

30 March 2023

Meighan Woods Development Manager Mirvac Projects

Dear Meighan

## Re: DRAFT Addendum cover letter for Elizabeth Enterprise Precinct Stage 1

This addendum cover letter has been prepared by Artefact Heritage for Mirvac Projects (Mirvac) to address updates to the following reports prepared by Artefact Heritage:

- Elizabeth Enterprise Precinct Stage 1, Aboriginal Test Excavation Report (ATER) for Public Exhibition
- Elizabeth Enterprise Precinct Stage 1, ATER Not for Public Exhibition
- Elizabeth Enterprise Precinct, Non-Aboriginal Archaeological Research Design Report
- Elizabeth Enterprise Precinct Stage 1, Salvage Excavation Archaeological Research Design Report
- Elizabeth Enterprise Precinct, Historical Archaeological Test Excavation Results Report

A summary of the updates are presented in Table 1. The changes have been found to be consistent with the conclusions and recommendations of these reports.

Sincerely

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■ We acknowledge the Traditional Custodians of Country in which we live and work, and pay our respects to them, their culture and their Elders past, present and emerging

Table 1: Summary of updates

Report	Section	Page	Original text	Updated text	Comments
Appendix CC2 – Elizabeth Enterprise Precinct Stage 1, ATER for Public Exhibition	Executive Summary	ii	Waste Disposal Facility	A Concept Masterplan comprising eight (8) industrial buildings and a Stage 1 development including site preparation, bulk earthworks, road works, stormwater infrastructure and utilities and construction of two warehouse and distribution buildings	This change is consistent with the conclusions and recommendations of the report
	1.1 Introduction	1 1	Waste Disposal Facility	A Concept Masterplan comprising eight (8) industrial buildings and a Stage 1 development including site preparation, bulk earthworks, road works, stormwater infrastructure and utilities and construction of two warehouse and distribution buildings	This change is consistent with the conclusions and recommendations of the report
	1.2 Study area	1	54.41ha	55.66ha	The study area has been increased from 54.41ha (Figure 1) to 55.66ha (Figure 2), this change is consistent with the conclusions and recommendations of the report
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# Addendum cover letter for Elizabeth Enterprise Precinct Stage 1

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Appendix DD2 – Elizabeth Enterprise Precinct, Non-Aboriginal Archaeological Research Design Report	Executive Summary	iii	Waste Disposal Facility	A Concept Masterplan comprising eight (8) industrial buildings and a Stage 1 development including site preparation, bulk earthworks, road works, stormwater infrastructure and utilities and construction of two warehouse and distribution buildings	This change is consistent with the conclusions and recommendations of the report
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# Addendum cover letter for Elizabeth Enterprise Precinct Stage 1

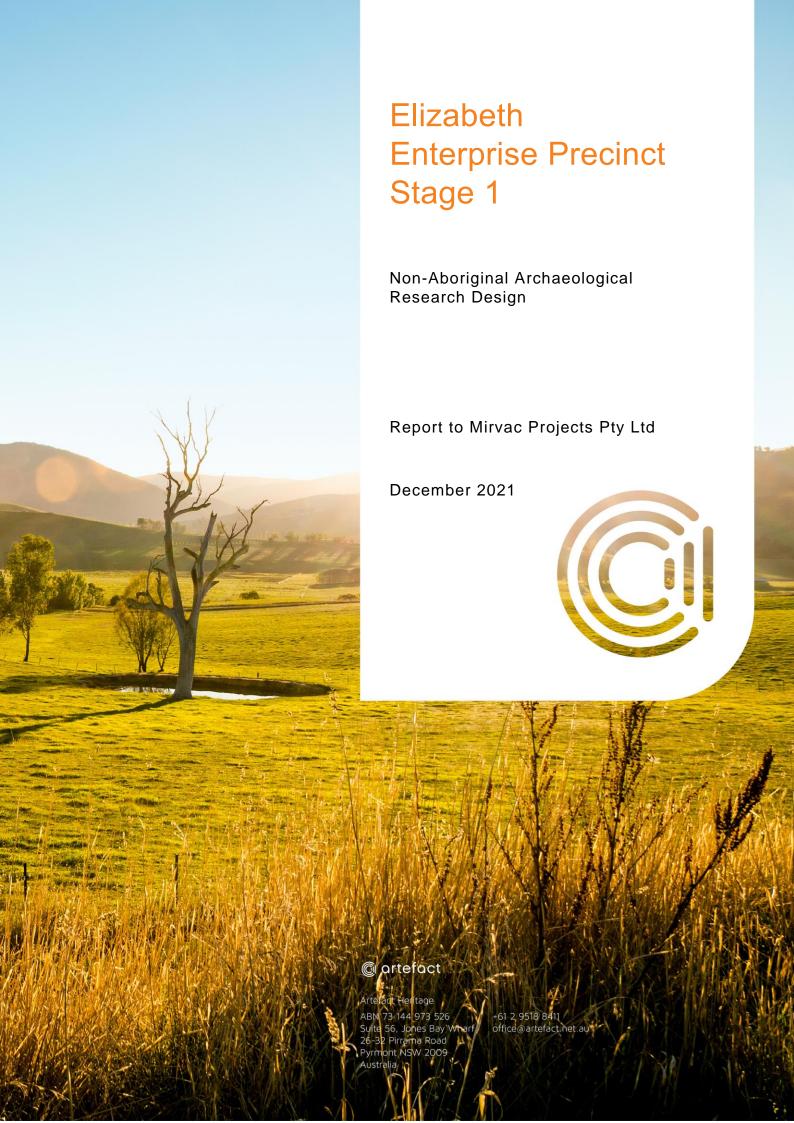
Report	Section	Page	Original text	Updated text	Comments
	1.1 Introductio	n <sup>1</sup>	Waste Disposal Facility	A Concept Masterplan comprising eight (8) industrial buildings and a Stage 1 development including site preparation, bulk earthworks, road works, stormwater infrastructure and utilities and construction of two warehouse and distribution buildings	This change is consistent with the conclusions and recommendations of the report
	1.2 Study area	1	54.41ha	55.66ha	The study area has been increased from 54.41ha (Figure 1) to 55.66ha (Figure 2), this change is consistent with the conclusions and recommendations of the report
Appendix DD4 – Elizabeth Enterprise Precinct, Historical Archaeological Test Excavation Results Report	Executive Summary	iii	Waste Disposal Facility	A Concept Masterplan comprising eight (8) industrial buildings and a Stage 1 development including site preparation, bulk earthworks, road works, stormwater infrastructure and utilities and construction of two warehouse and distribution buildings	This change is consistent with the conclusions and recommendations of the report
	1.2 Study area	1	54.41ha	55.66ha	The study area has been increased from 54.41ha (Figure 1) to 55.66ha (Figure 2), this change is consistent with the conclusions and recommendations of the report

Figure 1: Original study area



Figure 2: Updated study area





## **Document history and status**

Revision	Date issued	Reviewed by	Approved by	Date approved	Revision type
1	26 July 2020	Sandra Wallace / Duncan Jones	Sandra Wallace	26 July 2020	Draft V1
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Author:	Jenny Winnett
Project manager:	Jayden van Beek
Project number:	19024
Name of organisation:	Artefact Heritage
Document version:	Final

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# **EXECUTIVE SUMMARY**

Mirvac Projects Pty Ltd (Mirvac) are proposing to develop a Waste Disposal Facility at 1669 – 1732 Elizabeth Drive, Badgerys Creek, for the disposal of clean waste spoil material resulting from the construction of critical State Significant Infrastructure and building projects.

Artefact Heritage (Artefact) were engaged by Mirvac to prepare a Statement of Heritage Impact (SoHI) report for the project in 2019.¹ The SoHI found that the study area was once the property of James Badgery, an early settler in the colony, and that his original homestead "Exeter Farm", was once located on the property. The SoHI concluded that there was the potential for significant archaeological remains related to Badgery's "Exeter Farm" homestead to be located within the study 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 Archaeological Research Design (ARD) <sup>2</sup> in support of an application for a section 139 exception (s139) for archaeological testing under the NSW *Heritage Act 1977* (approved by Heritage NSW, Department of Premier and Cabinet (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). The results of the test excavation have been summarised in Section 3.3.1.

Consequently, the ARD recommended that a s140 excavation permit should be sought from Heritage NSW, DPC to approve archaeological salvage excavations at the study area. This ARD has been prepared to support this application.

### Conclusions

Based on the results of historical research and archaeological testing, this ARD has identified the following:

- 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 following a site visit with an individual involved in the 1973 excavation of the first Exeter house and archaeological test excavation in 2020

<sup>&</sup>lt;sup>2</sup> Artefact, 2019b. Elizabeth Drive Non-Aboriginal Archaeological Research Design Report. Report prepared for Mirvac



<sup>&</sup>lt;sup>1</sup> Artefact, 2019a. Elizabeth Enterprise Precinct, Stage 1: Non-Aboriginal Statement of Heritage Impact. Report prepared for Mirvac.

- 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 20<sup>th</sup> century farm building
- 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.

### Recommendations

- 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, predominantly focused on areas known to contain intact artefact bearing deposits of local significance. This document accompanies an application for a s140 excavation permit from NSW Heritage Division. The archaeological salvage program would be undertaken within the requirements of this permit.
- If archaeological remains of State significance, or locally significant remains not identified in the SoHI or this ARD, are unexpectedly identified during the archaeological 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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# 1.0 INTRODUCTION

### 1.1 Introduction

Mirvac are proposing to develop a Waste Disposal Facility at 1669 – 1732 Elizabeth Drive, Badgerys Creek, for the disposal of clean waste spoil material resulting from the construction of critical State Significant Infrastructure and building projects (the project).

Artefact Heritage (Artefact) were engaged by Mirvac to prepare a Statement of Heritage Impact (SoHI) report for the project in 2019.<sup>3</sup> The SoHI found that the study area was once the property of James Badgery, an early settler in the colony, and that his original homestead "Exeter Farm", was once located on the property. The SoHI concluded that there was the potential for significant archaeological remains related to Badgery's "Exeter Farm" homestead to be located within the study area and recommended further archaeological management of these resources prior to ground disturbing works were conducted at the site.

As a result, Mirvac engaged Artefact to prepare a non-Aboriginal Archaeological Research Design (ARD) <sup>4</sup> in support of an application for a section 139 exception (s139) for archaeological testing under the NSW *Heritage Act 1977* (approved by Heritage NSW, Department of Premier and Cabinet (Heritage NSW, 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 (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). The results of the test excavation have been summarised in Section 3.3.1.

Consequently, the ARD recommended that a s140 excavation permit should be sought from Heritage NSW, DPC to approve archaeological salvage excavations at the study area. This ARD has been prepared to support this application.

# 1.2 Study area

The study area comprises 1669 – 1723 Elizabeth Drive, Badgerys Creek (Lot 5 / DP 860456). The study area is a 54.41 hectare (ha) rural property located within the boundaries of the Penrith Local Government Area (LGA) and the Western Sydney Priority Growth Area. The study area is within the parish of Claremont within the country of Cumberland. The location of the study area is illustrated in Figure 1.

### 1.3 Authorship

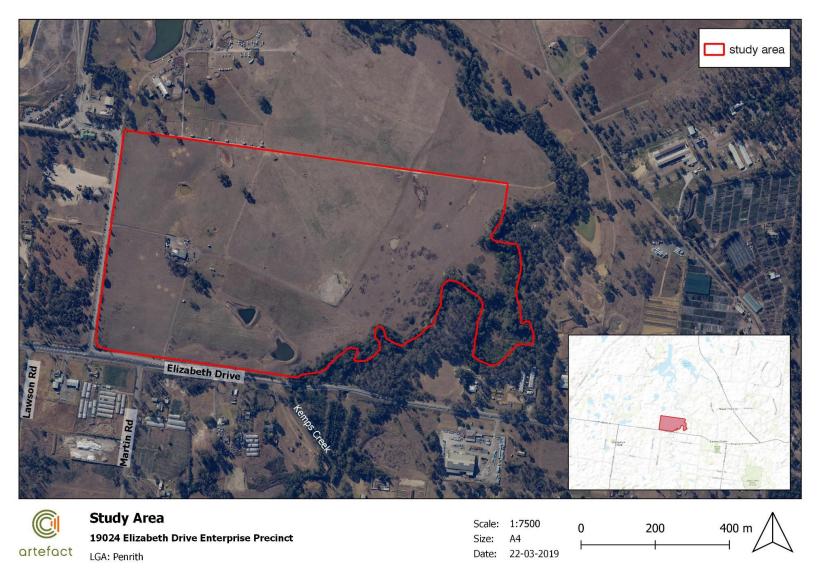
This report was prepared by Jenny Winnett (Principal and Excavation Director), Duncan Jones (Principal) and Jayden van Beek (Senior Heritage Consultant). Josh Symons (Principal) and Jacob Mark (Historian) prepared the background to 3.1 of this report. Management input and review was provided by Dr Sandra Wallace (Managing Director).

<sup>&</sup>lt;sup>4</sup> Artefact, 2019b. Elizabeth Drive Non-Aboriginal Archaeological Research Design Report. Report prepared for Mirvac.



<sup>&</sup>lt;sup>3</sup> Artefact, 2019a. Elizabeth Enterprise Precinct, Stage 1: Non-Aboriginal Statement of Heritage Impact. Report prepared for Mirvac.

Figure 1: Location and extent of study area



### 1.4 Limitations

This report is based on historical research and field inspections. These methods are not always precise and are subject to methodological inaccuracies. Therefore, there is always the potential for unexpected archaeological remains to be encountered during subsurface excavations. It is possible that further historical research or the emergence of new historical sources may support different interpretations of the evidence in this report.

The maps in this report are for informational purposes only and are not suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

The significance assessment made in this report is a combination of both facts and in accordance with a standard set of assessment criteria. It is possible that another professional may interpret the historical facts and physical evidence in a different way.

A summary of the statutory requirements regarding heritage is provided in Section 2.0. It should be noted that legislation, regulations and guidelines change over time and users of this report should satisfy themselves that the statutory requirements have not changed since the report was written.

This ARD and Excavation Methodology targets non-Aboriginal archaeology only (with the exception of contact archaeology). A separate Aboriginal Archaeological Assessment has been prepared by Artefact Heritage to manage this component of the project.

# 2.0 STATUTORY CONTEXT

# 2.1 Heritage Act 1977

The NSW *Heritage Act 1977* (Heritage Act) is the primary piece of State legislation affording protection to heritage items (natural and cultural) in NSW. Under the Heritage Act, 'items of environmental heritage' include places, buildings, works, relics, moveable objects and precincts identified as significant. Significance is based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values.

The State Heritage Register (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 NSW, DPC and includes a diverse range of over 1500 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.

#### 2.1.1 2009 Relics Provisions

The Heritage Act provides protection for archaeological 'relics' including significant archaeological material or deposits. Section 4 (1) of the Heritage Act (as amended in 2009) defines a relic as:

...any deposit, artefact, object or material evidence that:

relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and is of State or local heritage significance

Furthermore, the document Assessing Significance for Archaeological Sites and 'Relics' includes the following regarding archaeological relics:

Relevant case law and the general principles of statutory interpretation strongly indicate that a 'relic' is properly regarded as an object or chattel. A relic can, in some circumstances, become part of the land be regarded as a fixture (a chattel that becomes permanently affixed to land).<sup>5</sup>

Section 139 (Division 9: Section 139, 140 – 146) of the Heritage Act states:

- (1) A person must not disturb or excavate any land knowingly or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, damaged or destroyed unless the disturbance is carried out in accordance with an excavation permit.
- (2) A person must not disturb or excavate any land on which the person has discovered or exposed a relic except in accordance with an excavation permit.
- (3) This section does not apply to a relic that is subject to an interim heritage order made by the Minister or a listing on the State Heritage Register.
- (4) The Heritage Council may by order published in the Gazette create exceptions to this section, either unconditionally or subject to conditions, in respect of any of the following:
  - a. Any relic of a specified kind or description,

<sup>&</sup>lt;sup>5</sup> Assessing Significance for Archaeological Sites and 'Relics', Heritage Branch, Department of Planning, 2009:7.



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- b. Any disturbance of excavation of a specified kind or description,
- c. Any disturbance or excavation of land in a specified location or having specified features or attributes,
- d. Any disturbance or excavation of land in respect of which an archaeological assessment approved by the Heritage Council indicates that there is little likelihood of there being any relics in the land.

Excavation permits are issued by the Heritage Council of NSW, or its Delegate, under Section 140 of the Heritage Act. An application for an excavation permit must be supported by an ARD and Archaeological Assessment prepared in accordance with relevant archaeological guidelines. Impact to known archaeological relics should not occur prior to approval from Heritage NSW, DPC.

### 2.1.2 Works

The Heritage Act places 'works' in a separate category to archaeological 'relics'. 'Works' are typically remnants of historical structures that are considered to be items of environmental heritage but are not associated with artefact bearing material. Impacts to a 'work' do not require approval from the NSW Heritage Council or its delegate. The following examples of remnant structures have been considered to be 'works' by the NSW Heritage Council:

- Evidence of former infrastructure, where there are no historical artefacts in association with
- · Historical building footings where there are no historical artefacts in association with the item.

Where buried remnants of historical structures are located in association with historical artefacts in controlled historical contexts (such as intact historic glass, ceramic or bone artefacts), which have the potential to inform research questions regarding the history of a site, the above items may not be characterised as 'works' and may be considered to be 'relics'. The classification of archaeological resource as a 'work' therefore is contingent on the predicted remains being associated with historical structures as well as there being no prediction of the recovery of intact artefactual deposits which may be of research interest.

Archaeological works must be managed in accordance with their significance.

# 2.2 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (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 consists of three main parts of direct relevance to Aboriginal cultural heritage; Part 3 which governs the preparation of planning instruments, Part 4 which relates to development assessment processes for local government (consent) authorities, and Part 5 which relates to activity approvals by governing (determining) authorities.

Planning decisions within LGAs are guided by Local Environmental Plans (LEPs). Each LGA is required to develop and maintain and LEP that includes Aboriginal and historical heritage items which are protected under the EP&A Act and the *Heritage Act 1977*. The study area is located in the Penrith LGA and is subject to consents under the Penrith LEP 2010.

### 2.2.1 Penrith LEP 2010

The study area falls within the boundaries of the Penrith LGA. Clause 5.10 outlines the provisions which apply to heritage conservation and requirements in relation to development applications affecting a heritage item or within a conservation area. The aim of the LEP in relation to heritage is to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings, views and archaeological sites. The LEP lists identified items of heritage significance in Schedule 5.

The Penrith Development Control Plan (DCP) provides guidelines for development proposals and heritage under Part C 7 Culture and Heritage. It provides examples of the types of development and how this could affect heritage, and what requirements are needed before development can commence, such as heritage impact statements. Controls are listed depending on what type of development is proposed. The controls for currently listed LEP items encourage the retention of the items while enabling sympathetic change. New development must not diminish the significance of the item.

The following clauses apply to places of heritage significance within the Penrith LGA, under Part 5 Clause 5.10 of the Penrith LEP 2010:

- (1) Objectives The objectives of this clause are as follows:
- (a) to conserve the environmental heritage of Penrith
- (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabrics, settings and views,
- (c) to conserve archaeological sites,
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance



# 3.0 REVISED ARCHAEOLOGICAL CONTEXT

## 3.1 Introduction

Archaeological potential is defined by the NSW Heritage Division Archaeological Assessment Guidelines as 'the degree of physical evidence present on an archaeological site'. Archaeological potential can be subdivided into the following categories, based on the likely occurrence of archaeological material, previous impacts, findings from nearby archaeological excavations and previous geotechnical investigations:

High Potential	areas with known archaeological remains evidenced by ground truthing and/or a lack of previous impacts;
Moderate Potential	areas that may have archaeological remains based on other lines of evidence such as maps or documents where the extent of impacts is unknown;
Low Potential	areas that are likely to have minimal archaeological remains based on analysis of known or likely disturbance and previous land use and occupation;
Nil Potential	areas where it is known that archaeological remains will not occur such as deep basements, heavily disturbed ground and areas known to have remained unoccupied throughout the area's European history

# 3.2 Historical development

The following provides an overview of the historical context of the study area taken primarily from the SoHI<sup>6</sup> and ARD prepared for the project.<sup>7</sup> 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 1.

Table 1: Overview of historic land use and associated structures in the study area

Date	Structures in study area
c.1809	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.
	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.
	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.
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

<sup>&</sup>lt;sup>6</sup> Artefact 2019a.

<sup>&</sup>lt;sup>7</sup> Artefact 2019b.



Date	Structures in study 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 2. The development of the site in terms of structural remains is illustrated in Figure 2.

Table 2: 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: 19 <sup>th</sup> 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: 20 <sup>th</sup> 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 <sup>th</sup> 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.

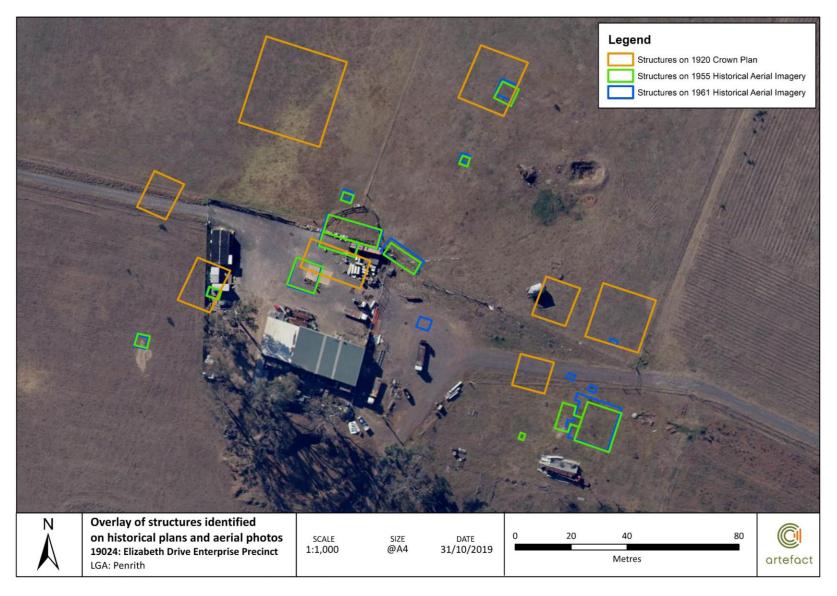


Figure 2: Overlay of structures in the study area from the 1920 crown plan, and 1955 and 1961 aerial photographic imagery

# 3.3 Results of archaeological testing

## 3.3.1 Historical testing

The 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 8.8

A summary of the findings from each test trench is included in Table 3 below.9

The test excavation findings have contributed to the partial revision of the assessment of archaeological potential completed in 2019, as summarised in Section 3.4.

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.

Table 3: 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)	
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

<sup>&</sup>lt;sup>9</sup> Artefact 2020. *Elizabeth Enterprise Precinct, Historical Archaeological Test Excavation Results*. Report prepared for Minuse.



<sup>&</sup>lt;sup>8</sup> Artefact 2019b.



Figure 3: Northwest view showing the location of the brick wall <028> in relation to the remains of the wesern annex



Figure 4: 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 5: Northwest view off TT 3 showing the location of the sandstone footings <029>



Figure 6: Northeast detail view of the sandstone footings <029> of the second Exeter Farm House

### 3.3.2 Aboriginal testing

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).<sup>10</sup> Test excavation of PAD01 and PAD02 was undertaken in accordance with the Code of Practice<sup>11</sup> between 17 February and 6 March 2020 (see Figure 9).<sup>12</sup>

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.

<sup>&</sup>lt;sup>12</sup> Artefact Heritage, *Elizabeth Enterprise Precinct Stage 1, DRAFT Aboriginal Test Excavation Report* for Projects Pty Ltd, April 2020



<sup>&</sup>lt;sup>10</sup> Artefact Heritage, Elizabeth Precinct Stage 1, Archaeological Survey Report, Report to Mirvac Projects Pty Ltd, 2019

<sup>&</sup>lt;sup>11</sup> 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

A total of 89 artefacts were retrieved during excavation, including nine artefacts produced from nineteenth century 'black' bottle glass (Figure 7).<sup>13</sup> These artefacts were assessed as being intentionally manufactured tools.<sup>14</sup>

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. <sup>15</sup> 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. <sup>16</sup> 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.



Figure 7: Glass artefacts recovered from EP AS 02

<sup>&</sup>lt;sup>16</sup> Artefact Heritage, April 2020, p.76



<sup>&</sup>lt;sup>13</sup> Artefact Heritage, April 2020, p.50

<sup>&</sup>lt;sup>14</sup> Artefact Heritage, April 2020, p.50

<sup>&</sup>lt;sup>15</sup> Hardy 1989: 19

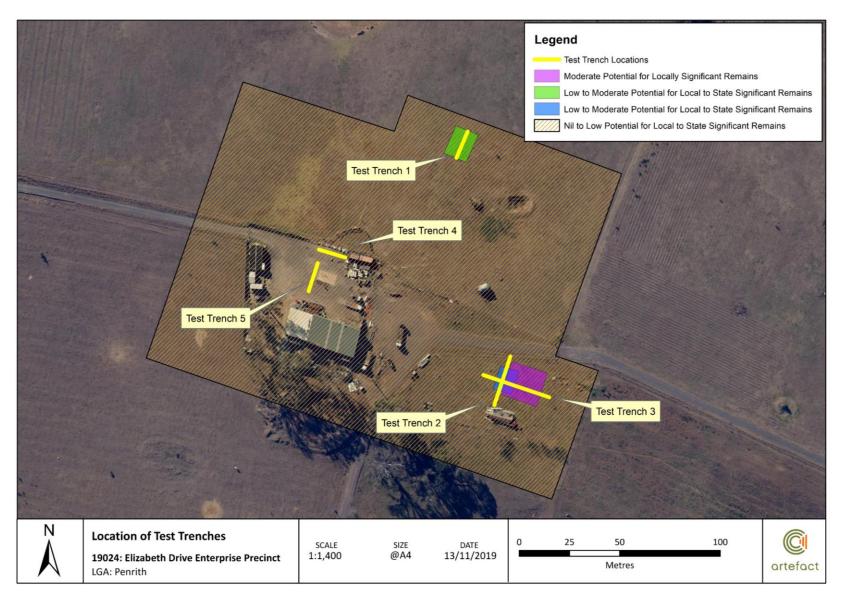


Figure 8: Locations of archaeological test trenches and archaeological potential as assessed in the 2019 ARD

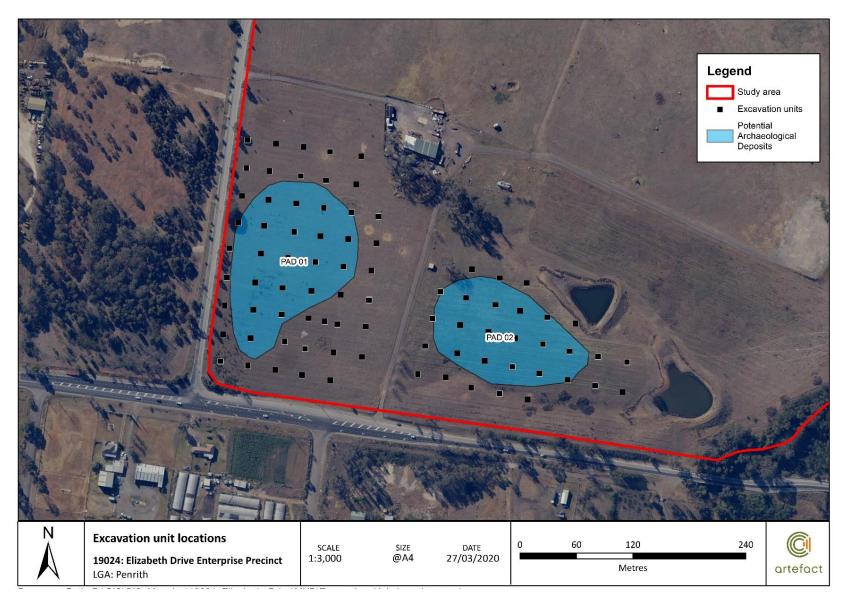


Figure 9: Excavation units across PAD 01 and PAD 02

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# 3.4 Revised assessment of archaeological potential

A detailed assessment of the archaeological potential and significance of the site was outlined in the 2019 ARD<sup>17</sup> and has been summarised in Table 4 below. This revised assessment, also in Table 4, 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 10)
- 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.<sup>18</sup> 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.<sup>19</sup> 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
- Due to the presence of intact Phase
- 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 to the south mean that this possibility cannot be entirely discounted.

The revised areas of archaeological potential are illustrated in Figure 10.

<sup>&</sup>lt;sup>19</sup> Hardy, 1989, p. 21



<sup>&</sup>lt;sup>17</sup> Artefact 2019b.

<sup>&</sup>lt;sup>18</sup> Donald and Dunson, 1996, p. 4

Table 4: 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)	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
Phase 1 Badgery Land Grant (1809 – 1839)	Northern Location for the First Exeter House, surrounds and gardens	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

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> <li>Evidence of former masonry buildings or structures (brick or stone footings, associated deposits)</li> <li>Occupation deposits (underfloor accumulations, yard scatters, rubbish pits)</li> <li>Paving associated with external yard divisions and landscaping</li> <li>Postholes associated with fence lines</li> <li>Beaten earth or paved surfaces, hearth, chimney remnants, refuse deposits associated with external kitchen</li> <li>Evidence of landscaping (such as stone or brick retaining walls, edging, hard surfaces indicating forme pathways, stone flagging)</li> <li>Rubbish pits.</li> </ul>	Low to Moderate	Low potential for deeper subsurface structural remains within the laydown area (pink on Figure 10)  Low within the area identified as containing an intact resource associated with the second Exeter Farm house (green on Figure 10)
Phase 1 Badgery Land Grant (1809 – 1839)	Early farming sheds, convict quarters and early farm infrastructure	<ul> <li>Post holes associated with ephemeral structures such as coops, stalls, stables, stock yard fencing</li> <li>Indicators of natural flooring including areas of compacted earth or paving indicating the location of flooring, occupation or underfloor deposits, hard stands/working surfaces</li> <li>Evidence of landscaping (such as stone or brick retaining walls, garden soils, terracing)</li> <li>Structures typically located in rear yards such as privies, wells, cisterns or cesspits</li> <li>Rubbish pits</li> </ul>	Nil to Low	Low potential for deeper subsurface structural remains within the laydown area (pink on Figure 10)  Low within the area identified as containing an intact resource associated with the second Exeter Farm house (green on Figure 10)

Phase	Known structure/activity	Potential archaeological remains	2019 assessment	Updated assessment
Phase 2: 19 <sup>th</sup> C. Dairy (1840 – 1920)	Second Exeter Farm House and grounds	<ul> <li>Evidence of former masonry buildings or structures (brick or stone footings, associated deposits)</li> <li>Occupation deposits (underfloor accumulations, yard scatters, rubbish pits)</li> <li>Paving associated with external yard divisions and landscaping</li> <li>Postholes associated with fence lines</li> <li>Beaten earth or paved surfaces, hearth, chimney remnants, refuse deposits associated with external kitchen</li> <li>Evidence of landscaping (such as stone or brick retaining walls, edging, hard surfaces indicating former pathways, stone flagging)</li> <li>Rubbish pits.</li> </ul>	Moderate	<b>High</b> – remains identified during testing (green on Figure 10)
Phase 2: 19 <sup>th</sup> C. Dairy (1840 – 1920) and Phase 3: 20 <sup>th</sup> C. Dairy (1921 – 2006)	Late nineteenth and early twentieth century farm buildings	<ul> <li>Posts and postholes associated with timber support posts, walls, pens and fences</li> <li>Evidence of former masonry buildings or structures (brick, stone or concrete footings, associated deposits)</li> <li>Paving associated with external yard divisions and landscaping</li> <li>Beaten earth or paved surfaces, yard surfaces</li> <li>Isolated artefact deposits</li> <li>Evidence of landscaping (such as stone or brick retaining walls, edging, hard surfaces indicating former pathways, stone flagging)</li> </ul>	remains related to Phase 2  Low for archaeological remains related to Phase 3	Low for archaeological remains related to Phase 2  High for archaeological remains related to Phase 3 (remains identified during testing)

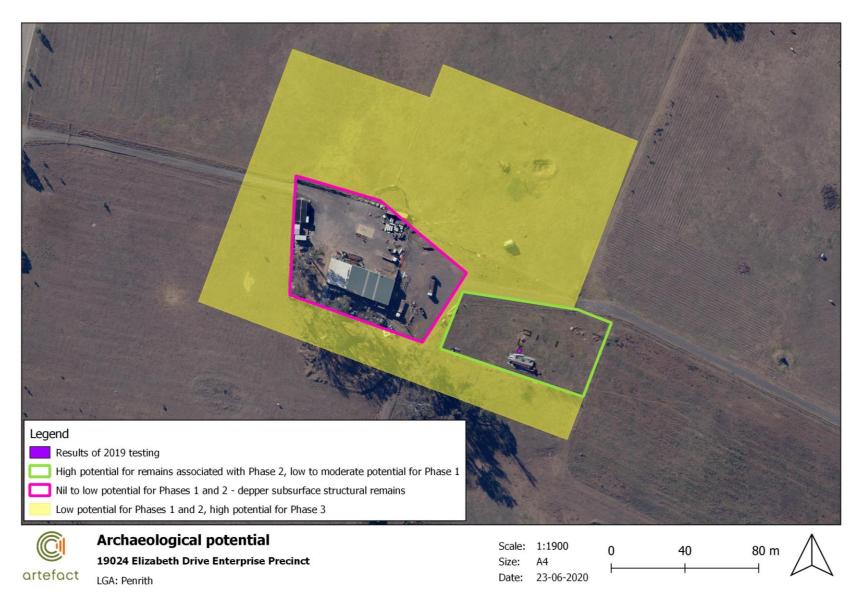


Figure 10: Revised assessment of archaeological potential with results of significant remains identified during testing

#### 3.5 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 4, has been assessed using the NSW heritage assessment criteria and described in Table 5.

Table 5: Significance assessment for archaeological remains of Exeter Farm

Table 5. Significance assessment for archaeological remains of Exercit Farm				
Criteria	Discussion			
A - Historical Significance  An item is important in the course or pattern of the local area's cultural or natural history	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.  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.			
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 Significance  An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area	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'.  The potential archaeological resource associated with Exeter Farm is unlikely to meet the significance threshold for local or State significance under this criterion.			
An item has strong or	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.			



spiritual reasons

area for social, cultural or If substantial and intact archaeological resources associated with Exeter Farm were found, they may have local significance under this criterion.

### Criteria

### **Discussion**

#### E - Research Potential

An item has potential to yield information that will contribute to an area's cultural or natural history

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 understanding of the local 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.

> 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

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.

### F - Rarity

An item possesses uncommon, rare or endangered aspects of natural history

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 the local area's cultural or remains dating to early settlement as well as in situ 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.

> 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.

### **G** - Representative

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)

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.

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.

#### 3.5.1 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 6 provides a summary of the specific archaeological significance of predicted archaeological remains.



Table 6: 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	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.	Local to State
	Northern Location 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	Local to State
	Southern location for the First Exeter House, surrounds and gardens	Low	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 <sup>th</sup> century Sydney.	Local to State
	Early farming sheds, convict quarters and early farm infrastructure	Nil to Low	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.	Local to State
Phase 2: 19 <sup>th</sup> C. Dairy (1840 – 1920)	Second Exeter Farm House and grounds	Moderate	This farm house was constructed at an unknown time in the (probably late) 19 <sup>th</sup> 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.  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.	Local

Phase	Specific remains	Arch. Potential	Discussion of significance in relation to specific archaeological remains	Significance
Phase 3: 20 <sup>th</sup> C. Dairy (1921 – 2006)	Mid to late twentieth century farm buildings	Low	Remains associated with twentieth century farm buildings would not reach the threshold for local significance.	Nil

### 3.5.2 Revised 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 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 identified during testing are 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

# 4.0 ARCHAEOLOGICAL METHODOLOGY

# 4.1 Archaeological impact assessment

The proposal seeks approval for a Waste Disposal Facility at 1669 – 1732 Elizabeth Drive, Badgerys Creek, for the disposal of clean waste spoil material resulting from the construction of critical State Significant Infrastructure and building projects.

The proposed Waste Disposal Facility at 1669 – 1732 Elizabeth Drive, Badgerys Creek would include the following activities:

- The demolition and removal of existing rural structures;
- Termination, connection or augmentation of services and utilities to the site;
- Dewatering and decommissioning of existing farm dams;
- Clearing of existing vegetation on the subject site;
- The importation, placement and compaction of clean waste spoil material as defined within the Fill Management Protocol supporting this application;
- Ancillary onsite earthworks associated with the waste disposal facility; and
- Construction of stormwater, erosion and sediment control systems.

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.

# 4.2 Proposed excavation methodology

The study area has potential to contain archaeological remains of State and local significance associated with all phases of the development of the study area. The following sections outline the archaeological management for each of these areas. Generally, these guiding precepts are followed:

- Manage archaeological resources in accordance with the relics provisions of the Heritage Act
   1977 with appropriate approval from Heritage, NSW DPC in the form of a Section 140 permit
- Investigate and record archaeological resources in accordance with archaeological best practice, NSW Heritage Council guidelines, the conditions of any permits issued under the Heritage Act and any requirements of Penrith City Council.

As the archaeological potential of the site varies, it is proposed that management of the potential archaeological resource include the following processes. The recommended archaeological management of the site is also illustrated in Figure 11.

- Heritage induction
- Salvage in areas with high potential to contain locally significant archaeological remains
- Monitoring and salvage (if required) in areas with high potential to contain less significant archaeological remains
- Unexpected finds procedure in areas of nil-low potential.

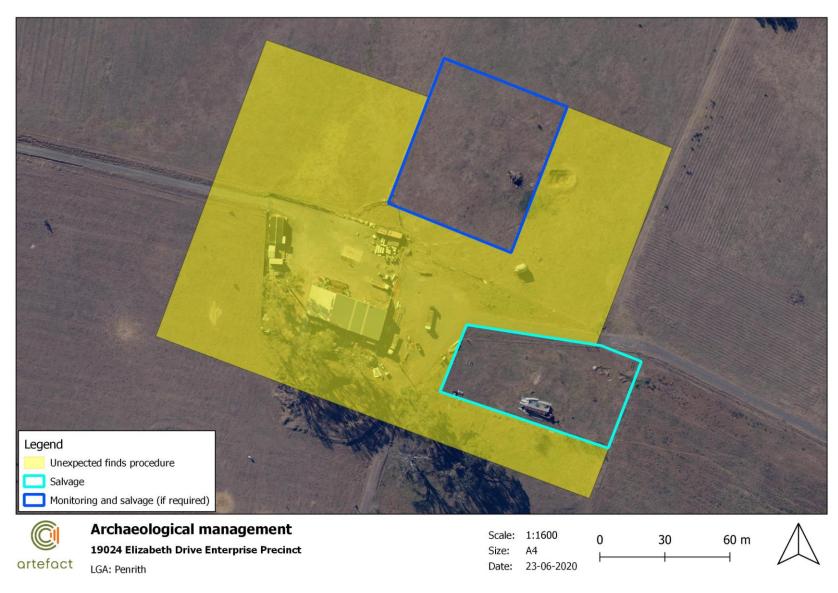


Figure 11: Archaeological management plan

## 4.2.1 Heritage induction

Archaeological heritage would be included in the general project induction for all personnel. At a minimum, this would include an overview of the project's obligations, archaeological management and the role of the archaeological team.

## 4.2.2 Monitoring

It is proposed that those areas identified as having limited potential to contain significant archaeological relics, but high potential to contain less significant evidence of former structures, be subject to archaeological monitoring and salvage (if required).

Archaeological monitoring is where an archaeologist is in attendance and supervising construction excavation work with potential to expose or impact archaeological remains. Monitoring is generally undertaken where there is low or low-moderate potential for significant archaeological remains and/or where minor excavation work is in an area of archaeological sensitivity.

If archaeological remains are identified during archaeological monitoring, they would be recorded and assessed to determine if further investigation is required. Localised stoppages in excavation work would be required to facilitate this process. Works would not recommence until the monitoring archaeologist has completed the recording and is satisfied that further investigation is not required.

If significant archaeological remains are identified, then further investigation (salvage) would be required prior to construction impacts. In this instance, the salvage excavation methodology outlined in Section 4.3.3 would be followed.

The monitoring program would be undertaken by experienced archaeologists, at the same time as the salvage excavation in the easternmost portion of the site and managed by a qualified Excavation Director.

In the event that unexpectedly intact state significant archaeological remains, or significant remains not identified in the archaeological assessment, are encountered during the monitoring program, Heritage NSW, DPC would be consulted.

### 4.2.3 Salvage excavation

During testing in 2019 the former homestead site was identified as containing intact archaeological remains associated with the second Exeter Farmhouse. This area has the potential to contain artefact bearing deposits reaching the local significance threshold. This area also has some potential to contain remnant archaeological evidence of the first Exeter Farmhouse. It is therefore recommended that this area be subject to open area salvage excavation. Salvage excavation may also be undertaken where archaeological monitoring or the Unexpected Finds Procedure have identified that other areas are likely to have high potential to contain further archaeological remains.

In the event that intact State significant archaeological remains, or significant remains not identified in the archaeological assessment, are encountered during works, then further assessment and approvals from Heritage NSW, DPC may be required before works can proceed.

Open area salvage excavation is a method of archaeological investigation in which the full horizontal extent of a site is investigated and cleared, preserving the stratigraphic record. The methodology outlined below would be followed.

#### 4.2.3.1 Survey

The study area would be surveyed using a total station, or by hand surveying techniques, to create accurate squares in which to excavate. If using a total station, the site will be gridded to an

appropriate datum such as the Map Grid of Australia (MGA) in 5 x 5 m squares, which will be used to facilitate the detailed planning process.

## 4.2.3.2 Clearing of vegetation and topsoil

Where vegetation in the paddock can be slashed safely without affecting remnant structures in the ground, this will be the first site activity.

An excavator controlled by an experienced operator would remove sterile topsoil in shallow scrapes under direction of the Excavation or Site Director to the top of archaeological layers. The initial focus will be the backfilled test trenches excavated during the 2019 testing program, with excavation extended outwards from this point.

Each architectural feature will be cleared of overlying soil and grass and exposed as clearly as possible without the removal of deposits or intact fabric using a combination of machine and hand excavation. When intact soil deposits are encounters, hand excavation and recording would commence.

#### 4.2.3.3 Hand excavation

Upon encountering archaeological material mechanical excavation would cease and excavation using hand tools would be undertaken by archaeologists trained in on-site historical excavation methods, under the guidance of the Excavation Director.

Project works would not proceed until the salvage excavation is completed and the Excavation Director has provided clearance.

### 4.2.3.4 Deeper subsurface structural remains

Should deeper subsurface structural remains be identified, such as wells, basements or cesspits, excavation of the deposits within would be controlled where possible. A probable cistern was identified during testing in 2019.

Features of this type may contain substantial amounts of backfilled material and artefactual remains. Artefacts find their way into these features through a number of actions, including deliberate placement and accidental loss. Structures of this type often contain a number of backfill or deposition events and are typically excavated suing a combination of machine excavation and hand excavation at depth. Any material removed by excavator would be examined for artefacts by the archaeologists. Accumulated deposits, if intact and uncontaminated, may be useful for soil and pollen analysis.

If the well or cesspit is found to extend to a substantial depth complete excavation of the fill may not be possible due to Occupational Health and Safety requirements. In this situation fill would be removed to a safe depth to allow for the recording of the structure and collection of a representative stratified sample of any fill or artefacts. It is possible that further excavation or monitoring of particularly deep structures, such as wells, may be able to be undertaken by machine at a later date. As this would involve the removal of substantial amounts of soil, the archaeological program would need to have been finalised in the immediate vicinity to avoid disturbance to any archaeological relics or deposits.

### 4.2.3.5 Underfloor and occupation deposits

Underfloor and occupation deposits may be present within internal spaces below the former residence, or accumulated below verandah spaces. Underfloor deposits may provide particularly useful archaeological information in the context of domestic or commercial spaces.

Intact underfloor deposits would be excavated in a grid system, either 50 centimetre or 1 metre depending on extent of deposit. Excavation would be by context if stratigraphic layers are identifiable. If the deposit is homogenised, excavation would proceed in 5 or 10 centimetre spits. Excavated

material would be wet or dry sieved. The range and percentage of archaeological material collected would be in accordance with a sieving strategy developed by the Excavation Director.

This type of investigation can recover data that may be utilised in the analyses of interior spaces and in the identification of activities within those spaces.

## 4.2.4 Unexpected finds procedure

It is not anticipated that works would encounter a significant or substantial historical archaeological resource in those areas with nil to low potential to contain archaeological resources (as illustrated in Figure 11). Therefore, excavation works in these areas can commence under an Unexpected Finds Procedure. If unanticipated archaeological items are identified during excavation in those areas not subject to archaeological monitoring or salvage excavation, the following should be procedure should be followed:

- Cease all project activity in the vicinity of the find
- Leave the material in place and protect it from harm
- Erect a 10 metre exclusion zone using temporary fencing and/or signage
- · Contact a suitably qualified archaeologist to provide an assessment of the find
- Should the assessment identify that the archaeological remains have significance, further assessment and approvals from Heritage NSW, DPC may be required before works can proceed.

During the works, it is recommended that environmental management and construction teams are to be made aware of the nature of the potential archaeological resource outlined in this assessment by undertaking the following:

- Incorporation of the Unexpected Finds Procedure into any construction management plans
- Incorporation of a heritage induction into the general site induction, outlining the history and heritage significance of the potential archaeological remains, the type of remains that may be found, and the procedure to be followed in the event of an unexpected find (see Section 4.2.1).

# 4.3 Recording methodology

The archaeological archival recording would be undertaken in accordance with best practice and Heritage NSW, DPC guidelines. The level of recording detail would be in accordance with the significance of the archaeological remains. State significant remains would require more detailed recording, in particular photographic, survey, and photogrammetry. The recording methodology includes the following:

- A site datum would be established
- A standard context recording system would be employed. The locations, dimensions in plan and characteristics of all archaeological features and deposits would be recorded on a sequentially numbered register
- Scaled section drawings where appropriate.

- Scaled trench plans would be drawn showing the location of archaeological deposits revealed by excavation
- Photographic recording of all phases of the work on site would be undertaken
- Digital photography, in RAW format, using photographic scales where appropriate. A
  photographic record of all phases of the work on site would be undertaken.

### 4.4 Artefacts

Artefacts are likely to be uncovered during archaeological investigations. Artefacts from secure or *in situ* contexts would be collected and recorded. Should relics made from hazardous material be encountered they will be recorded but not collected.

Should diagnostic or significant artefacts be present within the fill layers (out-of-context), a sample would be retained as part of the archaeological record. Any discarded items will be recorded on context or discard sheets (in the case of sieving).

Examples of structural material (building fabric) will be sampled where required and may include brick, mortar, stone, timber and plaster.

An artefact retention policy for the archaeological program is shown in Figure 12.

Retained artefacts would be cleaned processed, catalogued and analysed by an archaeologist experienced in historical artefact assemblages. Artefact analysis would include production of a database in accordance with best practice archaeological data recording. The resulting information would be included in the final excavation report.

Artefacts recovered from the archaeological investigations would be the property of the applicant and would be securely stored by them following completion of post-excavation analysis. Where possible artefacts should be incorporated into interpretive displays.

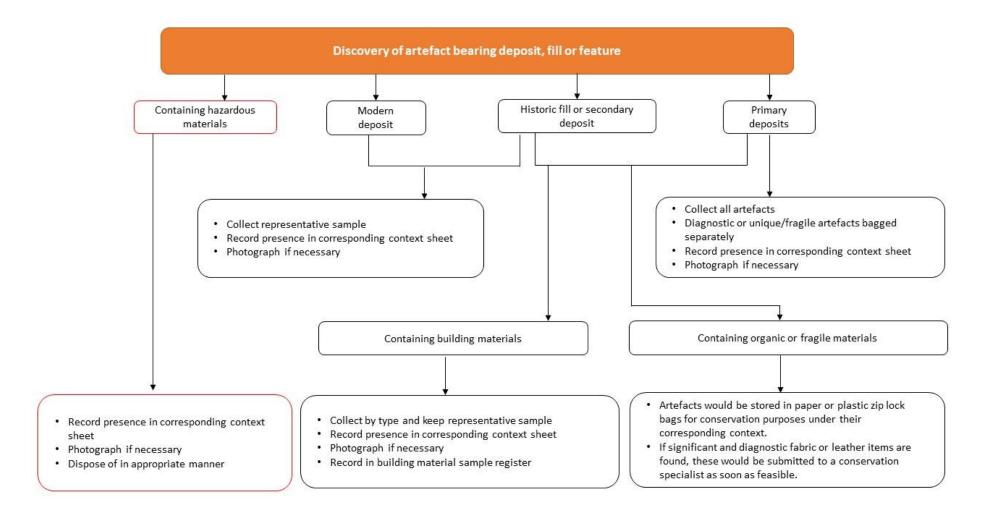


Figure 12. Artefact retention policy for the Elizabeth Enterprise precinct

# 4.5 Preliminary results reporting

Preparation of a preliminary 500 word archaeological results report is a typical conditions of a s140 excavation permit. This report would be prepared following completion of archaeological investigation stages.

The report would outline the main archaeological findings, post-excavation and analysis requirements, and could also include any further archaeological investigation requirements for a particular construction task.

# 4.6 Post-excavation analysis and final report

Following the completion of on-site archaeological works, post-excavation analysis of the findings would be undertaken. An archaeological excavation report will be produced that will comprehensively describe and interpret the findings of the investigation within the context of the research design and research questions.

The document would be issued as a single report incorporating the findings of the archaeological program. This would include artefact analysis, environmental and building material sample analysis, stratigraphic reporting, production of illustrations and detailed site plans. The archaeological remains would be interpreted, and research questions addressed. The report would include a reassessment of archaeological significance based on the investigation results and outline any future statutory requirements.

The report would be prepared in accordance with any requirements condition in the s140 excavation permit.

# 4.7 Management of Aboriginal objects

The 2020 Aboriginal Archaeological Test Excavation Report<sup>20</sup> recommends an AHIP be obtained for savage within the study area. The AHIP application process is occurring concurrently with the s140 application process.

If Aboriginal objects are located during archaeological monitoring and salvage, works would cease, and the find would not be impacted. The find would be recorded and registered in accordance with the requirements of the Code of Practice.

Although there is generally low potential that the proposed salvage area to contain contact archaeology in the form of worked glass artefacts, it is recommended that Registered Aboriginal Parties be included in the historical excavation process.

# 4.8 Management of state significant archaeological 'relics'

If substantial remains likely to be considered State significant or associated with Phase 1 are identified, excavations would cease and Heritage NSW, DPC would be notified.

The exposed remains would be surveyed, recorded, protected and left *in situ*, waiting advice from Heritage NSW, DPC. It is noted that additional assessment and approvals may be required to remove state significant archaeological remains.

<sup>&</sup>lt;sup>20</sup> Artefact Heritage, *Elizabeth Enterprise Precinct Stage 1, DRAFT Aboriginal Test Excavation Report* for Projects Pty Ltd, April 2020.



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# 4.9 Archaeological team

The archaeological team from Artefact Heritage would comprise:

- Excavation Director Jenny Winnett
- Site Directors/Project Management Duncan Jones and Jayden van Beek
- Archaeological Assistants –Josh Symons, Alyce Haast, Isabel Wheeler and other staff and sub-consultants as necessary
- Archaeological Surveyor Guy Hazell
- Environmental sampling Sam Player and Dr Mike McPhail
- Artefact analysis Michael Lever and Jenny Winnett.

# 5.0 ARCHAEOLOGICAL RESEARCH DESIGN

## 5.1 Introduction

An archaeological research design is a theoretical framework designed to support archaeological field investigations with the aim of extracting information regarding the development and function of the site, whilst also placing that information within a wider research context. The following research design is based on the outcomes of archival and documentary research as well as the assessment of archaeological potential and significance. It aims to develop questions that will contribute to current and relevant knowledge about the place, a historic theme and individuals that cannot be sourced from documentary evidence.

### 5.2 Historic themes

Historical themes are a way of describing important processes or activities which have significantly contributed to Australian history at a national and state level. The Heritage Council of NSW has prepared a list of state historic themes relevant to the demographic, economic and cultural development of the state. The use of these themes provides historical context to allow archaeological items to be understood in a wider historical context. Historical themes relevant to the subject site are summarised in Table 7.

Table 7: Historic themes for archaeological resources in the study area

Australian Theme	NSW Theme	Discussion
Peopling Australia	Convict	James Badgery was known to have convict workers appointed to his property to assist in land clearing and developing his cattle and horse farm. These convicts were attested to have their own accommodation on the property. Archaeological remains related to convict domestic and agricultural practices may therefore be present which could address this historic theme.
Developing local, regional and national economies	Agriculture	Badgery's Exeter Farm was developed primarily as a pastoral property however gardens and crops were also grown there.  Archaeological remains related to the operation of this farm would address this historic theme.
Developing local, regional and national economies	Industry	A blacksmith's workshop was attested in historical documents as being present on the site in the 1820s. Due to the relative remoteness of the property during this time, blacksmithing and ironmongery would have been required to be produced at the property for the operation of the farm, particularly for horse-rearing and racing. Any intact archaeological remains related to this former workshop be identified they would address this historic theme.
Developing local, regional and national economies	Pastoralism	Badgery's Exeter Farm was developed for grazing and dairying from soon after its establishment, and a number of sheds, pens and stables were constructed for the operation of the farm.  Archaeological remains associated with these structures would address this historic theme.
Developing Australia's cultural life	Domestic Life	Badgerys Exeter Farm consisted of the homestead for the landowning Badgery family but was also the location where indentured convict and other workers lived while they worked on the property. Archaeological remains associated with their accommodation, subsistence, cooking, clothing and toiletries may be present which would address this historic theme.

# 5.3 Research questions

The significance of a potential archaeological resource lies in its ability to respond to research agendas in a meaningful way, rather than duplicating known information, or information that might be more readily available from other sources such as documentary records or oral history. Therefore, the aim of the following questions is to ensure that the proposed archaeological investigation is focused on genuine research needs.

These research questions are predominantly focused on historical Phase 2. The Statement of Significance in Section 3.5.2, in combination with the NSW Historic Themes in Section 5.2,<sup>21</sup> have provided the basis for the research design framework. Additional research questions may be added if the archaeological resource allows for further, or more in-depth, investigation.

The archaeological resource within the study area has the potential to contribute to research areas such as:

- Consumer behaviour and the household
- Evolution of a working rural estate throughout the 19<sup>th</sup> century
- Rural construction methods
- Comparative analysis of archaeological results to similar agricultural estates in western Sydney.

Additional research questions may be posed (and existing questions modified) as the archaeological excavation progresses and the extant and condition of the archaeological resource is revealed.

### 5.3.1 Consumer behaviour and the household

Archaeological testing has identified that evidence of the second farmhouse is likely to consist of additional stone and brick footings, postholes associated with timber structures and outhouses, and potentially deposits containing evidence of occupation including underfloor deposits and yard scatters. The site may contain evidence of cottage gardens, the layout and use of yard areas, and artefact scatters and refuse pits associated with former residents. A probable cistern was also identified. Excavation of the cisterns, and any wells if they are present, has the potential to provide insight into discard practises, and determine the ways in which the household was disposing of its waste.

Material culture studies is a research area that is utilised by archaeologists to better understand the ways that gender, social standing, ethnicity, and religion are expressed through artefactual remains. Our knowledge of the day-to-day life of lower and working-class individuals is typically lacking in the historic written record. Archaeological investigation has the ability to identify the 'lifeways' of these individuals in a meaningful way.

Evidence of domestic occupation and identity would relate to the NSW Historic Theme of 'Domestic life', 'Accommodation' and 'Utilities'.

Potential research questions relating to the lifeways of these individuals include the following:

<sup>&</sup>lt;sup>21</sup> Heritage Council 2001



- Do any intact under floor deposits provide useful spatial information, identify discrete activity areas or provide spatial data on the range of tasks undertaken within the cottages over time?
   Is there evidence of 'working' versus 'living' areas of the farm house?
- Is there evidence that the residents were engaged in recreational activities? (gaming, smoking, sewing, etc)
- What food were the residents of the cottages consuming? Is there evidence of the cooking methods, brand or food preferences?
- What evidence is there of gardens, and the layout and use of the yard areas?
- Does the archaeological resource provide insight into activities split along gender or age lines? Is there evidence for the presence of women and children?
- Does the archaeological resource provide evidence of social standing and status? Is there
  evidence that former inhabitants of the site displayed their social standing or ethnicity through
  items of personal adornment or preferences for certain consumables?
- Can artefactual evidence be directly associated with the Badgery family, their descendants or their employees?

## 5.3.2 Evolution of a rural estate throughout the 19<sup>th</sup> century

The archaeological resource has the potential to provide insight into the development of the estate throughout the 19th and early 20th centuries.

Previous archaeological studies involving pastoral outbuildings in NSW have tended to predominantly focus on the archaeological remains of living quarters such as cottages. The main reason for this is that living spaces are generally more likely to be found in association with concentrated deposits of archaeological materials in comparison to agricultural structures such as sheds, which past studies have suggested can be difficult to interpret without more substantial archaeological remains. However, pastoral outbuildings have the potential to offer insight into the agricultural practices of the site, which played an important role in the economy of the wider region.

- Does the archaeological resource support the documentary evidence and its analysis or can it provide information that is not available elsewhere?
- Due to the long use and re-use of the site as a rural dairy, to what extent can archaeological remains (structural or artefactual) be individuated clearly between time periods and phases of use? Were early nineteenth century structures maintained on the property and utilised into the late nineteenth or twentieth centuries? What evidence of use and renovation of structures is identifiable in the study area? Does the continued use of structures and areas on site reduce our ability to discern earlier uses of these structures and areas?
- Is a former western annex to the second Exeter Farm House, demolished between 1955 and 1961, the site of the former first Badgery Exeter Farm House? If remains of this former building are identified and they are not the first Exeter Farm House, what was this building and when was it constructed?

- If the location of the first Exeter Farm House is identified, how does this improve our spatial
  understanding of other attested structures at the property, including convict worker's
  accommodation, blacksmith's workshops and farm sheds?
- Can the homestead be reconstructed using archaeological evidence?
- Do structural remains associated with this phase of activity show any evidence of hearths, chimneys or manufacturing furnaces (such as a blacksmith's workshop), which may provide information on domestic and agricultural working practices from that era?
- When was the second Exeter Farm House constructed? Can structural remains and contextual information provide a clear date or date range for the original construction of the building?
- Were landscaped gardens present in the vicinity of the second Exeter Farm house? Is there
  preserved archaeological evidence for these gardens? Are these remains discernible from
  earlier landscaping and garden features?
- Were stables and outbuildings of the second Exeter Farm house constructed before the second Exeter Farm house was built, showing continuity of use?

#### 5.3.3 Construction methods

The study area has been in use as an agricultural estate up to the present day. The archaeological investigation has the potential to identify the extent to which earlier buildings been re-used or modified.

- Does evidence of earlier phases of the farm house survive, and can phases of construction be ascertained from the archaeological record?
- Were the materials used in the construction of the buildings on the site locally manufactured and sourced, or were they imported from elsewhere? Do the construction materials provide some insight into the ways in which local materials were adapted to suit local conditions?
- Does fabric survive that could provide information on the layout of the farm house?
- If evidence of outbuildings or convict accommodation is identified, have they been constructed of different materials that may help differentiate archaeological remains of these buildings from the main residence?

## 5.3.4 Comparative studies

- How do the archaeological remains compare to those obtained from previous estates developed for use as Soldier settlements, such as Oakdale South?
- Can the archaeological resource provide insight into the layout of the former estate? Is this similar to extant estates of the same period i.e. Bella Vista Farm?

# 6.0 CONCLUSIONS AND RECOMMENDATIONS

### 6.1 Conclusions

Based on the results of historical research and archaeological testing, this ARD has identified the following:

- 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 with an individual 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 20<sup>th</sup> century farm building
- 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.

## 6.2 Recommendations

- 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.
   This document accompanies an application for a s140 excavation permit from NSW Heritage
  Division. The archaeological salvage program would be undertaken within the requirements of
  this permit.
- If archaeological remains of State significance, or locally significant remains not identified in the SoHI or this 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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