of archaeological significance.*

C. Controls

- 1) *Any application which proposes the disturbance or development of an 'archaeological site' listed in Schedule 5 – Environmental Heritage of Penrith LEP 2010 is to undertake an archaeological assessment and to submit that assessment as part of the Heritage Impact Statement or Conservation Management Plan. Penrith Development Control Plan 2014 C7 Culture and Heritage C7-11*
- 2) *The archaeological assessment is to:*
 - a) *Evaluate the probable extent, nature and integrity of the site and determine its significance;*
 - b) *Define appropriate management measures for the site having regard to its significance; and*
 - c) *Is to be prepared in accordance with guidelines contained within the document entitled "Assessing Significance for Historical Sites and 'Relics'" (Heritage Branch, Department of Planning, 2009).*
- 3) *Where the development or disturbance of an archaeological site is proposed, the applicant will be required to liaise with the Heritage Division of the Office of Environment and Heritage to ensure any related statutory requirements of the Heritage Act, 1977 are complied with prior to the submission of the development application. For example, any proposal to disturb or excavate land which will or is likely to result in a relic (whether or not that relic is listed as an archaeological site under Penrith LEP 2010) being discovered, exposed, moved, damaged or destroyed requires an excavation permit to be obtained from the Heritage Council (Heritage Division of the Office of Environment and Heritage).*
- 4) *If relics are discovered during construction or operation, works should cease immediately and the Heritage Division contacted. At that time, the Heritage Division may request an archaeological assessment before any further work can commence.*

7.1.7. Potential Heritage Items

A. Background

This section provides guidance to applicants wanting to lodge an application that involves a building, relic or structure that is more than 50 years old.

B. Objectives

To protect buildings that may have heritage significance but are not listed in Schedule 5 – Environmental Heritage of Penrith LEP 2010.

C. Controls

- 1) *Where it is proposed to develop or demolish a building, relic or structure not listed in Schedule 5 – Environmental Heritage of Penrith LEP 2010 that is older than fifty years, Council may require the submission of a Heritage Impact Statement that addresses those issues referred to in Clause 5.10 of Penrith LEP 2010 or in this DCP, so as to enable it to*

fully consider the impact of the development upon the significance of the building, relic or structure.

3.6.3 Liverpool LEP 2008

The study area is located directly to the north of the boundary between the Penrith and Liverpool LGA boundary (located through the middle of Elizabeth Drive). A search of heritage sites listed on the Liverpool LEP 2008 Schedule 5 Environmental Heritage register was conducted to identify any LEP-listed items within the vicinity of the study area.

No items listed on the Liverpool LEP 2008 were identified within 1,000 metres of the study area for the project.

3.7 Non-Statutory Registers

3.7.1 The Register of the National Estate

The Register of the National Estate is a list of natural, Aboriginal and historic heritage places throughout Australia. It was originally established under the *Australian Heritage Commission Act* 1975. Under that Act, the Australian Heritage Commission entered more than 13,000 places in the register. Following amendments to the *Australian Heritage Council Act* 2003, the Register of the National Estate (RNE) was frozen on 19 February 2007 and ceased to be a statutory register in February 2012. The RNE is now maintained on a non-statutory basis as a publicly available archive and educational resource.

There are no items listed on the Register of the National Estate within the study area.

3.7.2 Register of the National Trust

The National Trust of Australia is a community-based, non-government organisation committed to promoting and conserving Australia's Indigenous, natural and historic heritage. The Register of the National Trust (RNT) was established in 1949. It is a non-statutory register.

There are no items listed on the Register of the National Trust within the study area.

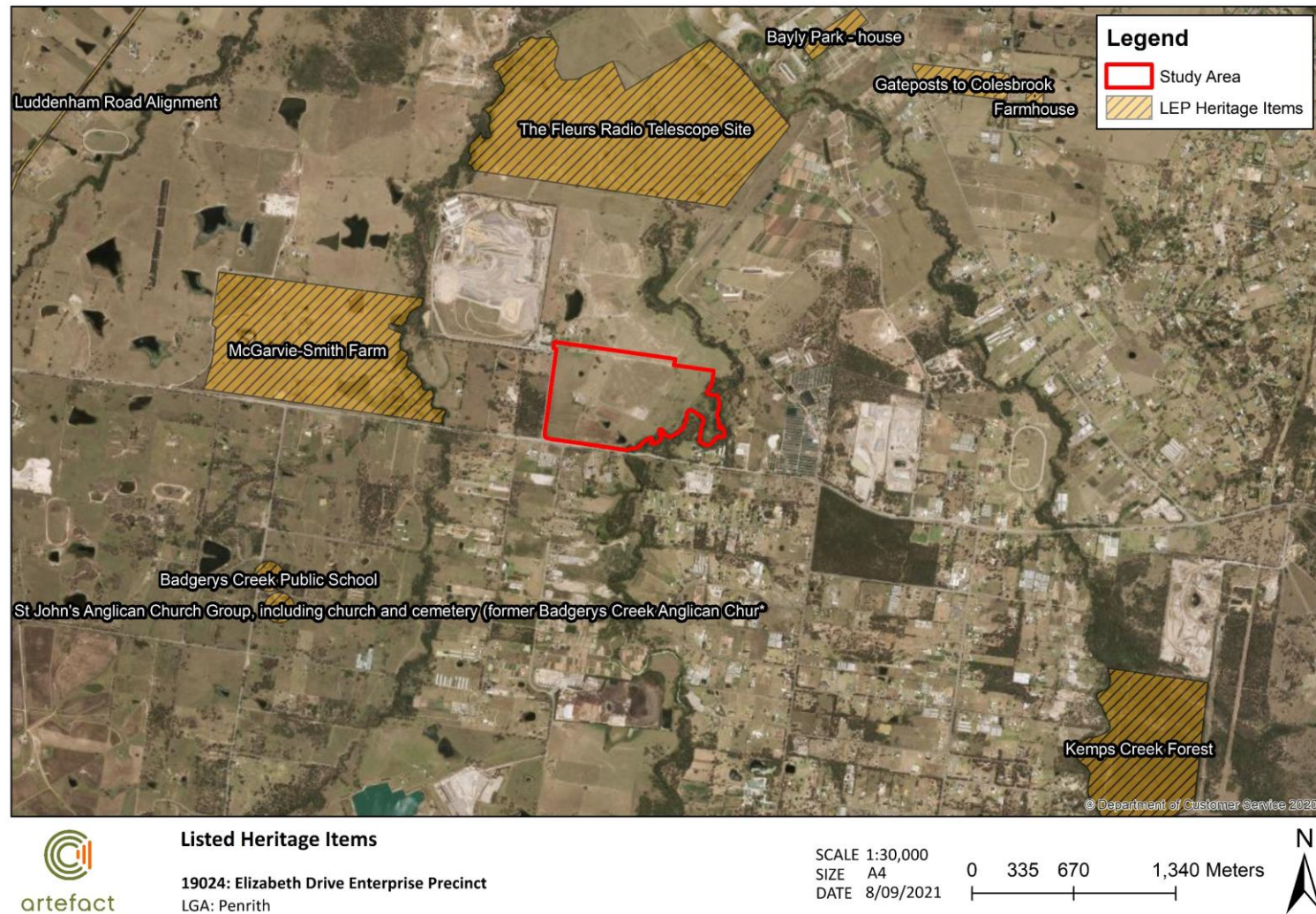


Figure 2: Location of the listed heritage items in the vicinity of Stage 1

4.0 HISTORICAL CONTEXT

4.1 Aboriginal histories of the locality

Before the appropriation of their land by Europeans, Aboriginal people lived in small family or clan groups that were associated with particular territories or places. It seems that territorial boundaries were fairly fluid, although details are not known. The study area is located within the Darug language group area. The Darug language group is thought to have covered the area south from Port Jackson, north from Botany Bay, and west from Parramatta.⁸

The arrival of British settlers in NSW and subsequent expansion along the Hawkesbury and Georges Rivers had damaging repercussions for the Darug peoples.⁹ The Hawkesbury River and surrounding areas were important hunting and fishing grounds for the local groups residing there. The acquisition of these lands by settlers resulted in conflict lasting from 1789 to 1805.¹⁰

The Darug people continue to live in the region and as such they have contemporary cultural, social and spiritual meanings for this area. A more comprehensive discussion of Aboriginal history and lifeways for the study area is provided in the Aboriginal ASR assessment for this project.¹¹

4.2 Establishment of Exeter Farm

4.2.1 James Badgery

The land in which the study area is located was first granted to the English migrant, James Badgery. Hailing from Devonshire, he was one of the few free settlers to migrate to New South Wales in the late eighteenth century, having migrated to Sydney in 1799.¹² With the possible support of Sir Joseph Banks, Badgery sailed into Sydney aboard the supply ship the *Walker*, alongside his later patron Colonel William Patterson. Badgery, before sailing for Sydney, had spent time on Bank's Spring Grove Estate with Patterson. Upon arrival in Sydney, Badgery quickly demonstrated an aptitude to both farming and grazing, renting land along the Hawkesbury River where he established a small farm and bakery. At the time of the 1802 muster, Badgery had 6 acres and 13 goats, expanding in 1803 to 39 acres.

In 1808, Governor Bligh was disposed from his position by the NSW Corps and John Macarthur. Badgery had supported the removal of Bligh, presumably because of Bligh's reluctance to grant additional land to free settlers such as himself. He travelled to Sydney from the Hawkesbury to witness the arrest of Bligh, taking his four-year-old son with him. Colonel Patterson, who replaced Bligh as governor, rewarded Badgery for his support by providing him an inn licence and three grants of lands allocated to his children: 240 acres to his daughter Ann which was called Exeter Farm; 200 acres to his son Henry, to be called Heavy Tree; and 200 acres to his son Andrew.

In November 1810, the newly appointed Governor Macquarie visited Exeter Farm. The purpose of his visit was to evaluate the improvements made to the land so as to determine if the land title should be

⁸ Attenbrow, V., 2010 *Sydney's Aboriginal Past: Investigating the Archaeological and Historical Records*. Sydney NSW. p. 34.

⁹ *Ibid.* p. 14.

¹⁰ *Ibid.* p. 15.

¹¹ Artefact Heritage, March 2019. *Elizabeth Enterprise Precinct Stage 1 – Archaeological Survey Report*. Report prepared for Mirvac.

¹² Biographical information about James Badgery and his immediate family are drawn mostly from Bobbie Hardy, *From the Hawkesbury to the Monaro: The Story of the Badgery Family* (Sydney: Kangaroo Press, 1989); another useful source on the history of Exeter Farm is Beverley Donald and Bill Gulson, *A Little Bit of Country: an Oral History of Badgerys Creek* (Sydney: Alken Press, 1996)

permanently transferred to Badgery. Officials in London did not recognise the grants made under the 'rebel' administration of Patterson, and Macquarie had been instructed to repeal Patterson's grants unless sufficient improvements had been made to the land. However, Governor Macquarie was impressed by the improvements made at Badgery's Farm, writing in his journal how he:

*Called first at Badgery's Farm close on the left Bank of the South Creek, where I was much pleased to find a good Farm House built, a good Garden, and a considerable quantity of ground cleared.*¹³

In 1812, Badgery wrote to Macquarie to describe the improvements of his farm to further his claim for full title of the land. Badgery described the farm as being enclosed with a good fence, that the land had been subdivided into nine paddocks with stockyards, and that a large garden had been established by the house. The improvements satisfied Macquarie, and title was conferred upon Badgery for the land Patterson had granted to his children.¹⁴

The whole 640 acre land grant that had been provided to his three children was renamed as a whole 'Exeter Farm'. This area was located in Claremont Parish and was bounded by South Creek to the east, a road easement to the south, and a tributary of South Creek to the west. Nicholas Bayley's 680 acre grant was located to the north near the confluence of a small tributary into South Creek. . Later, the tributary was renamed 'Badgery's Creek'. The road easement to the south has been called Elizabeth Drive since 1964 (see Section 4.2.3), but prior to that was variously called 'Mulgoa Road', 'Orphan School Road', or simply 'from The Northern Road'.

Exeter Farm land-use during Badgery family ownership of the property

James Badgery's primary occupation of Exeter Farm involved raising and driving cattle to be sold at market, either in Sydney itself, the government stores in Parramatta or the newly established town of Liverpool. Early use of the property consisted of land-clearing of vegetation to provide pasturage to increase the quantity of cattle that could be raised there. Badgery was keenly interested in horse racing, and Exeter Farm into the nineteenth century also became well known as stud breeding farm.. Badgery's major occupation remained in meat tendering, however, and he was listed in the Sydney Gazette as one of the suppliers of fresh meat in the colony. In July 1817, James Badgery was noted to have supplied to the Deputy Commissary General a large of fresh meat to 'His Majesty's Stores'.¹⁵ In this article, Badgery was referenced as living at South Creek. With the phasing out of the government meat tendering system during the 1810s, James Badgery started selling his cattle directly to a private butcher, Roberts and Hill.¹⁶

The business partnership with Roberts and Hill proved to be lucrative to both parties. As demand for his cattle increased, Badgery petitioned Macquarie for additional land grants. In a letter written to Macquarie in 1819, Badgery wrote of Exeter Farm as being "totally enclosed with a good fence, subdivided into nine paddocks. There was a large garden, stockyards, more cultivated area than the terms of his grant stipulated, with good buildings and equipment."¹⁷ During the 1820s, Badgery sought to increase his holdings around South Creek, buying out other local farmers, alongside developing new holdings at Sutton's Forrest in the Southern Highlands and in the Illawarra in the south of Sydney. In 1820, James Badgery requested more land from Governor Macquarie, writing that with 450 cattle, 650 sheep and 16 horses, the 1300 acres he had thus far acquired in Bringelly

¹³ Lachlan Macquarie, 1979 *Lachlan Macquarie: Governor of New South Wales Journals of His Tours in New South Wales and Van Diemen's Land*. Sydney, NSW. p. 19.

¹⁴ Donald and Gulson, 1996. 'A Little Bit of Country: An Oral History of Badgerys Creek'. Liverpool City Council, p. 4

¹⁵ The Sydney Gazette and New South Wales Advertiser Saturday 14 June 1817, p.1

¹⁶ Hardy, 1989, p. 30

¹⁷ Hardy, 1989, p. 27

and Sutton's Forrest was not enough for his growing herds of livestock, and that additional land, particularly in the Illawarra, was needed for continued economic growth.

Badgery's interest in horse racing and horse breeding was well known, with references to Badgery's horses winning races at Hyde Park as early as 1811.¹⁸ Badgery was also involved in the earliest races of the Sydney Turf Club in 1825, the year that club was formed. Badgery's horse Hector is listed as winning the second race of the St Patricks Day horse racing at Bellevue Hill.¹⁹

Dairy farming, a theme in the twentieth century history of Exeter Farm, was established at Exeter Farm before the property was placed on the market by the Badgery and Roberts families in 1869. The auction notice for Exeter Farm in 1869 notes that the property had at that time a good reputation as a dairy farm.²⁰ During later subdivisions, advertisements in newspapers emphasised the suitability of the land for raising cattle. With the advent of electrical refrigeration and motorised tractors, the land became increasingly viable for dairy production in the early to mid-twentieth century.

Built structures at Exeter Farm during Badgery family ownership of the property

In 1809, shortly after being conferred the land at South Creek by Patterson, Badgery built a temporary wattle and daub building into which he relocated his family from the Hawkesbury area. It is likely that William Badgery, born 1 December 1809, was born in the wattle and daub structure at Exeter Farm.²¹ This wattle and daub building was utilised while a more substantial brick farmhouse was constructed. The year in which the brick farmhouse on the property was completed is unknown, with Donald and Gunson suggesting the brick structure was completed by 28 November 1810 when Governor Macquarie visited the property with Gregory Blaxland.²² Hardy however suggests that it would likely have still been a wattle and daub construction at the time of Macquarie's visit.²³

By 1812, there is sufficient evidence to indicate that the brick house had been completed. In a Sydney Gazette article, Ann Badgery, the daughter of James, is reported to have been bitten by a snake when passing between the kitchen and the back skillion.²⁴ This suggestion of a kitchen and back skillion indicates the possibility of a more formal farm house being present on the property. It is likely that the brick structure was built from local bricks, featuring a hipped roof. It is unknown if the structure was furnished with a verandah; we do know that beneath the footings two English farthings dating to 1799 were placed, and a hearthstone was potentially made of stone from England that had been brought to Sydney as ship's ballast.²⁵ These finds were made in 1973 when Margot Badgery, the wife of a great-great grandson of James Badgery excavated the foundations of the original homestead with members of the Nobbs family who at the time owned Exeter Farm.²⁶ There is also reference to some of the bricks and a part of the hearthstone being retrieved and used as part of a memorial to the Badgery family at Badgerys Creek School.²⁷

The early built structures of the farm would have included a number of dwellings to house convict workers. The farm made use of convict labour, and at least one convict dwelling was located near the farmhouse. Other structures likely to have been located near the farmhouse possibly include smaller ancillary structures for workers and at least one shed or hay barn. A description of a violent event that occurred at the property on 23 November 1823 provides some information on the type of structures present around the farmhouse. On the evening of 23 November, a fight broke out in the convict

¹⁸ Donald and Gulson, 1996: p. 4

¹⁹ The Sydney Gazette and New South Wales Advertiser Thursday 24 March 1825, p.2

²⁰ The Sydney Morning Herald, Wednesday 3 February 1869, p. 7

²¹ Hardy, 1989. 'From Hawkesbury to the Monaro: the Story of the Badgery Family'. Kangaroo Press, p. 19

²² Donald and Gulson, 1996, p. 4

²³ Hardy, 1989, p. 21

²⁴ The Sydney Gazette and New South Wales Advertiser Saturday 2 May 1812, p. 2

²⁵ Hardy, 1989, p. 21

²⁶ Donald and Dunson, 1996, p. 4

²⁷ Hardy, 1989, p. 21

quarters. Bob Redmond, the overseer, was mentioned as residing in a separate hut near the back gate, and becoming involved in the fight.²⁸ Also mentioned was Edwards, a blacksmith who fought with James Badgery's son, Henry, as he attempted to restore order by forcing Edwards back to his own hut.²⁹ Jack Molloy, a possible convict, who died of injuries sustained during the fight, was found next to the cow-bails in the barnyard.³⁰ This event provides some evidence for the following structures around the farmhouse section of the property:

- The family homestead
- A convict quarters
- A small residence/ hut for Bob Redmond, the overseer
- A small residence/ hut for the blacksmith Edwards and his wife
- A barnyard.

A larger and more substantial brick house with wrap-around verandah and two chimneys was demolished in 2006. A series of 37 photographs, of the farm house, sheds and surrounds was taken in 1995. From these photographs, inferences can be made about the possible build date for the structure. For instance, we can determine the structure consisted of a hipped roof structure with a verandah supported by brick supports and brick balustrade that had possibly replaced earlier wooden posts. The exposure of existing photographs for the house provides limited visibility of the house façade, however the window and chimney details suggest construction in the second half of the nineteenth century. As such, it is unlikely that this structure was Badgery's farmhouse.

A 1955 aerial photograph of the property shows a smaller hipped roof structure located several metres from the rear of the later brick homestead. It is possible that this structure was the original farmhouse, which was joined under a short covered passage to the later farmhouse. Any verandah(s) and skillions appear to have been removed when the larger adjacent house was constructed. The smaller structure, potentially the original farmhouse, was demolished before 1961, as the second aerial photograph indicates. Further, this image also indicate the presence of a rear verandah extended around the house with two skillions added; one possibly functioning as a kitchen. This phasing for demolition of the smaller structure between 1955 and 1961 supports the timing of the Nobbs family excavation of the footings in 1973.

During preparation of this report attempts were made to better locate the area in which the farmhouse was located on Badgery's property during the early years of the nineteenth century. A search through the land records held in the State Archives and State Library of New South Wales was undertaken. From the correspondence of the colonial secretary, there is a copy of a letter sent to James Badgery in 1818 notifying that James Meehan, the assistant surveyor, was planning to pass through his property in early 1819 with the intention of surveying his property, along with the farms nearby.³¹ The purpose of Meehan's visit was to consolidate the boundaries between different farms to ensure accurate, precise records of the boundaries between properties were maintained. After consulting Meehan's sketch and field books, only passing mention was made of James Badgery's farm on South Creek, and little information was given on the location of possible structures.³² Further research was conducted in locating other references to the property in the State Archives such as the primary

²⁸ Hardy, 1989, p. 32

²⁹ Hardy, 1989, p. 32

³⁰ Hardy, 1989, p. 33

³¹ Ancestry.com. *New South Wales, Australia, Colonial Secretary's Papers, 1788-1856* [database on-line]. Provo, UT, USA: Ancestry.com Operations, Inc, 2010 p. 19617.

³² Surveyor General sketch book folio 1-133 [extracted material] SA Reel 2782; NSW Surveyor General Field-book Number 137, Location 2/4789 SA Reel 2623. Both references are for Meehan's 1817-1819 tour of New South Wales.

application packet and older maps.³³ Whilst these illuminated the history of the land transfer of the property, no map or plan other than the crown plan in figure 20 was found to contain structures.

The Badgery and Roberts family

The Exeter Farm land grant, as issued by Governor Macquarie, was in the possession of James Badgery until his death in 1827. Badgery died on 1 December 1827, aged 58, and was buried in St. Luke cemetery, Liverpool.³⁴

Following James' death, Elizabeth Badgery stayed at Exeter Farm until 1839, when she relocated to a property managed by Andrew Badgery near Braidwood, also called Exeter Farm. Elizabeth remained at that property until her death in 1849.³⁵ Henry Badgery moved to the family's Spring Grove Property at Sutton Forest, where he died in 1880. James Badgery's son, James, moved to an adjacent property, 'Woodbine Cottage Estate', where he died in 1844 at the age of 32.

The Badgery and Roberts family were close associates in horse racing and livestock, with Andrew Badgery being close friends with William Roberts.³⁶ James Badgery had a successful business partnership selling his cattle to William Roberts father, a butcher in Castlereagh Street in Sydney. In 1823, Ann Badgery married William Roberts, and this contributed to the Roberts family becoming more involved in the management and ownership of Exeter Farm. William Roberts' brother, Thomas Roberts, is referenced frequently in later advertisements and notices relating to Exeter Farm. William Robert's brothers included Charles Roberts and Thomas Roberts, both of who are referenced in future advertisements and notices relating to Exeter Farm.

Although living at and managing Exeter Farm near Braidwood, it appears that Andrew Badgery was involved in the management of Exeter Farm, South Creek following James' death in 1827 and Elizabeth's move to Jembaicumbene in 1839. Andrew placed an advertisement in 1848 states that Exeter Farm, consisting at that time of 900 acres, was to be leased, following the expiry of the current ten year tenure by Thomas Roberts.³⁷ In 1853, Charles Roberts is described as purchasing from Andrew Badgery the adjacent property, Woodbine Cottage Estate.³⁸

In 1853 Thomas Roberts of Exeter Farm, South Creek, published a number of notices in The Sydney Morning Herald cautioning shopkeepers that he would not be responsible for any goods procured on his account without his express written authority.³⁹ This was mostly directed to his son, Charles Hutchinson Roberts, who was freely using his father's credit for his own ends.⁴⁰ In 1855 Thomas Roberts purchased a hotel in Parramatta, "The Red Cow", with the intention of residing there.⁴¹ Thomas Roberts is recorded as passing away at that property in 1858 at the age of 48, and buried in the family vault in the Old Burial Ground, Sydney.⁴² He was noted as being a promoter of 'turf pursuits' and improvement of 'colonial stock'.

³³ NSW State Archives, Primary Application – Henry Horton, Parish of Claremont County of Cumberland PA 24574; The Old Rolls reference in the Parish Maps are available as aperture cards. C320 – 1688; S331 – SZ442, S288 – SZ438

³⁴ The Sydney Gazette and New South Wales Advertiser Friday 7 December 1827, p.3; Nepean Times, Saturday 1 October 1932, p. 6

³⁵ Western Sydney Libraries, accessed 24 March 2019, <http://www.westernsydneylibraries.nsw.gov.au/westernsydney/james.html>

³⁶ Hardy, 1989, p. 32

³⁷ The Sydney Morning Herald, Monday 23 October 1848, p. 4

³⁸ Accessed 26 March 2019: https://research-data.westernsydney.edu.au/redbox/verNum1.9/default/detail/64a2d42b042b2b209beb0eb589ca5501/SouthCreekListon_final.csv

³⁹ The Sydney Morning Herald, Thursday 17 November 1853, p. 2; *Ibid* Tuesday 22 November 1853, p. 2

⁴⁰ The Sydney Morning Herald, Sat 26 Nov 1853

⁴¹ The Sydney Morning Herald, Thursday 25 October 1855, p. 8

⁴² Bell's Life in Sydney and Sporting Reviewer, Saturday 17 April 1858, p. 2

In 1856 there is record of Charles Hutchinson Roberts⁴³ wife giving birth to a daughter at Exeter Farm, South Creek in 1856.⁴⁴ In 1859 Thomas John Roberts⁴⁵ instructed an auctioneer to sell all his stock and farm implements, including thoroughbred horses, saddles and cart horses, cows and pigs.⁴⁶ However, Charles' debts were not entirely absolved through these sales, and in 1861 insolvency proceedings were initiated by his creditors. He was able to retain his interest in Exeter Farm, but some of the other properties in Charles' name were sold.⁴⁷ Mr Roberts was asked to show cause as to why his property should not be placed under sequestration for the benefit of his creditors.⁴⁸ His property is described as household furniture, farming implements, hay and other miscellaneous farm goods.

Thomas Roberts had been in possession of Exeter Farm, according to one advertisement in the Sydney Morning Herald, since 1838. The advertisement read of two properties, Melton and Exeter Farm, both situated on South Creek, that were to be let by Thomas Roberts who had been in possession of both for the last ten years. The estate of Exeter Farm, "comprising of 900 acres, of which 300 are cleared, and all fenced in." Inquiries were directed to Andrew Badgery at the Saracen's Head Inn, on King St and Sussex St. It is most likely that Exeter Farm was operated by both Thomas Roberts and Andrew Badgery at this point.

Neighbouring property - Woodbine Cottage Estate

James Badgery's son, James died 21 December 1844 at 'Woodbine Cottage, South Creek'.⁴⁹ 'Woodbine Cottage Estate' was put up for sale in 1845, and described as following:

*'The Woodbine Cottage Estate, situated and bounded on the Parramatta side of South Creek, consisting of 150 acres, near "Fleurs". The Cottage contains 6 rooms, mostly plastered, and fit for the reception of a respectable family – neat verandah, detached kitchen, store, five-stall stable, good barn, and a garden orchard of 6 acres, all paled in. Of the farm, 100 acres are cleared, 20 of which are now under crop – hay and wheat, and the whole fenced in'*⁵⁰

The description above of Woodbine Cottage Estate suggests it was located on the eastern side of South Creek, opposite Exeter Farm. From review of historical aerial imagery it is possible that Woodbine Cottage may have been located approximately 1.2 km east of the Exeter Farm homestead.⁵¹ This places cottage on the eastern side of South Creek, as per the description above from the Morning Chronicle.

4.2.2 Later Ownership and Subdivision of Exeter Farm

In 1855, the trustees of Thomas Roberts' estate sold Exeter Farm. It was purchased by James Boyd McKaughan purchased the farm at this time, as he had other interests in the area. Upon McKaughan's death in 1893, it was sold to Henry Penton Stevens, who lived at Exeter Farm between

⁴³ Born 1833, son of Thomas Roberts and Hannah Hutchinson

⁴⁴ The Sydney Morning Herald, Saturday 13 December 1856, p. 1

⁴⁵ Born 1831, son of William Roberts and Ann Badgery

⁴⁶ The Sydney Morning Herald, Saturday 8 January 1859, p. 11

⁴⁷ The New South Wales Government Gazette, Friday 26 September 1862, p. 1851.

⁴⁸ Empire, Saturday 5 October 1861, p. 5

⁴⁹ The Sydney Morning Herald Thursday 9 January 1845, p.2, The Sydney Morning Herald Tuesday 15 April 1845, p.1

⁵⁰ Morning Chronicle, Wednesday 23 July 1845, p. 3

⁵¹ Roads and Maritime Services, 2016, 'M12 Motorway Strategic Route Options Analysis: Heritage Working Paper', p. 32

1906 and 1915. Alongside the engineer Ern Kent, who purchased nearby land to Exeter Farm, they worked the farm together to sell grapes and wheat alongside dairy cattle.

In 1893, the advertisement for the sale of Exeter Farm read “One thousand one hundred and fifteen acres, having frontages to Mulgoa Road and Western Road, and well-watered by Badgery and South Creeks. The property is fenced and divided into paddocks, portions of which are cleared, and some portions have been cultivated. There are 2 cottages and outbuildings on the estate.”⁵² The advertisement was aimed at dairy farmers, graziers and speculators. It was around this time larger estate became broken into smaller farms for sale. One such advertisement indicates the plan of the subdivision. Lack of a railway into the area did discourage many people from settling into the area. In the aftermath of the First World War, some of the land was again subdivided as part of the resettlement for returned soldiers.

In 1920, Exeter Farm and the surrounding farm land was sold by the Lands Department to Huie Clarence Bowden as part of the Solider Settlement Scheme that had been implemented since 1916 to give returned soldiers access to country land at affordable prices.⁵³ Huie Clarence Bowden had enlisted in the 34th Australian Infantry Battalion in August 1915, where he possibly fought in the battles of Amiens and Villers Bretonneux. Bowden then returned to Australia and was discharged on the 6 May 1919 with the rank of corporal.⁵⁴ Bowden did not farm for long at Exeter Farm; he sold the farm to Ern Kent in 1921, possibly due to the difficulties of getting dairy products to market.

In 1946, Kent sold his share of the farm to Mervyn Jospeh Nobbs, who had in the preceding years rented farm land in Exeter for their dairying. The Nobbs family retained the farm throughout the twentieth century. Nobb's young son remembered during the Second World War the construction of the nearby Fleurs airstrip which almost caused the demolition of Exeter Farm house because it was under the flight path.⁵⁵



Figure 3: Ploughing on the Nobbs farm, note the later 19th century brick farmhouse at Exeter Farm in the background.

4.2.3 Elizabeth Drive

Elizabeth Drive dates from the early 1800s and was originally constructed as a ‘corduroy’ road, using round logs as a base. It was established to provide access to local land grants and was originally

⁵² The Sydney Morning Herald. Sat 1 April 1893

⁵³ A Land fit for Heroes? A History of Soldier Settlement in New South Wales, 1916-1939
<<https://soldiersettlement.records.nsw.gov.au/>> Accessed 30.4.2019

⁵⁴ Corporal Huie Clarence Bowden’, < <https://www.awm.gov.au/collection/P10703866> > Accessed 30.4.2019

⁵⁵ A Little Bit of Country, p. 42.

known as the Orphan School Road as it extended west from the Orphan School in what is now Bonnyrigg. Its name was later changed to Mulgoa Road, in reference to its western extent, but subsequently changed again in 1964 to honour the visit of Queen Elizabeth II.⁵⁶

⁵⁶ NSW Government Gazette, Friday 18 December 1964 Issue 144 p. 4158

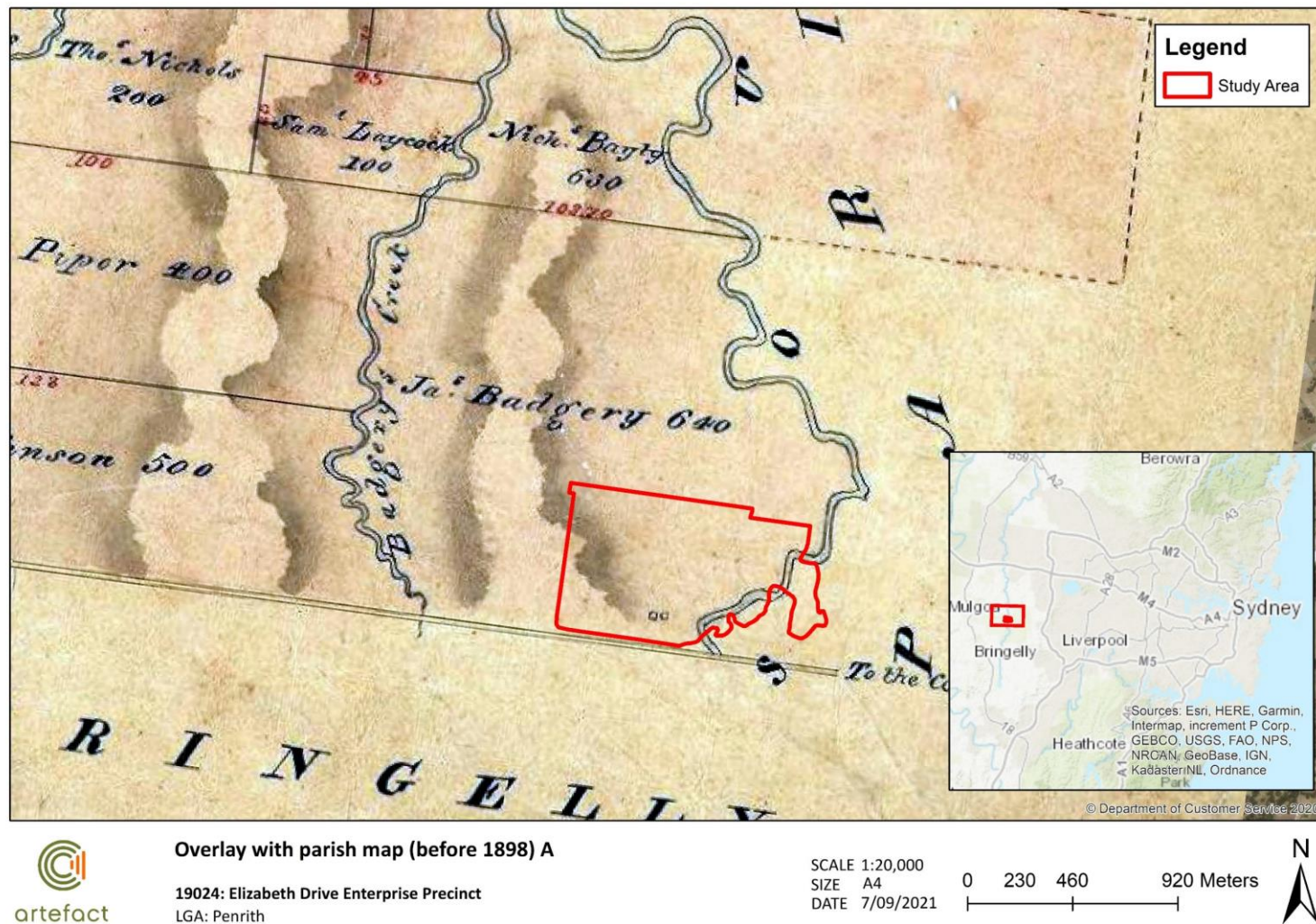


Figure 4: Overlay of study area on Parish Map (likely mid-nineteenth century)

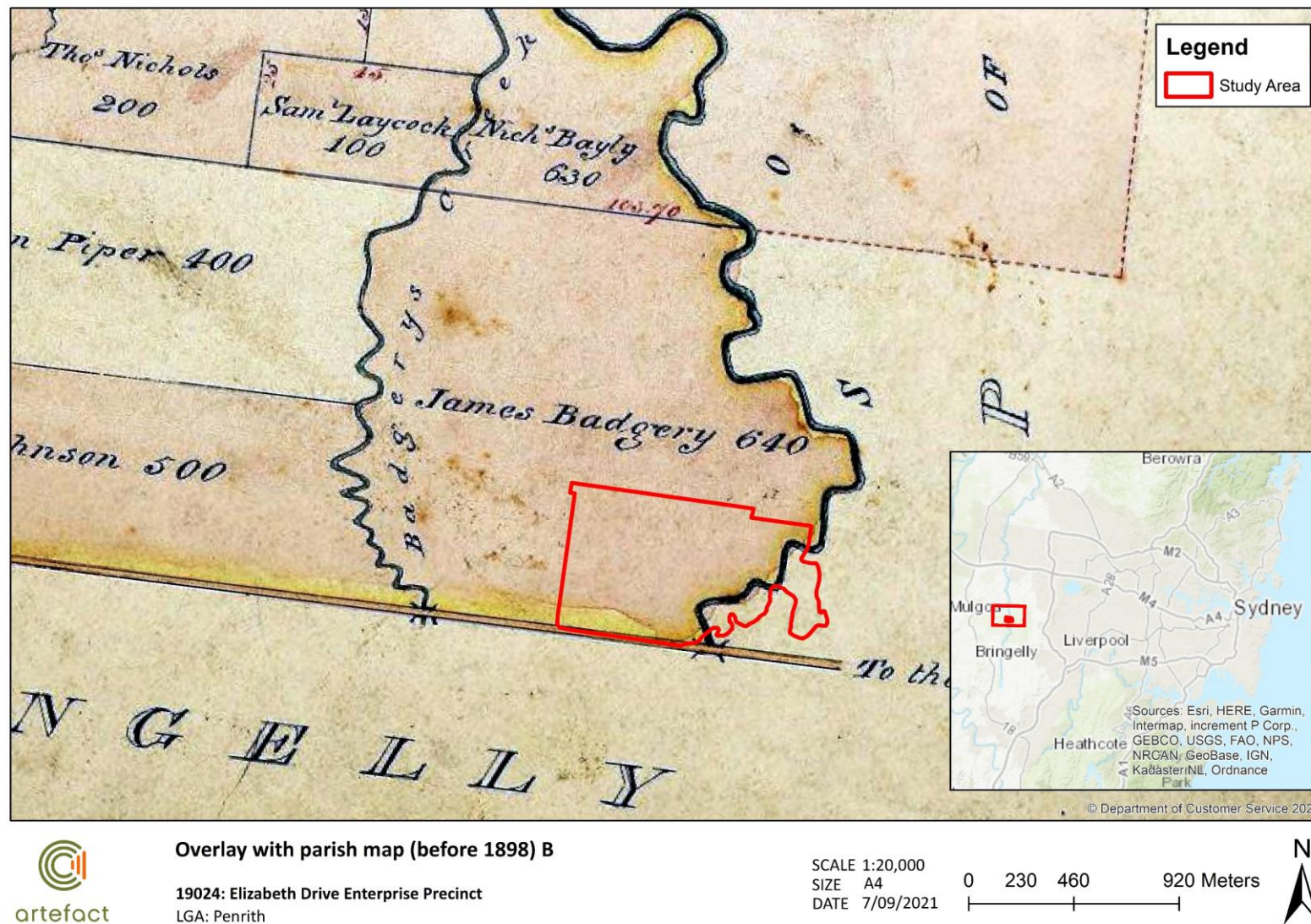


Figure 5: Overlay of study area over parish map (late nineteenth century)

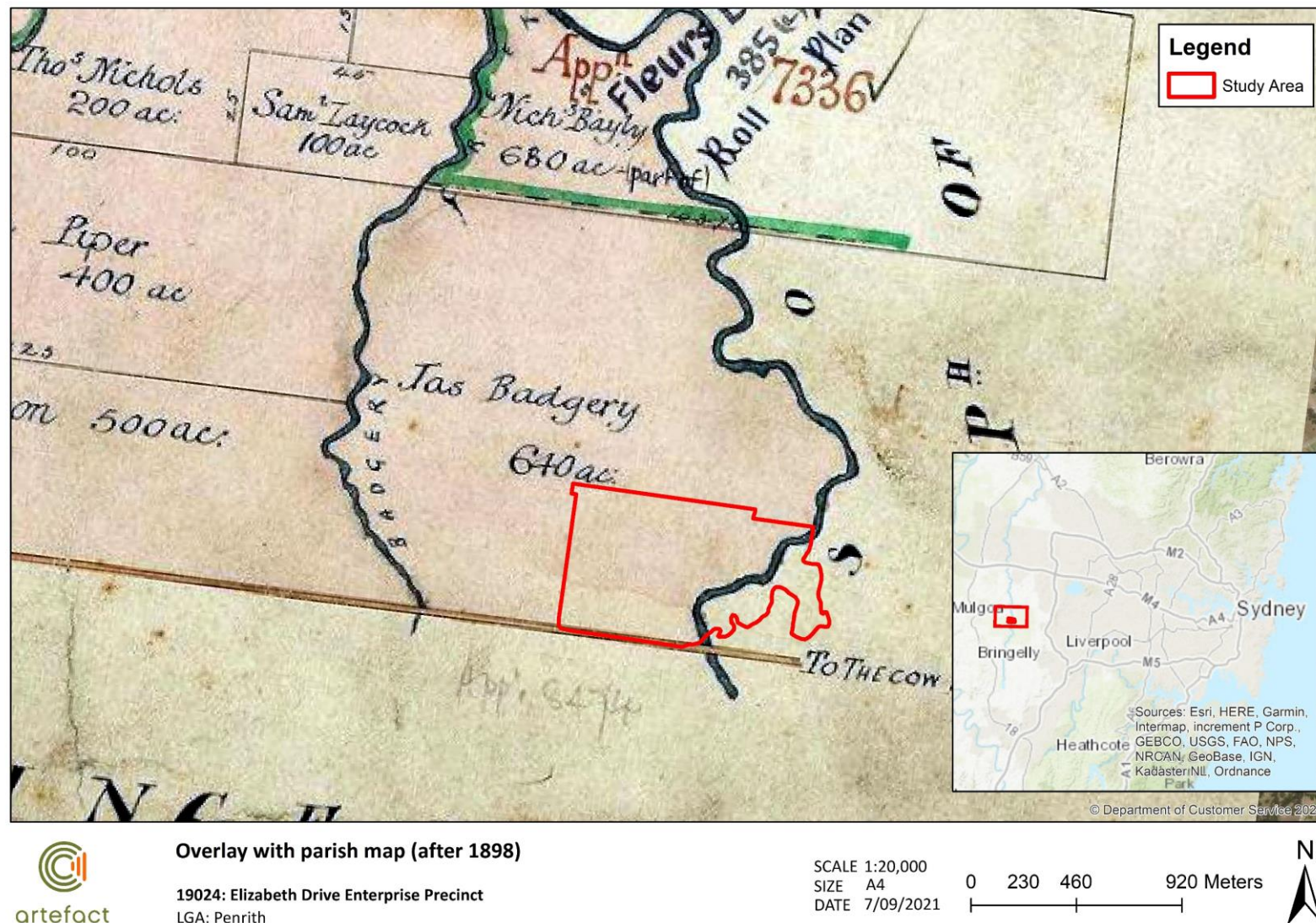


Figure 6: Overlay of study area over parish map (ca 1998 – 1918)

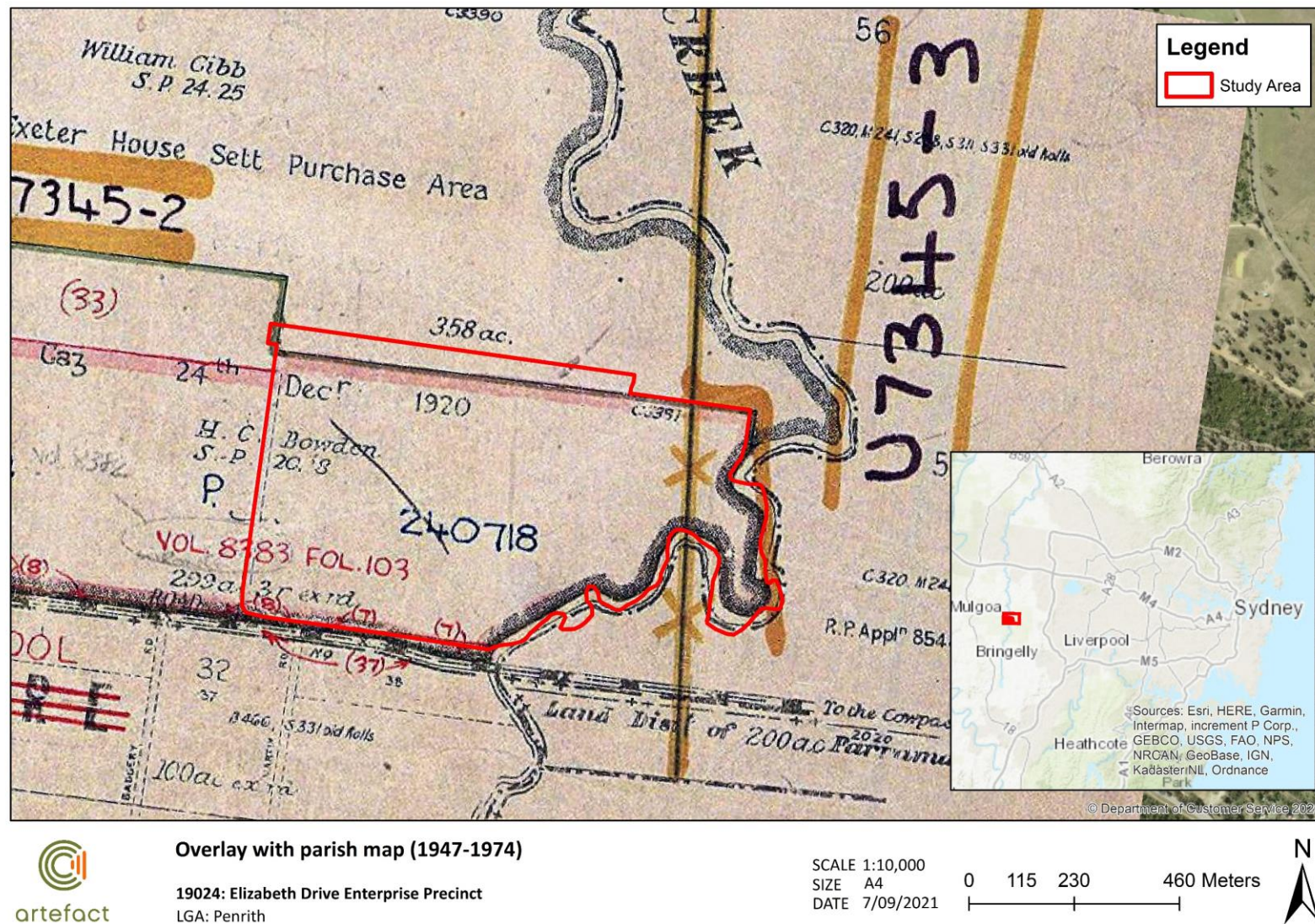
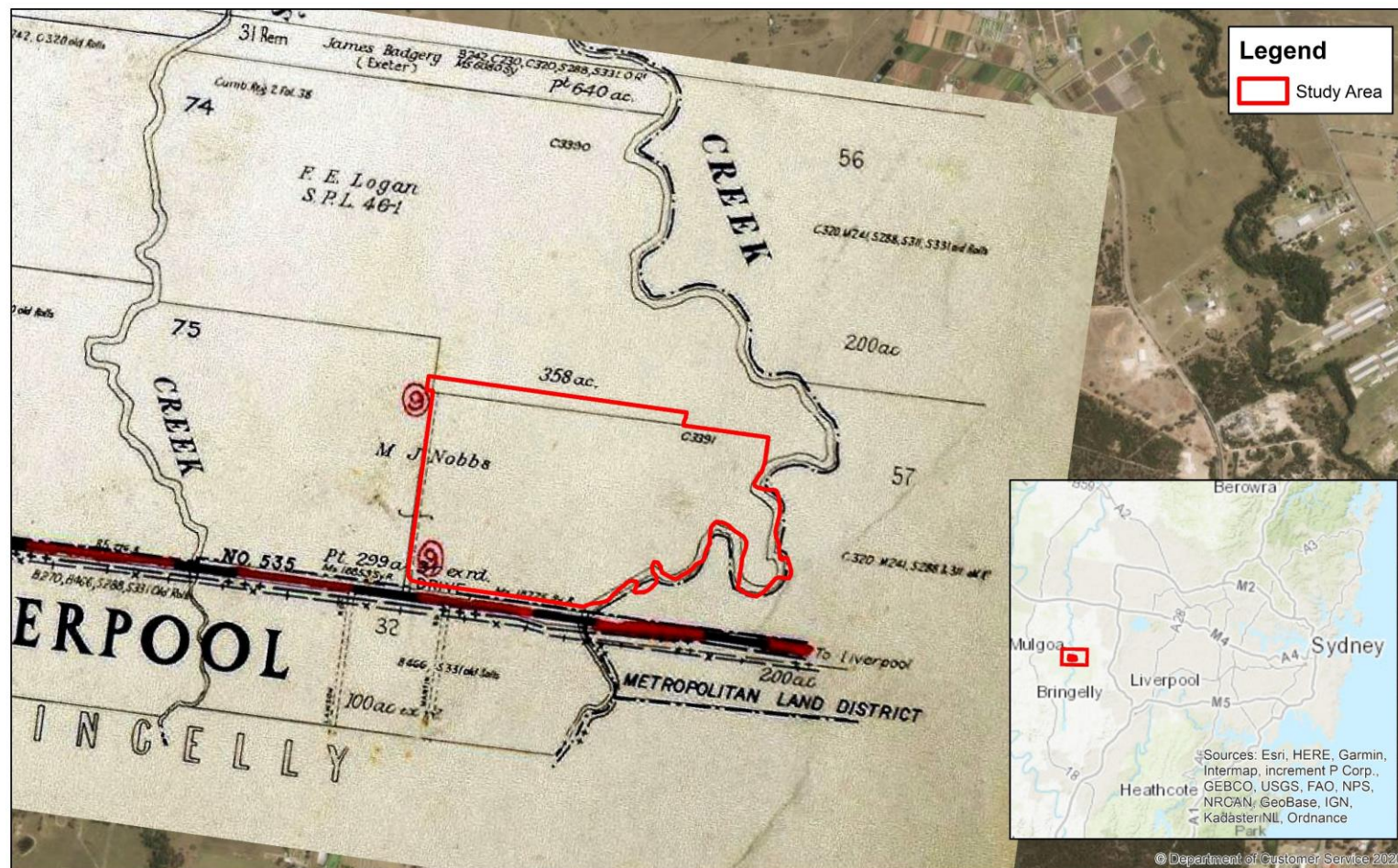


Figure 7: Overlay of study area over parish map (ca 1947 – 1974)



Overlay with parish map (1972-1974)

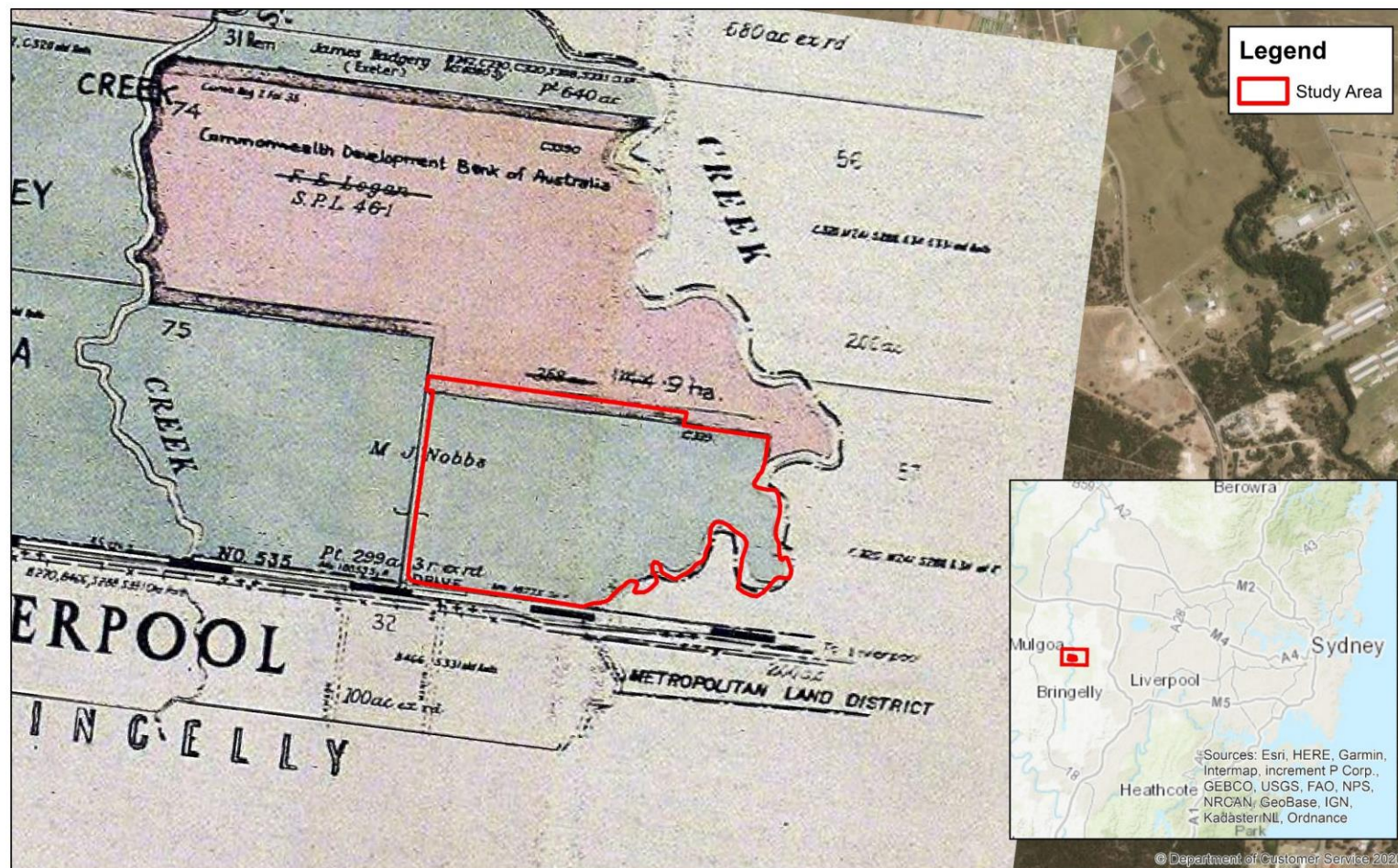
19024: Elizabeth Drive Enterprise Precinct
LGA: Penrith

SCALE 1:15,000
SIZE A4
DATE 7/09/2021

0 170 340 680 Meters



Figure 8: Overlay of study area over parish map (ca 1972 – 1974)



Overlay with parish map (1972-1988)

19024: Elizabeth Drive Enterprise Precinct
LGA: Penrith

SCALE 1:15,000
SIZE A4
DATE 7/09/2021

0 170 340 680 Meters



Figure 9: Overlay of study area over parish map (ca 1972 – 1988)

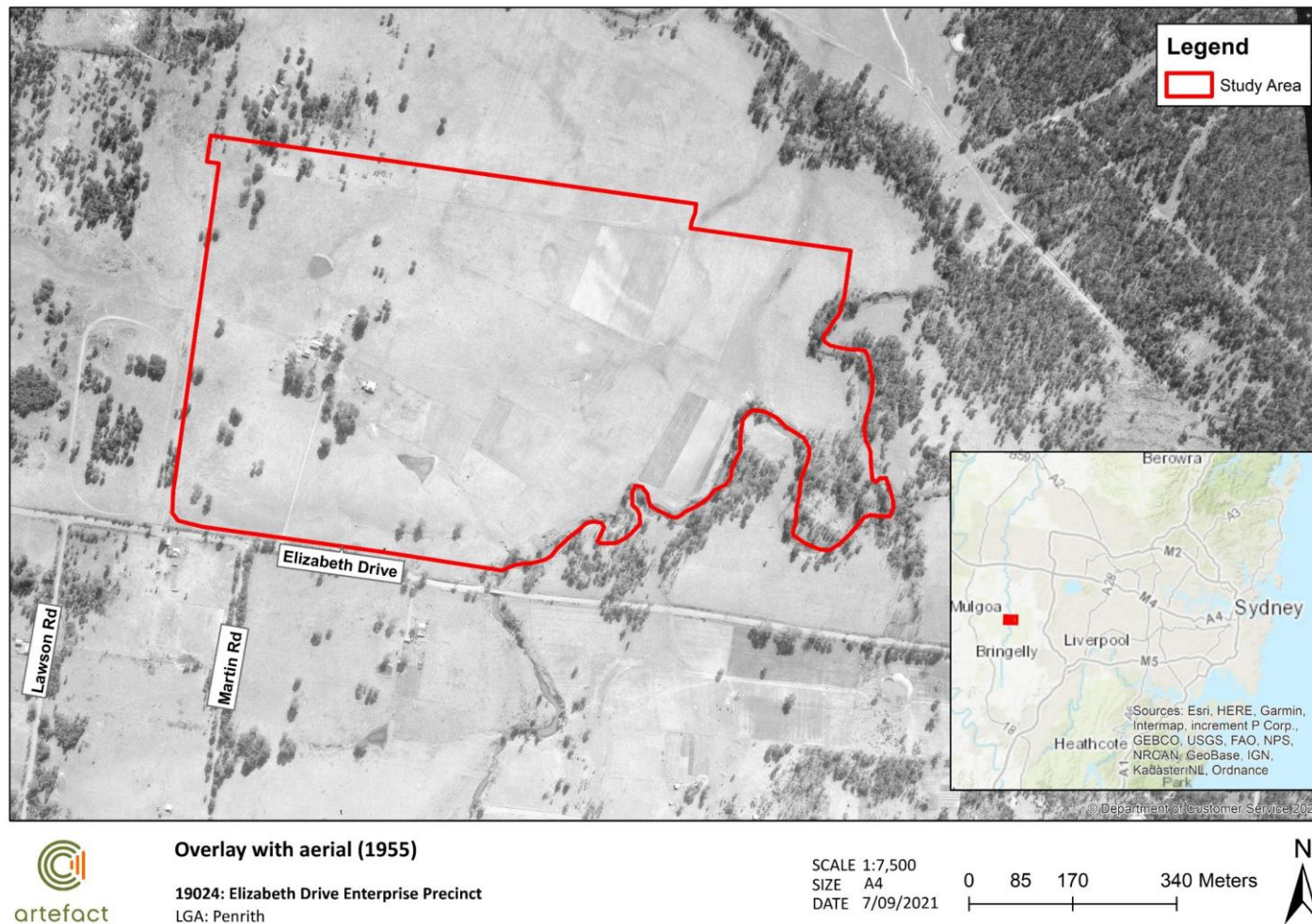


Figure 10: overlay of study area over 1955 historical aerial photo

4.3 Historical development

The following provides an overview of the historical context of the study area taken primarily from the SoHI⁵⁷ and ARD prepared for the project.⁵⁸ These documents have been submitted to Heritage NSW, DPC in support of s139 exception application DOC19/1036338. Additional historical context is included in these documents.

Based on historical research and aerial imagery for the Exeter Farm site, construction and demolition events within the study area are summarised in Table 4.

Table 4: Overview of historic land use and associated structures in the study area

Date	Structures in study area
c.1809	<p>Construction of wattle and daub residence. It is possible that this included the construction of basic amenities, including a separate kitchen, skillions, outbuildings and wells/cisterns.</p> <p>It is assumed that this period would also have seen the clearing of area around the house for later construction of Exeter House, construction of fencing and establishment of gardens.</p> <p>The study area would initially have required vegetation clearing. Land clearing activities are typically archaeologically ephemeral, as is the use of partially cleared land for grazing of livestock.</p>
1810 - 1812	Enclosure of the land with fencing, divided into paddocks with stockyards and a large garden by the house.
1823	Description of the property as comprising a convict quarters, hut for the overseer near the back fence, hut for the blacksmith and his wife, Exeter Farm farmhouse, and a barn.
1869	Description of the property as a notable dairy farm in the area
1920	Crown plan made, property briefly used as part of the Soldier Settlement Scheme
c.1930	Construction and improvement of buildings for continued dairying operations
c.1955-1961	Possible date for the demolition of the original brick farmhouse
1973	Excavation of a part of the footings of the original farmhouse by the land owners at that time (Nobbs) and descendants of the Badgery family. The two 1799 English farthings placed under the foundations by James and Elizabeth Badgery were retrieved during these works. The precise location of this building was not clearly identified.
Pre September 2006	Later brick farmhouse and remaining farm structures demolished.

The development of the study area has been divided into the phases outlined in Table 5. The development of the site in terms of structural remains is illustrated in Figure 11.

⁵⁷ Artefact 2019a.

⁵⁸ Artefact 2019b.

Table 5: Historical phases of land use in the study area

Phase	Date	Historical activities
Phase 1: Badgery Land Grant	1809 – 1839	Land grant to James Badgery, land clearing, construction of original wattle and daub residence, brick farmhouse, blacksmith workshop, convict accommodation and farm sheds.
Phase 2: 19th C. Dairy	1840 – 1920	Property is taken up by the Roberts family and is known to be a notable dairy by the 1860s. The brick farmhouse (demolished in 2006) was constructed during this time to replace the original brick farmhouse as the primary residence.
Phase 2: 20th C. Dairy	1921 - 2006	Brief use as part of Soldier Settlement Scheme, owned by Kent and Nobbs families as an active dairy during this time. The western annex to the late 19 th c. farmhouse and possible brick cottage in the northern paddock are demolished in the late 1950s
Phase 4: Modern use	2006 – present	Residential buildings, sheds and barns demolished, and the property used for agistment.

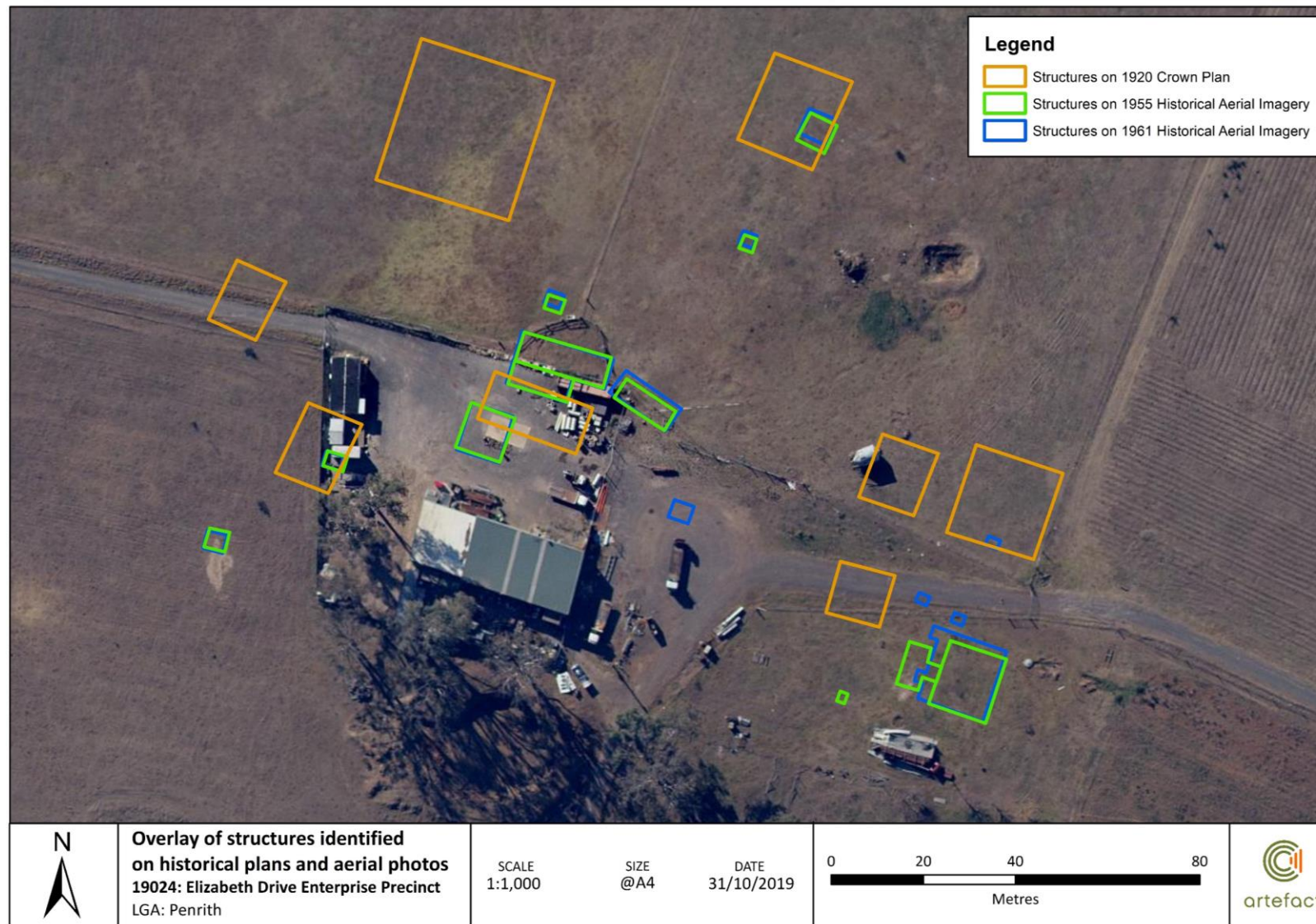


Figure 11: Overlay of structures in the study area from the 1920 crown plan, and 1955 and 1961 aerial photographic imagery

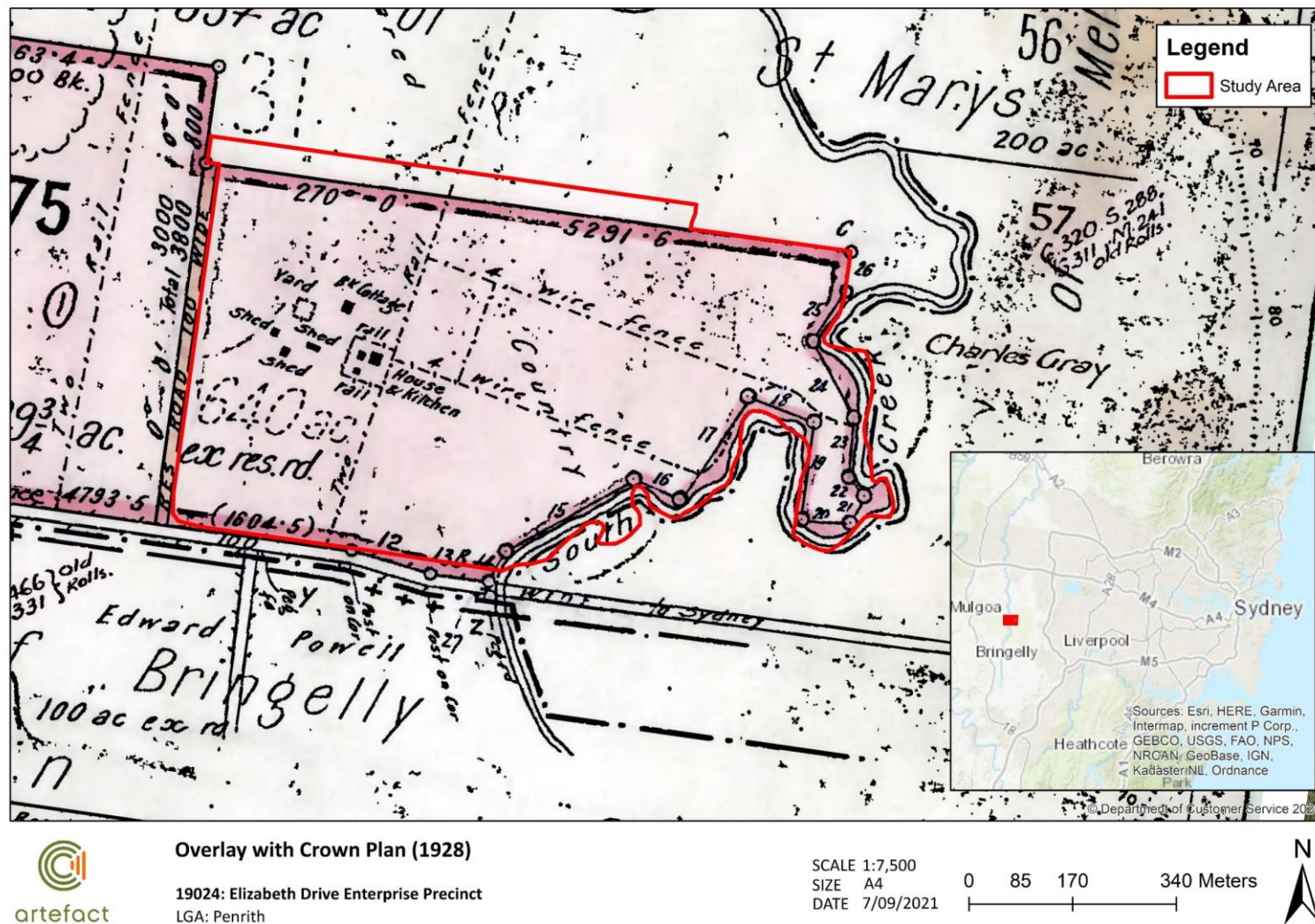


Figure 12: 1928 Crown Plan showing extant structures at that time

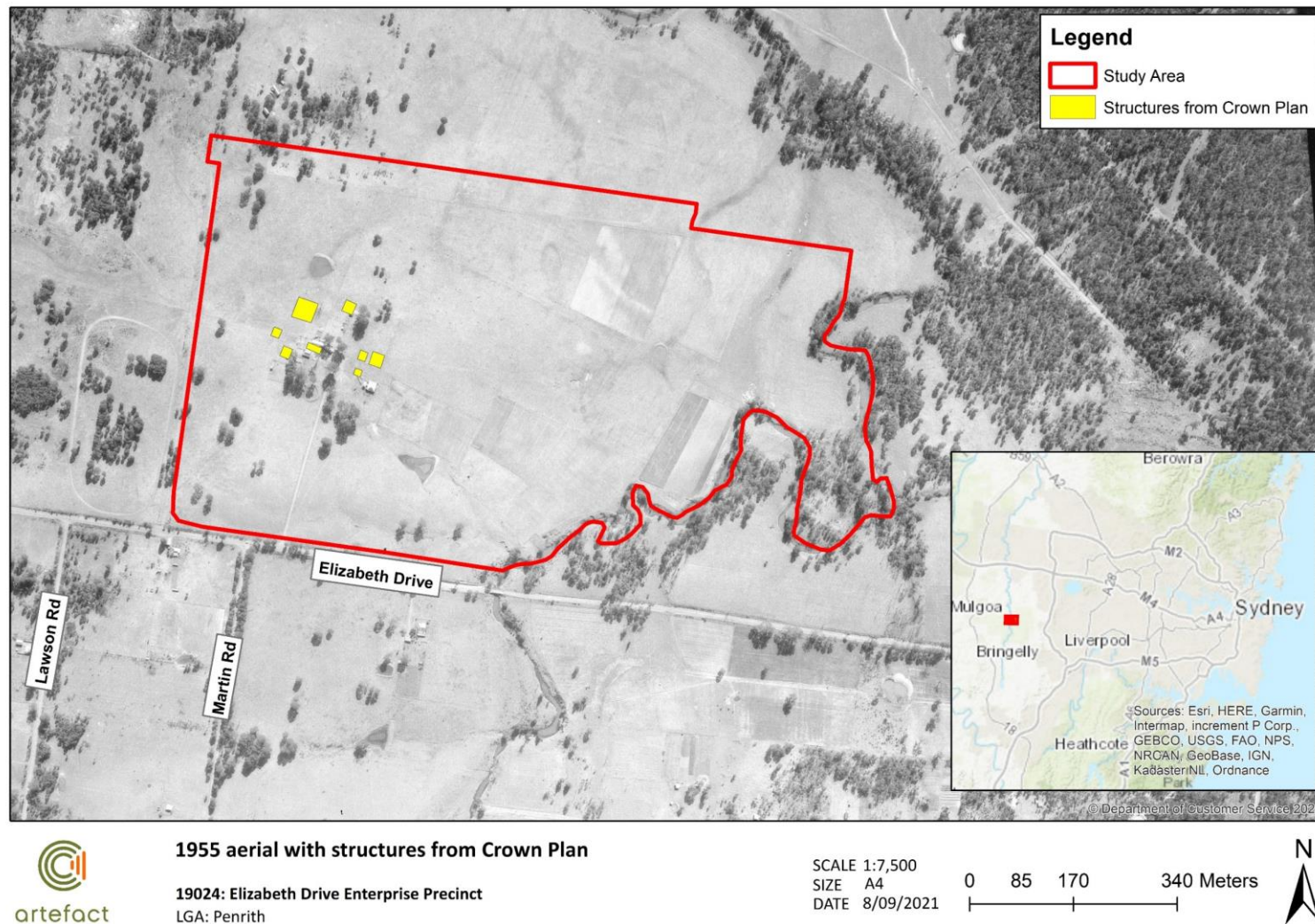


Figure 13: Overlay of 1928 Crown Plan over 1955 historical aerial imagery

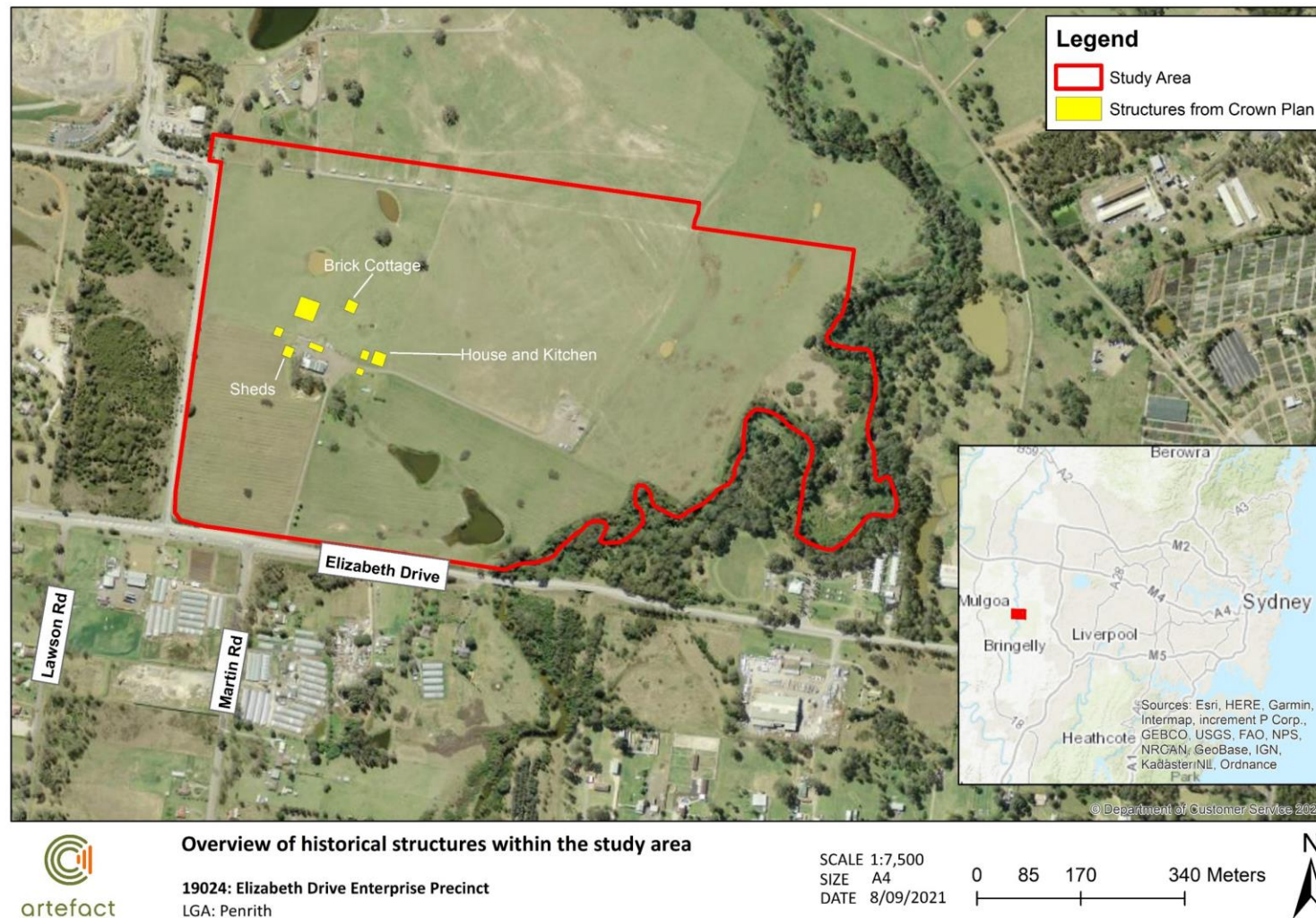


Figure 14: Overview of historical structure within study area

5.0 SITE INSPECTION

5.1 Introduction

An archaeological and heritage site survey was undertaken on 20 March 2019. The survey was supervised by Alyce Haast (Senior Heritage Consultant, Artefact Heritage) with Ryan Taddeucci (Senior Heritage Consultant, Artefact Heritage) and Steve Randall (Deerubbin Local Aboriginal Land Council) in attendance. The aim of the site inspection was to assess the heritage significance of any built fabric on the site and to assess ground surface conditions for any evidence of potential archaeological remains and evidence of ground disturbance. The inspection was undertaken on foot and a photographic record was made.

An addendum site survey was undertaken by Julia McLachlan (Senior Heritage Consultant), on the 27 August 2021 to inspect the extension of the study area on the northern boundary of the study area.

5.2 Site setting

The study area is located on a gentle hillslope and low-relief ridgeline located directly to the north of Elizabeth Drive. The eastern portion of the study area descends at a low gradient towards South Creek, with the high point on the ridgeline located roughly 200 metres to the east of the study area's western boundary.

The majority of the study area consists of open fields and pasturage, with several artificial dams on the property.

5.3 Built structures

Several structures are present on the site located in the western portion of the study area, situated on the crest of the low ridgeline. These buildings consist of several small demountable structures and sheds which surround a gravel and concrete covered car park and turning area. Several juvenile eucalyptus trees surround these buildings. This portion of the study area has accumulated modern rubbish and stockpiled goods.

5.4 Results

No potential archaeological resources were identified on the ground surface relating to the Exeter Farm were identified during the site inspection undertaken on the 20 March 2019 and 27 August 2021.



Figure 15: View of open grassland and ridgeline from near South Creek, west aspect



Figure 16: View of built structures on ridgeline, north west aspect



Figure 17: Gravelled car turning area and stockpiled building materials. Tin shed visible in background. South-west aspect.

6.0 ARCAHEOLOGICAL TEST EXCAVATION

6.1 Introduction

In 2020, Mirvac engaged Artefact to prepare a non-Aboriginal Archaeological Research Design (ARD) in support of an application for a section 139 exception (s139) for archaeological testing under the Heritage Act (approved by Heritage NSW, Heritage NSW, DPC on 8 January 2020, DOC19/1036338).

The test excavation program confirmed that the study area contains locally significant archaeological relics associated with the second Exeter Farm house (c. late 1800s, locally significant) and works associated with a post-1920 farm building (does not reach the local significance threshold). No evidence of state significant archaeological remains associated with the early development of the site were identified, including the wattle and daub cottage (first house of Badgery Family, 1809 – 1810/1812) and the first brick Exeter Farm House (constructed c. 1810).

6.2 Test excavation methodology

The primary aim of the test excavation was to ascertain the location of former structures of the property and identify the provenance and potential significance of the remains to inform the future management of the site. To do this the test excavation program targeted locations that had a higher likelihood of containing surviving subsurface structures and intact artefact-bearing deposits, such as cesspits, yards, outbuildings and structural footings.

6.3 Test excavation results

An archaeological test excavation was conducted under a s139 exception DOC19/1036338, between 9 – 20 March 2020. A total of five test trenches were excavated in accordance with the methodology outlined in the ARD and illustrated on

Figure 22.⁵⁹

A summary of the findings from each test trench is included in Table 6 below.⁶⁰

The test excavation findings have contributed to the partial revision of the assessment of archaeological potential completed in 2019.

The testing program did not identify remains associated with historical Phase 1 in the location determined to be most likely to contain such resources. However, the site retains the potential to contain evidence of this phase below the remains of the second Exeter house.

The second most likely location of the Phase 1 Exeter farmhouse was determined to be the ridgeline, currently occupied by an asphalted laydown area. This area was archaeologically tested and found to be truncated down to the natural clay. This likely occurred during establishment of the laydown. Consequently, it was determined that the landscaping activities near TT 4 and TT 5 have likely had a greater impact on potential archaeological deposits than originally anticipated. It is unlikely archaeological remains, with the exception of deeper subsurface structural remains (wells, cisterns, etc), survive intact in this location.

⁵⁹ Artefact 2019b.

⁶⁰ Artefact 2020. *Elizabeth Enterprise Precinct, Historical Archaeological Test Excavation Results*. Report prepared for Mirvac.

Table 6: Discussion of test trench locations as outlined in the ARD

Test Trench Number	Assessed potential	Testing results
TT 1	Evidence of former 'brick cottage' identified on the 1920 crown plan (possibly first Exeter Farm homestead)	Concrete and brick footings and postholes associated with a post-1932 agricultural building
TT 2	Evidence of the western annex to the second Exeter Farm House (possibly associated with the first Exeter Farm homestead)	Remains of the second Exeter Farm house western annex were present in the form of brick footings and flooring. The brick and mortar used suggests a construction date between c.1860 and 1890. Artefacts identified dated into the 1930s. External features included a brick surface and cistern.
TT 3	Evidence of the second Exeter Farm House and its structural relationship with the western annex (and possible first Exeter Farm brick homestead)	Remains of the second Exeter Farm house were present in the form of brick and sandstone footings. The bricks and mortar were consistent with those identified in TT 2.
TT 4 and TT 5	Evidence of a former shed or stable identified in the 1920 crown plan	No archaeological remains identified, the area had been truncated to the underlying natural clays



Figure 18: Northwest view showing the location of the brick wall <028> in relation to the remains of the western annex



Figure 19: Southeast profile view of TT 3 at the eastern end of the western annex, with the mortar like layer (010) transitioning to (060) as it moves outside the former structure



Figure 20: Northwest view off TT 3 showing the location of the sandstone footings <029>



Figure 21: Northeast detail view of the sandstone footings <029> of the second Exeter Farm House

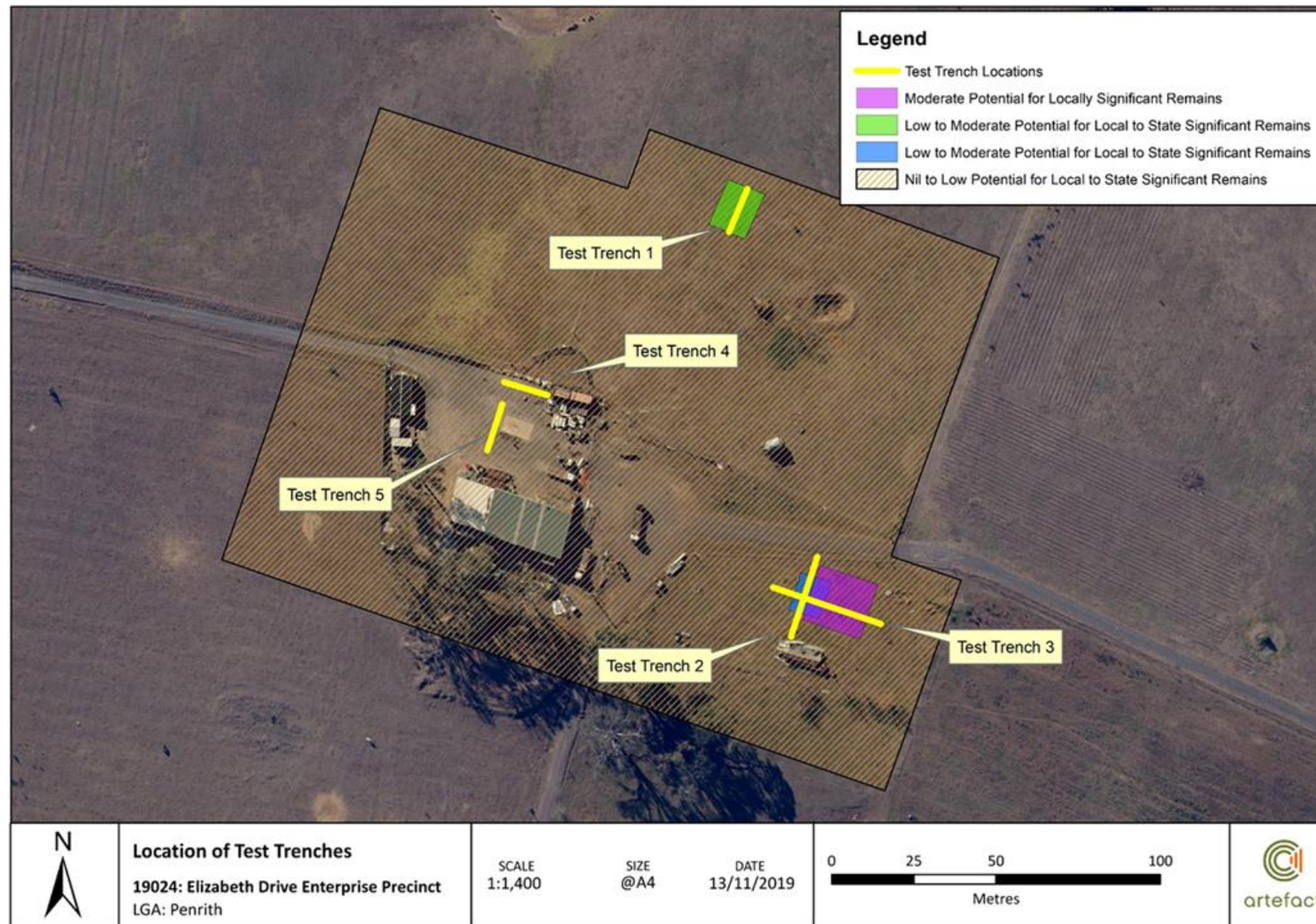


Figure 22: Locations of archaeological test trenches and archaeological potential as assessed in the 2019 ARD

6.3.1 Aboriginal heritage test excavation

Artefact Heritage was engaged by Mirvac to conduct Aboriginal archaeological test excavations for the project across two Potential Archaeological Deposits (PADs) identified during production of an Aboriginal Archaeological Survey Report (ASR).⁶¹ Test excavation of PAD01 and PAD02 was undertaken in accordance with the Code of Practice⁶² between 17 February and 6 March 2020 (see Figure 24)⁶³

A total of 88 excavation units (excavation unit = 50 centimetres by 50 centimetres) were excavated across two testing areas. A total of two excavation units were expanded to 1 m x 1 m test pits (comprised of four individual excavation units) where comparatively higher densities of Aboriginal objects were recovered. An additional excavation unit was also placed 10 metres from an existing high-density pit to further investigate the geographic distribution of the high-density deposit within the established requirements of the Code of Practice.

A total of 89 artefacts were retrieved during excavation, including nine artefacts produced from nineteenth century 'black' bottle glass (Figure 23).⁶⁴ These artefacts were assessed as being intentionally manufactured tools.⁶⁵

Badgery family history provides an account of the family assenting to a small group of Aboriginal people to camp on South Creek within their property, prior to the Badgery family leaving the property by the mid-1830s.⁶⁶ While this account is not directly corroborated, it is evidence that Aboriginal people may have camped on the property during Badgery's ownership. It is possible the worked glass artefacts are evidence of contact between Aboriginal people and the occupants of Exeter Farm. The resource has been assessed as having a high level of scientific significance.⁶⁷ The Aboriginal Archaeological Test Excavation Report has recommended that an area based Aboriginal Heritage Impact Permit (AHIP) is obtained for those portions of the study area to be impacted by the proposed works, to allow the surface collection of artefacts and targeted salvage excavation

⁶¹ Artefact Heritage, *Elizabeth Precinct Stage 1, Archaeological Survey Report*, Report to Mirvac Projects Pty Ltd, 2019

⁶² Department of Environment, Climate Change and Water NSW, *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*, September 2010

⁶³ Artefact Heritage, *Elizabeth Enterprise Precinct Stage 1, DRAFT Aboriginal Test Excavation Report* for Projects Pty Ltd, April 2020

⁶⁴ Artefact Heritage, April 2020, p.50

⁶⁵ Artefact Heritage, April 2020, p.50

⁶⁶ Hardy 1989: 19

⁶⁷ Artefact Heritage, April 2020, p.76



Figure 23: Glass artefacts recovered from EP AS 02

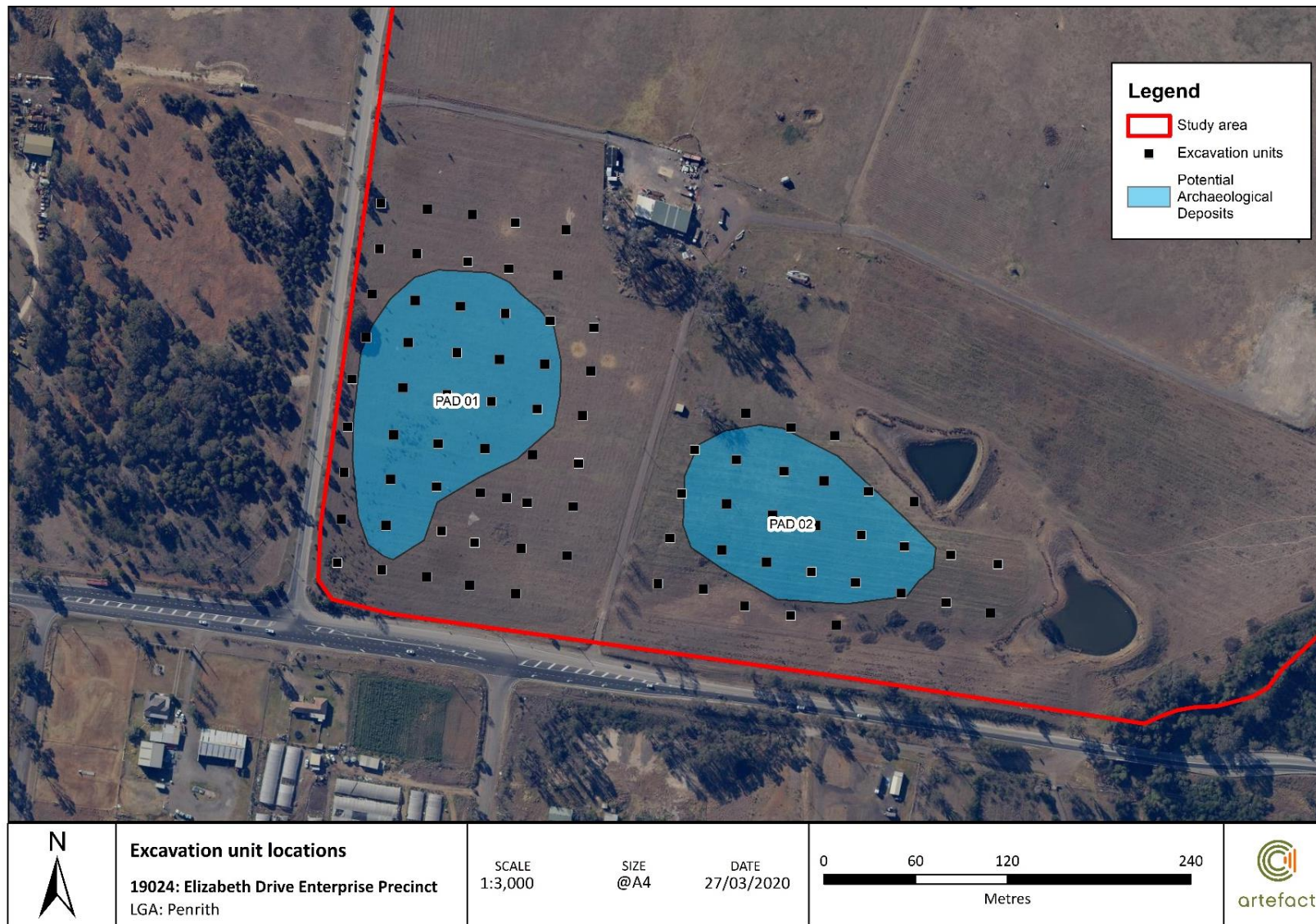


Figure 24: Excavation units across PAD 01 and PAD 02

7.0 ASSESSMENT OF SIGNIFICANCE

7.1 Listed heritage items

There are no items listed on any statutory heritage register within the study area, however there are two listed heritage items within 650 – 1000 metres from the study area. These items are:

- McGarvie-Smith Farm (SHI # 2260857) – at its closest is approximately 650 metres west of the study area
- The Fleurs Radio Telescope Site (SHI # 2260832) – at its closest is approximately 1000 metres north of the study area

A summary description and statement of significance for each item from their respective SHI listings is provided below.

7.1.1 The Fleurs Radio Telescope Site

7.1.1.1 History

The following historical notes are taken from the SHI listing for The Fleurs Radio Telescope Site⁶⁸:

Fleurs Radio Telescope station was established in 1954 to erect an innovative type of telescope known as the Mills Cross. The Mills Cross telescope was used by Bernie Mills, Eric Hill and Bruce Slee between 1954 and 1957 to carry out a detailed survey of radio emissions in the sky. The site for the telescope was near a disused WWII airstrip.

It was again used between 1961 and 1963 by Bruce Slee and visiting Cambridge radio astronomer, Peter Sheuer to carry out an interferometric sky survey of the MSH sources.

A second telescope on the site, the Shain Cross was completed in 1956. It was used by its creator Alex Shain to carry out a survey of the galactic plane and monitor decametric burst emission from Jupiter.

The third telescope at Fleurs was the Chris Cross, an array of 32 parabolic dishes designed by Dr W N Christiansen and completed in 1957. An 18m prefabricated American parabola was added to the eastern end of the Chris Cross in 1959. It was relocated to Parkes in 1963.

With the removal of the 18m parabola, the CSIRO no longer used the Fleurs site and it was transferred to the University of Sydney. Dr W. N. Christiansen was at that time a Professor at the University and further developed his telescope. Under the School of Engineering, the station continued to contribute to radio astronomy.

After 1988, the site was leased to the Engineering Faculty at the University of Western Sydney. Problems of interference from two way radios and mobile telephone made use of the equipment difficult and use of the telescopes effectively

⁶⁸ SHI listing 2260832, accessed on 27 March 2019:

<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2260832>

ceased in 1991. During this period the condition of all the telescopes deteriorated. All that remained in 2002 were the twelve centrally-located Chris Cross aerials, the Mills Cross equipment having been relocated to Bungendore. The site was cleared of any remaining equipment in 2005-6 including telescopes that were donated to the CSIRO to be re-erected at their Epping site. The site is currently agisted for cattle grazing.

During the period of use by the CSIRO, the Fleurs Radio Telescope Station was considered to be “one of the world’s leading radio astronomy field stations, and it played an important role in furthering solar and non-solar radio astronomy”.

7.1.1.2 Assessment of significance

The following assessment of significance of the “The Fleurs Radio Telescope Site” heritage item has been adapted from its SHI listing and is presented in Table 7 below.⁶⁹ No additional assessment of significance for this item has been undertaken for this report.

Table 7: Significance assessment of The Fleurs Radio Telescope Site

Criterion	Explanation
A – Historical Significance	Used from 1954 until 1988 for astronomical research, the Fleurs Telescope site was in the 1950s considered to be one of the world’s leading radio astronomy field stations. Its series of telescopes constructed in a short period were of great importance to the advance of radio astronomy. Much of the equipment was considered important enough to be relocated elsewhere for future research.
B – Associative Significance	The Fleurs Telescope site is associated with a number of important astronomers including Bernie Mills, creator of the Mills Cross, Alex Shain, creator of the Shain Cross and Dr W. N. Christiansen, creator of the Chris Cross and a Professor at the University of Sydney.
C – Aesthetic or Technical Significance	<i>Not listed</i>
D – Social Significance	<i>Not listed</i>
E – Research Potential	While most of the equipment has been removed from the Fleurs Telescope site, there is sufficient remaining equipment, including structure for the Mills and Shain telescopes, bases of the Chris Cross telescopes and two dishes of the Fleurs Synthesis telescope, to allow for further investigation and interpretation.
F – Rarity	Fleurs is a rare if not unique example of a site used for astronomical research in the Penrith Local Government Area. The use of the site and the sequence of equipment erected there is probably rare in New South Wales.
G – Representativeness	<i>Not listed</i>

⁶⁹ SHI listing 2260832, accessed on 27 March 2019:

<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2260832>

7.1.1.3 Statement of significance

The following statement of significance is taken from the SHI listing for The Fleurs Radio Telescope Site⁷⁰:

Used from 1954 until 1988 for astronomical research, the Fleurs Telescope site was in the 1950s considered to be one of the world's leading radio astronomy field stations. At its peak it included telescopes developed by with a number of important astronomers including Bernie Mills, creator of the Mills Cross, Alex Shain, creator of the Shain Cross and Dr W. N. Christiansen, creator of the Chris Cross and a Professor at the University of Sydney. The series of telescopes constructed on the site in a short period were of great importance to the advance of radio astronomy. Much of the equipment was considered important enough to be relocated elsewhere for future research.

While most of the equipment has been removed from the Fleurs Telescope site, there is sufficient remaining equipment, including structure for the Mills and Shain telescopes, bases of the Chris Cross telescopes and two dishes of the Fleurs Synthesis telescope, to allow for further investigation and interpretation.

Fleurs Telescope Site is a rare if not unique example of a site used for astronomical research in the Penrith Local Government Area.

7.1.2 McGarvie-Smith Farm

7.1.2.1 History

The following historical notes are taken from the SHI listing for McGarvie-Smith Farm⁷¹:

The University of Sydney established a research station for their veterinary science faculty on 160 hectares of land at Badgery's Creek in 1936 to be used for the training of students in animal husbandry. It was purchased with a grant from the McGarvie Smith Institute.

The farm is located in an area that has a rain shadow, creating problems with water supply. This lead to the University relocating its veterinary research facility to Camden in 1955. Dairying did continue on the site after the relocation.

The site is currently agisted for cattle grazing.

7.1.2.2 Assessment of significance

The following assessment of significance of the "McGarvie-Smith Farm" heritage item has been adapted from its SHI listing, and is presented in Table 7 below.⁷² No additional assessment of significance for this item has been undertaken for this report.

⁷⁰ SHI listing 2260832, accessed on 27 March 2019:

<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2260832>

⁷¹ SHI listing 2260832, accessed on 27 March 2019:

<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2260832>

⁷² SHI listing 2260857, accessed on 27 March 2019:

<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2260857>

Table 8: Significance assessment of McGarvie Smith Farm

Criterion	Explanation
A – Historical Significance	The McGarvie Smith Farm has interest as a veterinary research centre for Sydney University since 1936.
B – Associative Significance	<i>Not listed</i>
C – Aesthetic or Technical Significance	The c.1936 buildings are representative examples of Inter-War design applied to rural research buildings. The office building uses good proportions in a symmetrical design composed of primary and secondary roof forms and regular door and window openings. The scale, proportions and regular pattern of openings is continued in the less formal student accommodation building.
D – Social Significance	<i>Not listed</i>
E – Research Potential	<i>Not listed</i>
F – Rarity	These buildings are the only known example of rural research institution buildings in the Penrith City Council area.
G – Representativeness	<i>Not listed</i>

7.1.2.3 Statement of significance

The following statement of significance is taken from the SHI listing for McGarvie-Smith Farm⁷³:

The McGarvie Smith Farm has interest as a veterinary research centre for Sydney University since 1936. These buildings are the only known example of rural research institution buildings in the Penrith City Council area.

The c.1936 buildings are representative examples of Inter-War design applied to rural research buildings. The office building uses good proportions in a symmetrical design composed of primary and secondary roof forms and regular door and window openings. The scale, proportions and regular pattern of openings is continued in the less formal student accommodation building.

⁷³ SHI listing 2260832, accessed on 27 March 2019:

<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2260832>

7.2 Unlisted heritage items

An unlisted heritage landscape item was identified in the Penrith Heritage Study⁷⁴ which partially overlaps into the study area. This item, the “South Creek Basin (KC-01)” was described as an area of natural and visual importance, but the item is not considered a heritage item and therefore should not be included in the Penrith LEP. A description of the item from the Penrith Heritage Study is provided in Table 9 below.

Artefact Heritage conducted a preliminary heritage study for the Elizabeth Drive Precinct in 2018.⁷⁵ In this assessment, Artefact identified an additional unlisted item of heritage significance located approximately 450 metres to the north of the boundary of the study area for the current assessment. This item is the Fleurs Aerodrome, and a summary of the history and the significance of the item is provided in Table 9.

Table 9: Description of unlisted items

Unlisted item	Description and potential level of significance
South Creek Basin	Description from the Penrith Heritage Study for item KC-01: ⁷⁷
item KC-01 in the Penrith heritage Study⁷⁶	<p><i>‘This area with its remnant stands of paper bark and river she-oak along drainage lines and paddocks was listed as an area of high visual natural importance.</i></p> <p><i>However, it is not an item that belongs in a cultural heritage study and should not be listed in the revised LEP schedule.</i></p> <p><i>The item is not recommended for listing on the LEP schedule’</i></p>
Fleurs Aerodrome	<p>Fleurs Aerodrome is located on the eastern side of South Creek and approximately 450 metres north of the study area.</p> <p>Construction began on aerodrome in 1942 as part of a proposal to base a United States Navy Fleet Air Wing in Sydney if required. Initially three runways were planned however construction on No. 2 was abandoned. A total of eight aircraft dispersal hideouts were constructed and accommodation was a farm house and a former Civil Constructional Corps camp.</p> <p>The Aerodrome is located on flat land between Kemps and South Creeks, north of Elizabeth Drive. The main landing strip runs north east to north south and is 1.6 kilometres long, the south portion has been bituminised for approximately 300m.</p> <p>The site of the former Fleurs Aerodrome is likely to meet the threshold for local significance under criteria a (historical significance).</p>

The ‘South Creek Basin’ (KC-01) is not discussed further in this assessment as it is not a listed heritage item, and the Penrith Heritage Study definitively stated that is ‘not an item that belongs in a cultural heritage study’ and stated that it should not be listed on the LEP schedule.⁷⁸

An assessment of potential indirect impacts to the unlisted item of the Fleurs Aerodrome is provided in Table 9.

⁷⁴ Paul Davies Pty Ltd, 2007, ‘Penrith Heritage Study’, Volume 3, p. 15

⁷⁵ Artefact, March 2018. *Elizabeth Drive Preliminary Heritage Assessment Letter*. Report prepared for Mirvac.

⁷⁶ Paul Davies Pty Ltd, Volume 3, p. 15

⁷⁷ *Ibid*, Volume 3, p. 15

⁷⁸ *Ibid*, Volume 3, p. 14

7.3 Archaeological Assessment

This section provides an archaeological assessment for the study area, based on the subsequent test excavation which occurred between the 9th- 20th of March 2020. A methodology for the preparation for the archaeological assessment has been outlined in Section 6.2. This assessment focusses on identifying the location and types of remains associated with the early- to mid-nineteenth century homestead of the Badgery family (Exeter Farm), as well as archaeological remains related to later site developments. This section will also assess previous land disturbances and further archaeological potential.

7.3.1 Discussion of archaeological remains relating to Exeter Farm

A summary of the detailed discussion from Section 4.2 of the history of built structures at Exeter Farm is outlined below.

The study area encompasses the potential location of James and Elizabeth Badgery's farmhouse at Exeter Farm. In 1809, shortly after being conferred the land at South Creek by Patterson, Badgery built a temporary wattle and daub construction upon which he relocated his family from the Hawkesbury area. This wattle and daub construction was utilised whilst a more substantial brick farmhouse was constructed. The year in which the brick farmhouse was constructed is unknown, with Donald and Gunson suggesting the brick structure was completed by 28 November 1810 when Governor Macquarie visited the property with Gregory Blaxland,⁷⁹ and Hardy suggesting that it would likely have still been a wattle and daub construction at that time.⁸⁰ Whilst the remains of this building were not identified during the test excavation, the site still retains the potential to contain evidence of later phases that were removed during the test excavation program.

What is not in conjecture, however, is that a more substantial brick farmhouse was constructed on the property by James and Elizabeth Badgery. It is likely that the brick structure was made from locally made bricks and had a hipped roof. It is not known if the structure was furnished with a verandah. Other known details of the structure are that two English farthings dating to 1799 were placed under the foundations, and that a hearthstone was potentially made of stone from England that had been brought to Sydney as ship's ballast.⁸¹

The two English farthings dating to 1799 were retrieved in 1973 when the then owners of the property, the Nobbs family, excavated the foundations of the original homestead site with Margot Badgery. Margot Badgery is the wife of a great-great-grandson of James and Elizabeth Badgery.⁸² There is also reference to some of the bricks and a part of the hearthstone being retrieved and used as part of a memorial to the Badgery family at Badgerys Creek School.⁸³

Archival research provided a summary of structures identified at the property related to the early nineteenth century occupancy, which include the following:

- The family homestead
- A convict quarters
- A small residence/ hut for Bob Redmond, the overseer
- A small residence/ hut for the blacksmith Edwards and his wife

⁷⁹ Donald and Gulson, 1996, p. 4

⁸⁰ Hardy, 1989, p. 21

⁸¹ Hardy, 1989, p. 21

⁸² Donald and Dunson, 1996, p. 4

⁸³ Hardy, 1989, p. 21

- A barnyard

A larger and more substantial brick house with wrap-around verandah and two chimneys was demolished in 2006. The existing photographs of the hipped roof structure indicate that the verandah was originally supported by wooden posts that were later replaced with brick supports and balustrade. Black and white photographs of this house have poor exposure and provide limited visibility of the house façade, however the window and chimney details suggest construction in the second half of the nineteenth century. The test excavation identified concrete and brick footings, as well as postholes associated with a post-1932 agricultural building. It is therefore unlikely that this structure was Badgery's original brick farmhouse.

A 1955 aerial photograph of the property shows a smaller hipped roof structure located several metres from the rear of the later brick homestead. It is possible that this structure was either the original farmhouse or one of the larger ancillary structures, which was joined under a short covered passage to the later Victorian-era farmhouse. Any verandah(s) and skillions appear to have been removed when the larger adjacent house was constructed. The smaller structure, potentially the original farmhouse, is demolished before the 1961 aerial photograph, and the rear verandah of the larger house extended with two skillions added – one possibly functioning as a kitchen. This phasing for demolition of the smaller structure between 1955 and 1961 supports the timing of the Nobbs family excavation of the footings in 1973.

Crown Plan C3391.2030 from 1920 marks the location of a house and kitchen, brick cottage, yards and sheds (see Figure 12). An overlay of that crown plan onto the 1955 aerial shows that the house and kitchen, sheds, and yard, do not match the location of those features in the 1955 aerial, taken 35 years after the crown plan was prepared. There is the possibility that older sheds may have been demolished and replaced by the Nobbs family in the 1930s and 1940s, however there is no evidence to suggest that the brick farmhouse was moved. It is likely that the crown plan from 1920 provides and indicative location of structures and is not necessarily an accurate representation of their specific location.

A photographic recording of the property in 1995 includes images of the later brick farmhouse (25), an outhouse (Figure 26), stables (Figure 27) and a shed (Figure 28). Pre-2006 Google Earth imagery also shows these structures occupying the area.

At some time between April and September 2006 the later brick farmhouse, an outhouse, stables and sheds had been demolished and the site cleared. Land use within the area today is unknown. However, no significant development has taken place as evidenced by a satellite image taken in 2017.



Figure 25: Later 19th century brick farmhouse at Exeter Farm in 1995. Source. Liverpool City Library.



Figure 26: Exeter Farm outhouse in 1995. Source. Liverpool City Library.



Figure 27: Exeter Farm stables interior in 1995. Source. Liverpool City Library.



Figure 28: Exeter Farm shed and outbuildings in 1995. Source. Liverpool City Library.



Figure 29: View south of Exeter Farm House site.



Figure 30: View west of Exeter Farm House site.

7.3.2 Discussion of Previous Land Disturbance

While the history of the study area could have produced a range of archaeological evidence related to former activities and phases, the likelihood of such evidence surviving to the present is influenced by a range of factors. These factors include the durability of the material evidence and subsequent impacts such as demolition and construction.

The available historical sources provide evidence for an extensive domestic establishment and associated agricultural landholding that evolved through time to support a variety of agricultural activities including horse breeding, cattle and sheep grazing and dairying.

From 1809 to the present, the study area has been associated with rural and agricultural related activities. It has however undergone several changes of use, initially being utilised for cattle grazing and then dairying. Previous impacts identified within the study area include:

- Vegetation clearance throughout the majority of the subject site from 1809 onwards
- Construction of a larger brick farmhouse, likely in the mid to late 19th century
- Adaptation and modification of the earlier farmhouse
- Construction of mid-20th century farm buildings and structures (e.g. c1930s dairy improvements)
- Adaptation and modification of earlier outbuildings
- Landscape gardens, tree plantings, ground modification and machining

- Excavation of at least a portion of the footings of the original farmhouse in 1973 by the landowner and descendant of the Badgery family
- Recent impacts such as demolition of the original farmhouse and associated structures, and construction of pens, fencing and sheds.

Based on the history of these events, these activities would not be expected to produce extensive ground disturbance. These types of activities would cause either highly localised or generally shallow or surface-level ground disturbance across the site. None of these activities would be considered likely to have entirely removed any archaeological remains that may be present within the study area.

7.3.3 Discussion of archaeological potential

A detailed assessment of the archaeological potential and significance of the site was outlined in the 2019 ARD⁸⁴ and has been summarised in Table 10 below. This revised assessment, also in Table 10, is based on the following assumptions:

- Testing has demonstrated that excavation undertaken in the last 20 years and associated with the establishment of the existing laydown area on the ridgeline has truncated the soil profile down to the natural underlying clay and this has likely substantially impacted and/or removed any potential archaeological resources in this location (as illustrated on Figure 31)
- Excavation in 1973 by Margot Badgery and the Nobbs family removed archaeological remains associated with the first Exeter Farm House. Two 1799 English farthings placed under the foundations by James and Elizabeth Badgery were retrieved during these works.⁸⁵ There is also reference to some of the bricks and a part of the hearthstone being retrieved and used as part of a memorial to the Badgery family at Badgerys Creek School.⁸⁶ It is noted that when one of the historical society members involved in the 1973 excavation attended site at the invitation of Artefact in 2019 they were unable to conclusively identify the site of the first Exeter Farm House
- Remains of the 'brick cottage' identified on the 1920 crown plan and historic aerials in the north of the study area was identified during testing, and does not pre-date the early 20th century
- Whilst the testing program did not identify remains associated with historical Phase 1 in the location determined, the site nonetheless retains potential to contain evidence of Phase 1 beneath the remains of the second Exeter house.
- There is limited potential for the portion of the study area nominated for historical archaeological management to contain contact archaeology. However, the presence of worked glass artefacts identified in the Aboriginal test excavation program to the south means that this possibility cannot be entirely discounted.

The revised areas of archaeological potential are illustrated in Figure 31.

⁸⁴ Artefact 2019b.

⁸⁵ Donald and Dunson, 1996, p. 4

⁸⁶ Hardy, 1989, p. 21

Table 10: Assessment of predicted archaeological remains within the study area

Phase	Known structure/activity	Potential archaeological remains	2019 assessment	Updated assessment
Phase 1 Badgery Land Grant (1809 – 1839)	Wattle and daub cottage (first house of Badgery Family 1809 – 1810/1812)	<ul style="list-style-type: none"> Post holes, rubbish scatters, evidence of beaten earth working surfaces or paving Evidence of land clearance and cultivation of land, manipulation and use of early watercourse, postholes / working or yard surfaces / occupation or refuse deposits / artefacts / footings associated with early huts, rubbish pits or wells. 	Nil to Low	Nil to Low
Phase 1 Badgery Land Grant (1809 – 1839)	<u>Northern Location</u> for the First Exeter House, surrounds and gardens	<ul style="list-style-type: none"> Evidence of former masonry buildings or structures (brick or stone footings, associated deposits) Occupation deposits (underfloor accumulations, yard scatters, rubbish pits) Paving associated with external yard divisions and landscaping Postholes associated with fence lines Beaten earth or paved surfaces, hearth, chimney remnants, refuse deposits associated with external kitchen Evidence of landscaping (such as stone or brick retaining walls, edging, hard surfaces indicating former pathways, stone flagging) Rubbish pits. 	Low to Moderate	Low

Phase	Known structure/activity	Potential archaeological remains	2019 assessment	Updated assessment
Phase 1 Badgery Land Grant (1809 – 1839)	Southern location for the First Exeter House, surrounds and gardens	<ul style="list-style-type: none"> Evidence of former masonry buildings or structures (brick or stone footings, associated deposits) Occupation deposits (underfloor accumulations, yard scatters, rubbish pits) Paving associated with external yard divisions and landscaping Postholes associated with fence lines Beaten earth or paved surfaces, hearth, chimney remnants, refuse deposits associated with external kitchen Evidence of landscaping (such as stone or brick retaining walls, edging, hard surfaces indicating former pathways, stone flagging) Rubbish pits. 	Low to Moderate	<p>Low potential for deeper subsurface structural remains within the laydown area (pink on Figure 31)</p> <p>Low within the area identified as containing an intact resource associated with the second Exeter Farm house (green on Figure 31)</p>
		<ul style="list-style-type: none"> Post holes associated with ephemeral structures such as coops, stalls, stables, stock yard fencing Indicators of natural flooring including areas of compacted earth or paving indicating the location of flooring, occupation or underfloor deposits, hard stands/working surfaces Evidence of landscaping (such as stone or brick retaining walls, garden soils, terracing) Structures typically located in rear yards such as privies, wells, cisterns or cesspits Rubbish pits 		<p>Low potential for deeper subsurface structural remains within the laydown area (pink on Figure 31)</p> <p>Low within the area identified as containing an intact resource associated with the second Exeter Farm house (green on Figure 31)</p>

Phase	Known structure/activity	Potential archaeological remains	2019 assessment	Updated assessment
Phase 2: 19th C. Dairy (1840 – 1920)	Second Exeter Farm House and grounds	<ul style="list-style-type: none"> • Evidence of former masonry buildings or structures (brick or stone footings, associated deposits) • Occupation deposits (underfloor accumulations, yard scatters, rubbish pits) • Paving associated with external yard divisions and landscaping • Postholes associated with fence lines • Beaten earth or paved surfaces, hearth, chimney remnants, refuse deposits associated with external kitchen • Evidence of landscaping (such as stone or brick retaining walls, edging, hard surfaces indicating former pathways, stone flagging) • Rubbish pits. 	Moderate	High – remains identified during testing (green on Figure 31)
Phase 2: 19th C. Dairy (1840 – 1920) and Phase 3: 20th C. Dairy (1921 – 2006)	Late nineteenth and early twentieth century farm buildings	<ul style="list-style-type: none"> • Posts and postholes associated with timber support posts, walls, pens and fences • Evidence of former masonry buildings or structures (brick, stone or concrete footings, associated deposits) • Paving associated with external yard divisions and landscaping • Beaten earth or paved surfaces, yard surfaces • Isolated artefact deposits • Evidence of landscaping (such as stone or brick retaining walls, edging, hard surfaces indicating former pathways, stone flagging) 	<p>Nil for archaeological remains related to Phase 2</p> <p>Low for archaeological remains related to Phase 3</p>	<p>Low for archaeological remains related to Phase 2</p> <p>High for archaeological remains related to Phase 3 (remains identified during testing)</p>



Figure 31: Revised assessment of archaeological potential with results of significant remains identified during testing

7.4 Assessment of Archaeological Significance

In 2009, Heritage NSW, Department of Premier and Cabinet (Heritage NSW, DPC; formerly NSW Heritage Division of the Office of Environment and Heritage) issued a set of guidelines titled *Assessing Significance for Historical Archaeological Sites and 'Relics'*. These guidelines call for broader consideration of multiple values of archaeological sites beyond their research potential. Under the guidelines, the significance of a potential archaeological site can then be assessed as being of local or State significance. If a potential relic is not considered to reach the local or State significance threshold, then it is not a relic under the Heritage Act.

The significance of the potential archaeological resource, defined as being all potential archaeological remains within a site as identified in Table 10, has been assessed using the NSW heritage assessment criteria and described in Table 11.

Table 11: Significance assessment for archaeological remains of Exeter Farm

Criteria	Discussion
A - Historical Significance <i>An item is important in the course or pattern of the local area's cultural or natural history</i>	<p>Potential archaeological remains associated with Exeter Farm would have historical significance for its ability to provide information relating to the early European settlement and land use along Badgerys Creek from 1809 onwards. The farm was established and occupied by James Badgery and his family who raised cattle, thoroughbred horses, and cultivated crops. They were well known figures within the colony during this period and continue to be remembered amongst members of the wider Sydney region today. Governor Macquarie is known to have visited the farm in November 1810.</p> <p>Archaeological resources associated with James Badgerys Exeter Farm would be of local significance under this criterion, depending on the degree of intactness and legibility of the remains.</p>
B - Associative Significance <i>An item has strong or special associations with the life or works of a person, or group of persons, of importance in the local area's cultural or natural history</i>	<p>Potential archaeological remains associated with Exeter Farm would be directly related to James Badgery and his family. The land was first granted to James by Colonel Patterson in 1809, and then again by Macquarie in 1812. Macquarie made a visit to the house in November 1810 with Gregory Blaxland. James Badgery would go on to become a prominent landowner and pastoralist in the colony, with the family expanding land-holdings to Spring Grove, Sutton Forest, and through the Roberts family to Exeter Farm. The watercourse 'Badgerys Creek' and adjoining suburb are both named in James Badgery's honour.</p> <p>Archaeological resources associated with James Badgerys Exeter Farm would be of local significance under this criterion, depending on the degree of intactness and legibility of the remains.</p>
C – Aesthetic Significance <i>An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area</i>	<p>Although it is recognised that exposed <i>in situ</i> archaeological remains may have distinctive/attractive visual qualities, only rarely are these considered 'important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW'.</p> <p>The potential archaeological resource associated with Exeter Farm is unlikely to meet the significance threshold for local or State significance under this criterion.</p>
D – Social Significance <i>An item has strong or special association with a particular community or cultural group in the local area for social, cultural or spiritual reasons</i>	<p>Potential archaeological remains associated with Exeter Farm are likely to contain social significance amongst members of the surrounding community, as well as individuals or associations interested in the early colonial history of Penrith and NSW. It is also likely that potential remains would hold significance amongst descendants of the Badgery family and other individuals who lived on the property prior to 2006.</p> <p>If substantial and intact archaeological resources associated with Exeter Farm were found, they may have local significance under this criterion.</p>

Criteria	Discussion
E – Research Potential <i>An item has potential to yield information that will contribute to an understanding of the local area's cultural or natural history</i>	<p>Potential archaeological remains associated with Exeter Farm would have the ability to yield information relating to early colonial construction techniques, agricultural practices and pastoral activities (and their evolution) across the site from 1809 to the early 20th century. They may also provide information regarding domestic activities that occurred at the property and the use of outbuildings that may not be included in available documentary resources. The known presence of convict workers on the site may, if artefactual remains related to convict occupation were identified, provide unique material insights into the lifeways of early indentured settlers in western Sydney.</p> <p>The site has the potential to contain intact artefact bearing deposits with the potential to yield significant information regarding the evolving agricultural and pastoral activities of an early homestead in western Sydney. The archaeological resource has potential to yield information relating to the early 19th century construction techniques, and the individuals that occupied that homestead and labour quarters. Intact artefact-bearing structures or deposits, such as wells, rubbish pits and underfloor deposits, may provide an archive of information that may not be able to be ascertained through other historical sources. As the precise location of many of the structures across the property from the early 19th century is unknown, it is possible that archaeological remains may provide some insight into the early layout of the estate.</p> <p>Archaeological resources associated with James Badgerys Exeter Farm would be of local to State significance under this criterion, depending on the degree of intactness and legibility of the remains. Remains which are demonstrably associated with indentured convict workers would be of State significance under this criterion.</p>
F – Rarity <i>An item possesses uncommon, rare or endangered aspects of the local area's cultural or natural history</i>	<p>If intact archaeological remains associated with Exeter Farm were identified within the study area, they would be considered rare due to limited information available regarding land use and social activities at the property over time. In addition, few examples of intact colonial agricultural estates are known in the archaeological record and potential archaeological remains dating to early settlement as well as <i>in situ</i> evidence of early agricultural practices, if found to be substantially intact and extensive, would be of contributory value to this criterion at a State level.</p> <p>Archaeological resources associated with James Badgerys Exeter Farm would be of local to State significance under this criterion, depending on the degree of intactness and legibility of the remains.</p>
G – Representative <i>An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places of cultural or natural environments (or the cultural or natural history of the local area)</i>	<p>If intact archaeological remains associated with Exeter Farm were identified within the study area, they would represent physical evidence of pastoral and agricultural activities that took place within the first decades of European settlement in NSW. They would also represent principal characteristics of large farmsteads owned and operated by successful pastoralists in the early to mid-19th century including a homestead, outbuildings, gardens and paddocks.</p> <p>Archaeological resources associated with James Badgerys Exeter Farm would be of local to State significance under this criterion, depending on the degree of intactness and legibility of the remains.</p>

7.4.1 Archaeological significance of specific predicted remains

Due to the long use and re-use of the site as an active dairy and farm, the archaeological significance of potential remains in the study area are associated with specific historic phases, structures and land uses of the land. Table 12 provides a summary of the specific archaeological significance of predicted archaeological remains.

Table 12: Assessment of archaeological significance for specific potential archaeological remains

Phase	Specific remains	Arch. Potential	Discussion of significance in relation to specific archaeological remains	Significance
Phase 1 Badgery Land Grant (1809 – 1839)	Wattle and daub cottage (first house of Badgery Family 1809 – 1810/1812)	Nil to Low	<p>The first residence of James Badgery and his family was attested as a small wattle and daub structure and archaeological remains relating to this former building may have the ability to demonstrate early vernacular rural architecture. Domestic artefact deposits have the potential to inform on early colonial lifeways and living practices. The precise location of this cottage is unknown and archaeological remains of this type are considered unlikely to be significantly preserved in the study area. Robust and legible remains associated with the structure and its inhabitants would be of local to State significance, depending on the degree of intactness of the deposit.</p> <p>The test excavation revealed evidence of land clearance and cultivation of the land, manipulation and use of early watercourse, postholes/ working or yard surfaces / occupation or refuse deposits / artefacts / footings associated with early huts, rubbish pits or wells.</p>	Local to State
	<u>Northern Location</u> for the First Exeter House, surrounds and gardens	Low	The first brick house constructed by the Badgery family, along with its outbuildings and gardens, has the potential to provide material information on an early homestead in the rural Cumberland Plain. Structural remains have the potential to inform early rural architectural techniques while artefactual deposits have the potential to provide information on past lifeways and living and working practices from early 19 th century Sydney.	Local to State
	<u>Southern location</u> for the First Exeter House, surrounds and gardens	Low	The test excavation revealed evidence of former masonry buildings or structures; occupation deposits; paving associated with external yard divisions and landscaping; postholes associated with fence lines; beaten earth or paved surfaces, hearth, chimney remnant, refuse deposits associated with external kitchen. Evidence was also found of landscaping and rubbish pits.	Local to State
	Early farming sheds, convict quarters and early farm infrastructure	Nil to Low	<p>Early farming workshops, sheds and workers accommodation would likely have been timber buildings which may have the ability to demonstrate early vernacular rural architecture. Domestic and agricultural-associated artefact deposits have the potential to inform on early colonial lifeways and living practices. The precise location of these remains are unknown and archaeological deposits of this type are considered unlikely to be significantly preserved in the study area. Robust and legible remains associated with these structures, their use and their inhabitants would be of local to State significance, depending on the degree of intactness of deposits.</p> <p>The test excavation revealed post holes associated with ephemera structures such as coops, stalls, stables, stock yard fencing; indicators of natural flooring; evidence of landscaping including stone or brick retaining walls; structures typically located in rear yards such as privies, wells; and rubbish pits.</p>	Local to State

Phase	Specific remains	Arch. Potential	Discussion of significance in relation to specific archaeological remains	Significance
Phase 2: 19th C. Dairy (1840 – 1920)	Second Exeter Farm House and grounds	Moderate	<p>This farm house was constructed at an unknown time in the (probably late) 19th century, was demolished in 2006 and was used as the primary residence for the property during that time. While twentieth century remains are unlikely to reach the threshold for local significance, it is possible that the wider gardens and outbuildings may be remnant or repurposed from an earlier historical phase.</p> <p>Depending on the intactness of remains and the degree of association with earlier phases of the use of the property, archaeological structures or deposits associated with the second Exeter Farm House may be of local significance.</p> <p>The test excavation revealed evidence of former masonry buildings or structures; occupation deposits; paving associated with external yard divisions and landscaping; postholes associated with fence lines; beaten earth or paved surfaces, hearth, chimney remnants, refuse deposits associated with external kitchen; evidence of landscaping such as stone or brick retaining walls; evidence of rubbish pits.</p>	Local
Phase 3: 20th C. Dairy (1921 – 2006)	Mid to late twentieth century farm buildings	Low	<p>Remains associated with twentieth century farm buildings would not reach the threshold for local significance.</p> <p>The test excavation revealed evidence of posts and postholes associated with timber support posts, walls, pens and fences; evidence of former masonry buildings or structures; paving associated with external yard divisions and landscaping; beaten earth or paved surfaces, yard surfaces; isolated artefact deposits; evidence of landscaping such as stone or brick retaining walls, edging.</p>	Nil

Statement of Archaeological Significance

Archaeological remains associated with Phase 1 of the development of Exeter Farm may have historical, social, associative and representative significance at a State level through their association with prominent landowner and pastoralist James Badgery, his family and descendants. The success of the estate can be partially attributed to the use of convict labour, and archaeological evidence associated with convict housing or land-use would have significant research potential. If artefactual remains related to convict occupation were identified, provide unique material insights into the lifeways of early indentured settlers in western Sydney. Research and testing undertaken this far indicates that the potential for State significant relics to survive is low, and that the known and potential archaeological resource is associated with Phase 2 and 3.

Archaeological remains associated during testing were associated with Phase 2, the second Exeter Farm House. These were assessed as having local significance due to their integrity and historical association with earlier phases of use of the estate. The beehive cistern was assessed as having local significance for its association with water conservation efforts prior to the introduction of town water and sewer services, and the provision of water in rural areas. The artefact assemblage observed was dated to the twentieth century and the preliminary artefact analysis indicates that it has little potential to provide discrete information relating to nineteenth century domestic lifeways. The site has the potential to contain additional remains of local significance below the depths excavated during testing.

8.0 IMPACT ASSESSMENT

The objective of a SoHI is to evaluate and explain how the proposed development or land use change will affect the heritage value of the site and/or place. A SoHI should also address how the heritage value of the site/place can be conserved or maintained, or preferably enhanced by the proposed works.

8.1 Proposal Description

Mirvac proposed to develop the study area as part of Stage 1 of the EEP. The EEP is strategically placed to accommodate future flexible employment uses associated with the airport in Western Sydney.

The proposed plan is to convert the EEP into a development for general industry and warehouse distribution centres under a SSDA.

The proposed plan comprises of the following:

- Concept Masterplan for the Elizabeth Enterprise Precinct Stage 1 comprising nine industrial buildings, internal road network layout, building locations, GFA, car parking, concept landscaping buildings heights setbacks and built form parameters
- Site preparation works comprising:
 - Demolition and removal of existing rural structures
 - Bulk earthworks - site levelling through cut/fill, site stripped 200mm
 - Creation of roads and access infrastructure, including a signalised intersection with Elizabeth Drive
 - Clearing existing vegetation on the subject site and associated dam dewatering and decommissioning
 - Realignment of existing creek
 - On-site bulk earthworks including any required ground dewatering
 - Importation, placement and compaction of soil material
 - Construction of boundary of retaining walls
 - Delivery of catchment level stormwater infrastructure, trunk service connections, utility infrastructure
- Construction and fit out of a warehouse and distribution building (@41,480m²) in Stage 1
- Ancillary office building (@1,037m²)
- Boundary stormwater management, fencing and landscaping
- Internal road network
- Subdivision of Stage 1
- Signage

8.2 Assessment of Heritage Impact

There are two listed heritage items in the vicinity of the study area. There is one potential heritage item in the vicinity of the study area. As these items are located outside of the study area, these items would not be directly impacted by the proposed works.

An assessment of potential indirect (visual) impacts to the significance values of the three items in the vicinity of the study area is assessed in the table below.

Table 13: Potential indirect (visual) heritage impacts to nearby heritage items

Item name and listing	Potential indirect (visual) impacts
The Fleurs Radio Telescope Site SHI # 2260832	<p>The significance values of The Fleurs Radio Telescope Site do not include aesthetic values or views to and from the site. The significance values of the site are primarily related to the site's historical significance, associative significance with important astronomers, research potential related to remaining telescope structures, and rarity values.</p> <p>Therefore, the proposed works will result in negligible visual (indirect) impacts to the significance values of The Fleurs Radio Telescope Site.</p>
McGarvie-Smith Farm SHI # 2260857	<p>The significance values of McGarvie-Smith Farm are related to the aesthetic inter-war design of the rural research buildings (aesthetic significance), as well as historical and rarity significance values. The study area is separated from the McGarvie-Smith Farm by a local high point (between 60-69 metres above sea level [ASL]), a series of four rural properties off Elizabeth Drive (1743 – 1783 Elizabeth Drive), and Badgerys Creek. A large resource recovery precinct is located adjacent to both the study area and McGarvie-Smith Farm.</p> <p>The proposed earthworks within the study area will not be directly visible from McGarvie-Smith Farm, and the proposed works will result in negligible visual (indirect) impacts to the significance values of McGarvie-Smith Farm.</p>
Fleurs Aerodrome Potential heritage item – unlisted	<p>The former location of the Fleurs Aerodrome is located on the eastern side of South Creek and approximately 450 metres north of the study area. The aerodrome is located across a flat landform context, and visually separated from the study area by dense vegetation bordering both margins of South Creek.</p> <p>The potential local significance values of the airstrip would relate to its historical significance values, which would not be impacted by partial views of works within the study area.</p> <p>Therefore, the proposed works will result in negligible visual (indirect) impacts to the significance values of former location of Fleurs Aerodrome.</p>

8.2.1 Archaeological impact

The proposed earthworks within the study area will involve extensive cutting within an area where the former buildings for Exeter Farm were located (Figure 33). The proposed works would result in the total removal of any archaeological remains that may be preserved, thus having a **major** impact. A map of the area of suspected Exeter Farm buildings onto a plan of proposed works is shown in Figure 34.

Works have the potential to impact the remains of:

- Badgery's farmhouse

- Convict quarters
- At least two huts for farm assistants, including the overseer and the blacksmith
- At least one barn

Other structures and features associated with a farm complex dating to the early 19th century, including cesspits, privy, rubbish deposits, and other as yet unidentified structures such as for butchering and blacksmith's workshops.

If archaeological remains of State significance, or locally significant remains not identified in this SoHI or ARD, are unexpectedly identified during the archaeological salvage program, works in the affected area would cease and Heritage NSW, DPC would need to be notified. Additional assessment and further approval may be required prior to the recommencement of excavation.

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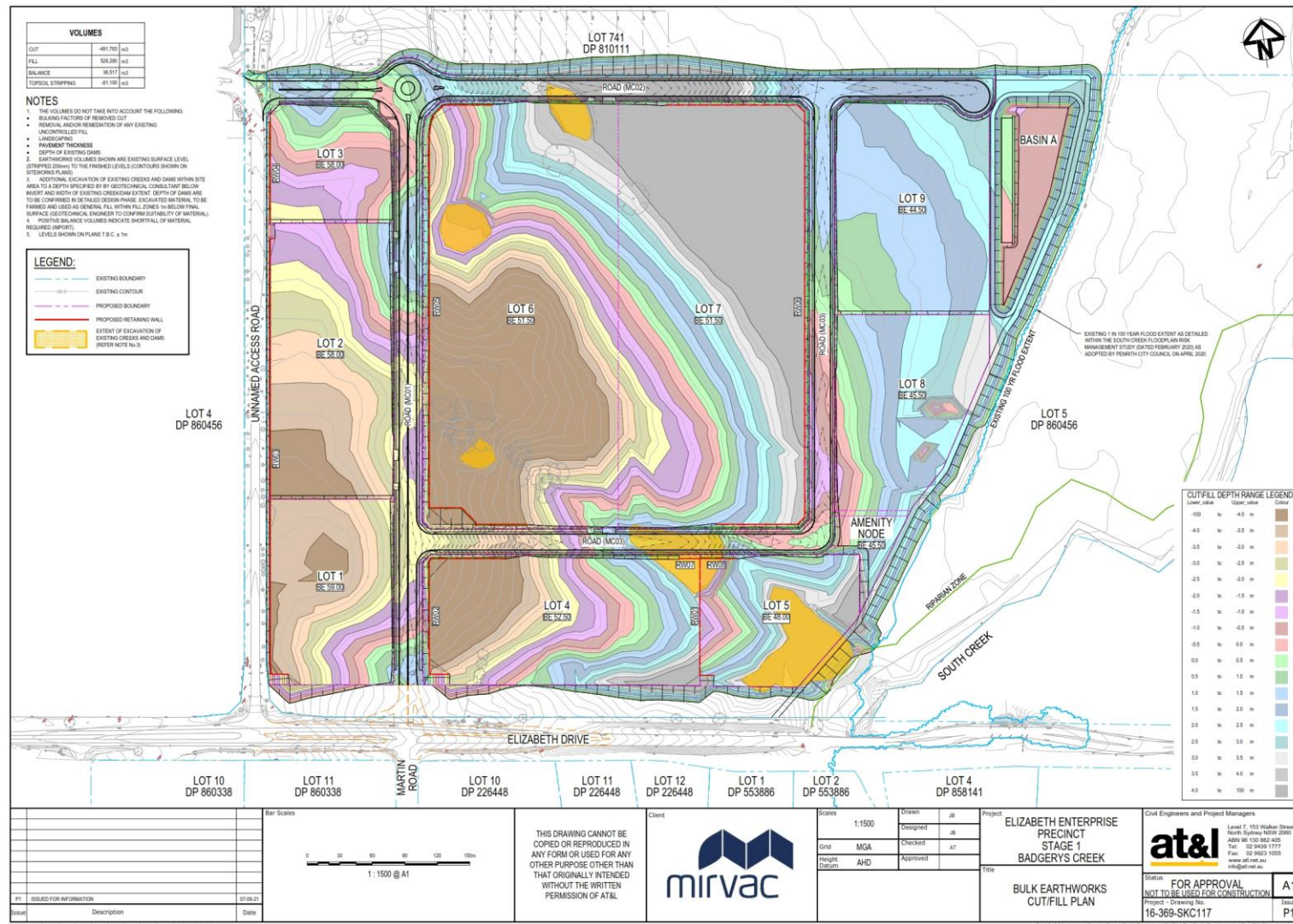


Figure 33: Bulk earthworks plan (supplied by Mirvac Properties Pty Ltd)

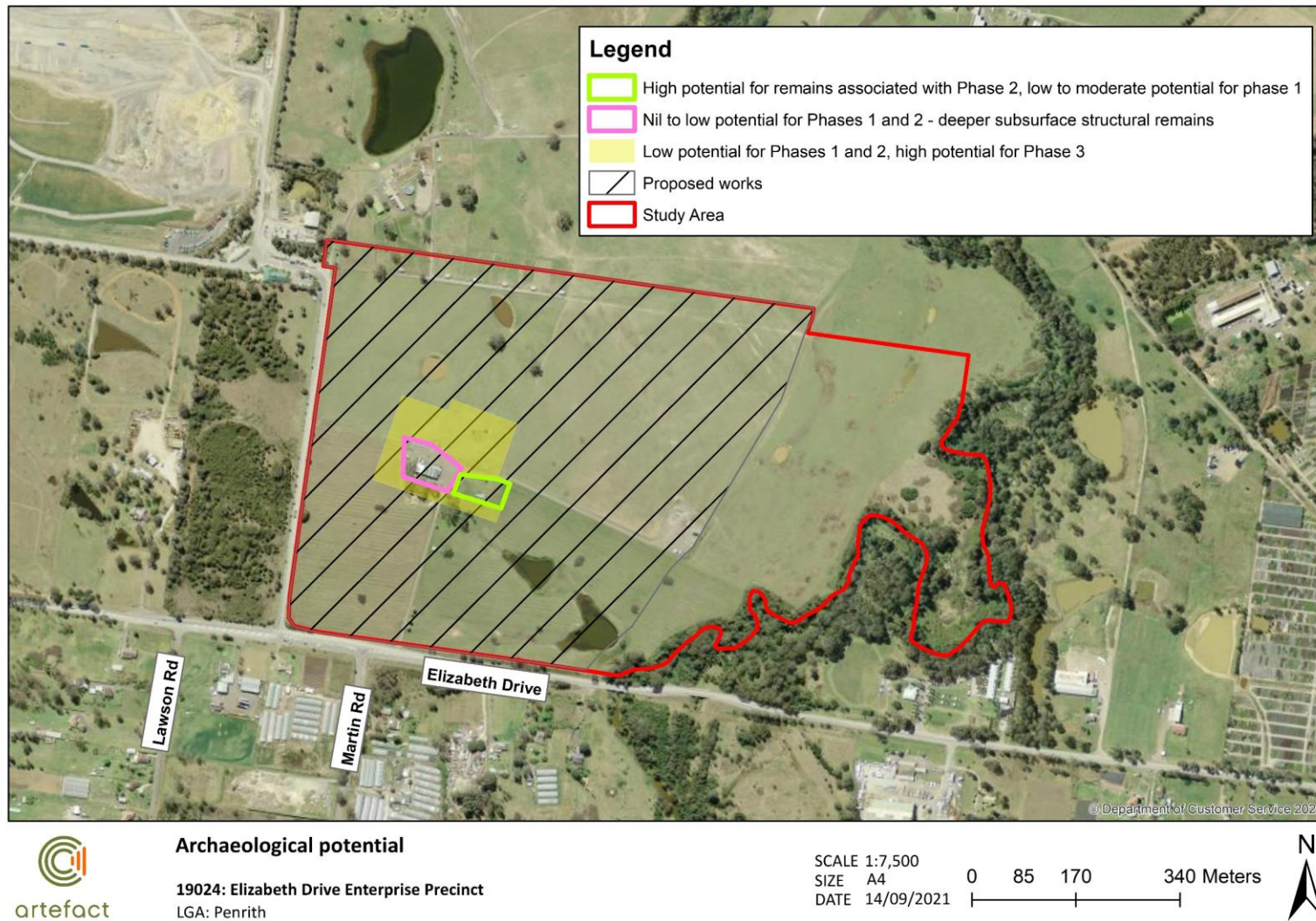


Figure 34: Potential location of former homestead and outbuildings

8.3 Statement of Heritage Impact

A Statement of Heritage Impact for the proposed works is provided in Table 14 below.

Table 14: Statement of heritage impact

Impact	Discussion
What aspects of the proposal respect or enhance the heritage significance of the study area?	<p>The proposal will have no physical (direct) impact on nearby heritage items. The proposal will have negligible visual (indirect) impact on nearby heritage items.</p>
What aspects of the proposal could have a detrimental impact on the heritage significance of the study area?	<p>The proposed earthworks within the study area have the potential to impact local and state significant archaeological remains relating to James and Elizabeth Badgery's occupation of Exeter Farm (assessed as having low archaeological potential). This includes their early 19th century farmhouse and associated structures such as the convict quarters, farm assistants' quarters, cesspits, privies, and rubbish deposits. There is the potential for underfloor deposits associated with some of the structures, such as the farmhouse and assistant's quarters.</p> <p>There is high potential for these remains to occur during the proposed works salvage, to which, depending on the item identified work, would pause further work accordingly (see Section 9.2 – Recommendations).</p> <p>The ARD provides a methodology for archaeological test excavation and refinement of archival research. (See Appendix 1, Section 4.2 of the ARD)</p> <p>Proposed earthworks would have major impact on the identified and potential archaeological remains.</p>
Have more sympathetic options been considered and discounted?	<p>The proposed cut and fill methodology for creating individual flat lots will support the market need for large flexible allotments to accommodate a broad range of requirements to ensure economic efficient use of the land for flexible employment generating purposes.</p>

9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

This SoHI has made the following conclusions:

- James Badgery received a land grant, which included the current study area, in 1809. Badgery established a working farm and dairy with the assistance of government-allotted convict labour
- Badgery built his first substantial house on the property between 1810 and 1812, a brick homestead called Exeter Farm. Two potential locations for this homestead were identified from historical research. The location was unable to be verified during a site visit and test excavation program involved in the 1973 excavation of the first Exeter house and archaeological test excavation in 2020
- Later landowners constructed a second Exeter Farm homestead, probably in the late nineteenth century, which became the primary residence of the property. This building was demolished in 2006.
- Historical test excavation completed in 2020 identified intact archaeology associated with the second Exeter house and remains of a later 20th century farm building
- The testing program did not identify remains associated with first Exeter house (historical Phase 1) in the location determined to be most likely to contain such resources. However, the site retains nil-low potential to contain evidence of this phase below the remains of the second Exeter house
- Proposed ground disturbing works would entirely remove all areas of predicted significant archaeological potential. The proposal would result in a major impact to potential archaeological remains.
- The proposed earthworks are likely to have negligible visual impacts on nearby heritage items.
- Two Aboriginal glass artefacts were identified during an Aboriginal test excavation program (Artefact Heritage 2019), indicating post-1788 Aboriginal use of the site

9.2 Recommendations

The following recommendations will aid in mitigating impact to potential archaeological remains and nearby heritage items:

- A program of archaeological monitoring and salvage should be carried out within the study area prior to subsurface excavations. This program would include both monitoring and targeted salvage excavations, focused on intact artefact bearing deposits of local significance.
- If archaeological remains of State significance, or locally significant remains not identified in the SoHI or ARD, are unexpectedly identified during the archaeological salvage program, works in the affected area would cease and Heritage NSW, DPC would be notified. Additional assessment and further approval may be required prior to the recommencement of excavation
- Should State significant remains associated with early nineteenth century convict accommodation and workshops be identified significantly intact during monitoring or salvage excavation program,

opportunities for retaining these remains *in situ* and redesigning works to avoid impacts should be considered.

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