

# Oakdale West Estate

Non-Aboriginal (Historical) Heritage  
Assessment

and

Historical Archaeological Research  
Design

Report to Goodman

April 2017



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## EXECUTIVE SUMMARY

Goodman Group are proposing the development of the Oakdale West Estate located in Kemps Creek. The project area is approximately 156 hectares, consisting of land contained within Lot 11 DP1178389 within the Penrith City Council Local Government Area (LGA). The project is a separate but complimentary development to the Oakdale Central and Oakdale South Estates.

Part of the Oakdale West Estate development will include the construction of the West North South Link Road (WNSLR) to be utilised as the primary access road. The WNSLR runs from Oakdale West Estates northern boundary, up to Lenore Drive (Erskine Park Link Road Lot 3031 DP1168407).

The study area was originally included in a Historical Archaeological Assessment and Heritage Management Strategy for the Oakdale Concept Plan prepared by Australian Museum Business Services (AMBS). The AMBS assessment identified the site of a timber slab cottage as having high archaeological research potential and high significance.

Artefact Heritage has been engaged to prepare a non-Aboriginal Heritage Assessment for the proposed development. The aim of this report is to identify potential heritage and archaeological impacts of the proposal, and provide management and mitigation measures. This report will inform the Environmental Impact Statement (EIS) for the proposal. This report also includes a non-Aboriginal (historic) Archaeological Research Design outlining the excavation and recording methodology to mitigate impacts to historical archaeological resources.

### Overview of Findings

- The study area has largely been used for pastoral purposes since the 19<sup>th</sup> century
- There are no listed or unlisted heritage items located within the study area
- The majority of the study area has nil-low potential for archaeological remains
- In the southwest of the study area there is a potential archaeological site—the 'collapsed cottage site'. This site has moderate potential to contain locally significant archaeological relics associated with the cottage and outbuildings potentially dating from the early-mid 19<sup>th</sup> century
- The proposed works would result in the complete removal of any archaeology within this site. This impact would be mitigated by a program of archaeological investigation
- As the proposed works are to be assessed as an SSD it is not necessary to acquire approvals under the Heritage Act to impact the archaeological relics. However, the archaeological investigation must be undertaken in accordance with the NSW Heritage Division guidelines, standards and requirements for historical archaeological excavations.

### Recommendations

- Impacts to the collapsed cottage archaeological site would be mitigated by a program of archaeological investigation and recording as described in the Archaeological Research Design (section 7.0). This includes the following:
  - Monitoring the removal of the remaining structure of the cottage

- Test excavation within the curtilage defined in Figure 13 to determine the presence, or absence, of archaeological relics, define the extent of the remains and refine the assessment of significance
- Salvage excavation based on the results of the monitoring and test excavation
- Analysis and preparation of a final archaeological investigation report.
- In those areas of the site identified as having nil-low archaeological potential, it is recommended that an unexpected finds policy, outlined below, be implemented during excavation:
  - Stop work, protect item and inform environment staff
  - Contact an archaeological consultant to provide an assessment of the find
  - Preliminary assessment and recording of the find by the archaeologist. Following the production of the document some, or all works, may be able to proceed
  - Notify the regulator, if required
  - Implement any archaeological mitigation recommended by the archaeologist
  - Resume work.

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# 1.0 INTRODUCTION

## 1.1 Background

The study area was originally included in a Historical Archaeological Assessment and Heritage Management Strategy for the Oakdale Concept Plan prepared by Australian Museum Business Services (AMBS). The AMBS assessment identified the site of a timber slab cottage as having high archaeological research potential and high significance.

Goodman Group has engaged Artefact Heritage to prepare a non-Aboriginal (historical) heritage assessment for the proposed development of Oakdale West Estate located in Kemps Creek.

Part of the Oakdale West Estate development will include the construction of the West North South Link Road (WNSLR) to be utilised as the primary access road. The WNSLR runs from Oakdale West Estates northern boundary, up to Lenore Drive (Erskine Park Link Road).

The aims of this report are to:

- Identify listed and unlisted heritage items within and adjacent to the study area
- Assess the study area's archaeological potential
- Assess the non-Aboriginal heritage and archaeological impact of the proposal
- Provide recommendations for heritage impact mitigation and management

This report will inform the Environmental Impact Statement (EIS) for the proposal.

## 1.2 Study Area

### PART A

The project area is approximately 156 hectares, consisting of land contained within Lot 11 DP1178389 within the Penrith City Council Local Government Area (LGA). The study area is located within the suburb of Kemps Creek, Cumberland County, Parish of Melville. It is bound by Warragamba dam pipeline to the north, Ropes Creek to the east and private properties to the west and south (Figure 1).

### PART B

The WNSLR is located within Lot 3031 of DP 1168407, Erskine Park, immediately to the north of study area Part A. The road corridor runs from Lenore Drive to the proposed Oakdale West Estate (Figure 1). The proposal area for the WNSLR is approximately 8.5 hectares in size.

## 1.3 Proposal

### PART A

The proposal involves the development of the Oakdale West Estate. The project is a separate but complimentary development to the Oakdale Central and Oakdale South Estates. The proposal (Figure 2) includes the following works:

- Initial bulk earthworks: to create broad, flat, developable hardstand areas.
- Civil works: including internal access roads, parking areas, basins, retaining walls and services.

- Building Works: Construction of several industrial use buildings within new subdivision area.

## **PART B**

The proposal involves the construction of the WNSLR from Erskine Park Link Road in the north, down to OWE in the south. The concept design (Figure 3) includes the following works:

- Earthworks and construction of the road.
- The bridge over the SCA pipeline.
- Intersections and infrastructure associated with the road such as drainage.

### **1.4 Authorship**

This report was prepared by Claire Rayner (Heritage Consultant) with management input from Alex Timms (Senior Heritage Consultant). Section 7.0 was written by Duncan Jones (Heritage Consultant). Additional assessment for the WNSLR was undertaken by Veronica Norman (Heritage Consultant). The report was reviewed by Abi Cryerhall (Principal, Historic Heritage).

### **1.5 Limitations**

This report addresses non-Aboriginal heritage within the study area. A separate Archaeological Survey Report (Artefact Heritage 2015) has been prepared to address the Aboriginal heritage within the study area. No physical archaeological investigation within the study area has been undertaken.

Figure 1: Location of study area

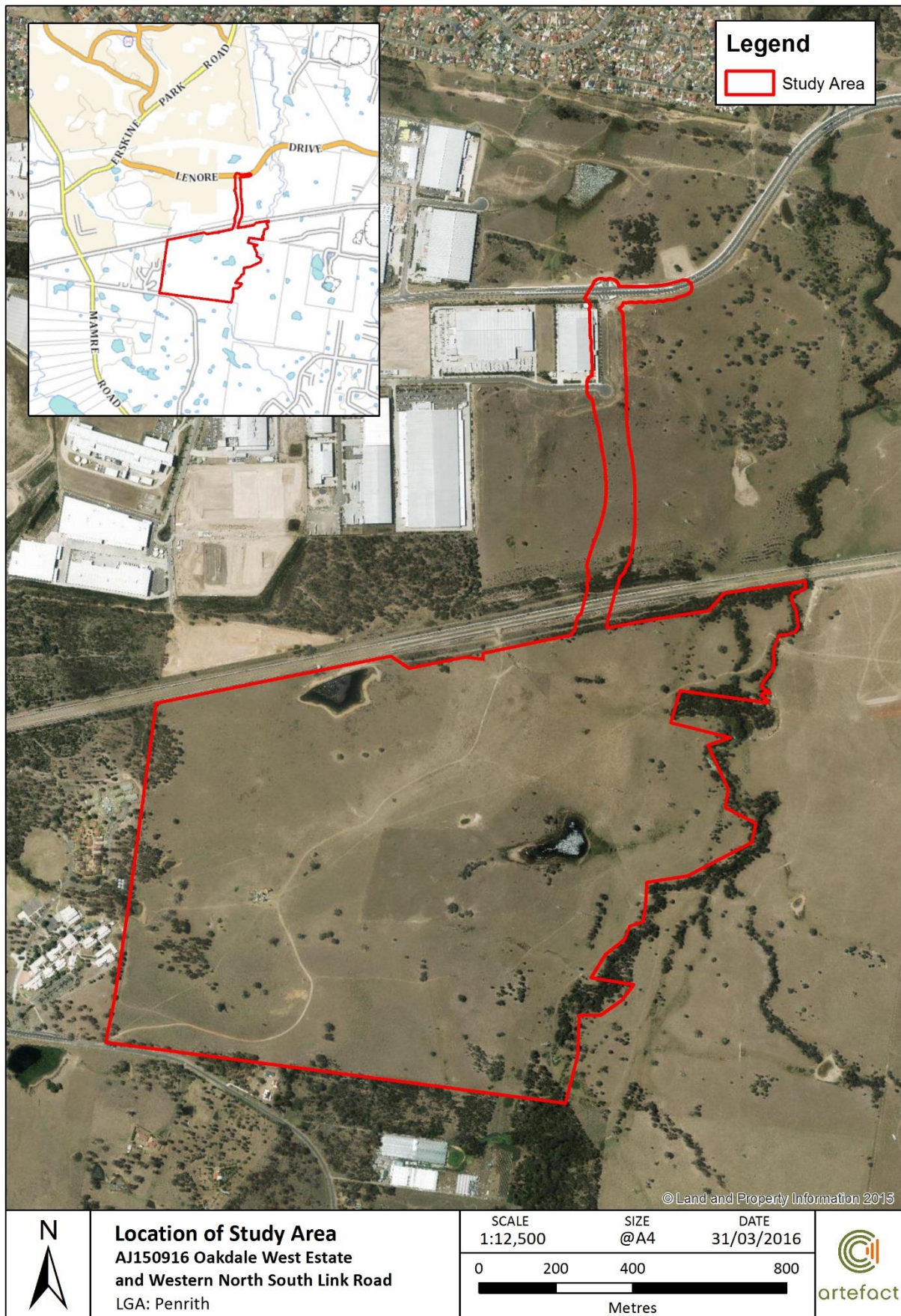




Figure 2: Concept Design: Part A – Oakdale West Estate



SEE DRAWING OAK MP03 FOR CONTINUATION



Site Area Schedule	
Total Site Area	154.12 ha
Less:	
Non Developable Land	25.20 ha
Easements	22.43 ha
Regional Roads	6.43 ha
Services Lot	1.50 ha
Estate Roads	8.92 ha
	64.48 ha
Development Areas	
Precinct 1	22.41 ha
Precinct 2	21.57 ha
Precinct 3	18.49 ha
Precinct 4	21.04 ha
Precinct 5	6.02 ha
Total Developable	89.53 ha
Total Warehouse	453,369 sqm
Total Office	23,555 sqm
Total Facility	476,924 sqm

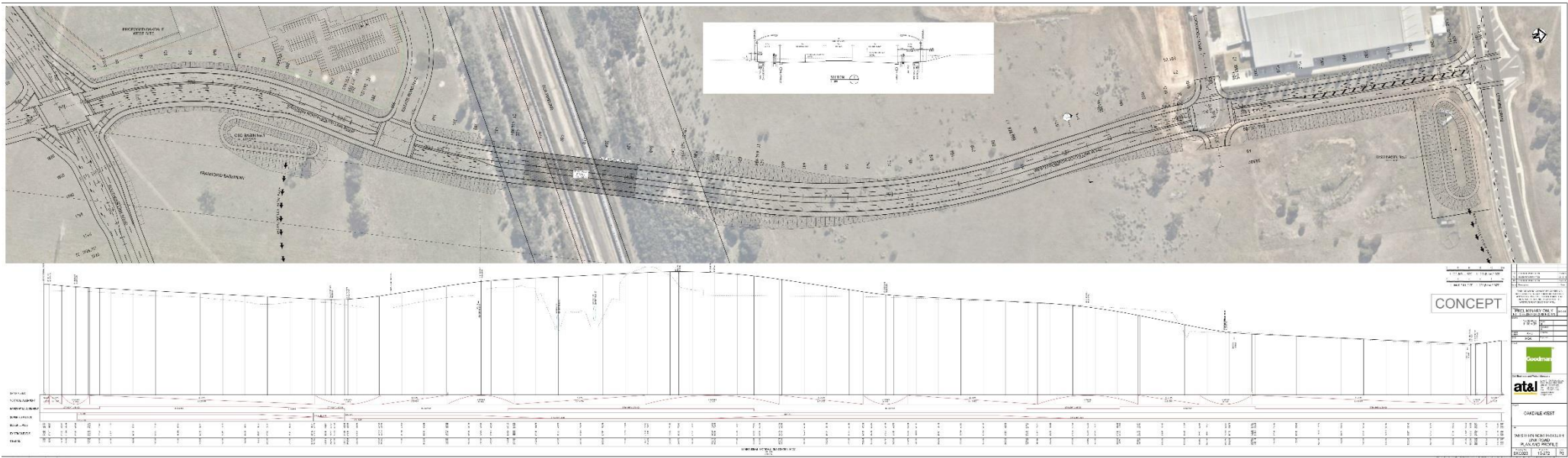


Oakdale West Estate  
Horsley Park

SSDA Estate Masterplan

1:3000 @ A1  
1:6000 @ A3  
25 Jan 2017  
OAK MP 02 (X)

Figure 3: Concept Design: Part B - WNSLR



## 2.0 STATUTORY CONTEXT

### 2.1 Introduction

This section presents the statutory and planning context relating to heritage items and archaeological relics in NSW relevant to the proposed development.

### 2.2 Heritage Act 1977

The NSW *Heritage Act 1977* (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.

#### 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 1500 items, in both private and public ownership.

There are no items listed on the SHR located within the study area.

#### 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:

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*"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."*

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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.



## 2.3 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (the EP&A Act) establishes a 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 before land development; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits. The EP&A Act also requires that Local Governments prepare planning instruments (such as Local Environmental Plans [LEP] and Development Control Plans [DCP]) in accordance with the EP&A Act to provide guidance on the level of environmental assessment required.

The study area is located within the Penrith LGA.

### Penrith Council LEP 2010

The first stage of the Penrith Local Environmental Plan 2010 was published in 2010 and applied to Penrith's rural and industrial areas and St Marys Town Centre. The second stage of the Penrith LEP was published on 28 January 2015 and came into effect on 25 February 2015 to set planning controls for much of the areas not covered by Stage 1 of Penrith Local Environmental Plan 2010, including the City's residential and commercial areas. Clause 5.10 outline heritage requirements under the LEP and heritage items are listed in Schedule 5 (Environmental Heritage).

There are no heritage items within or near the study area which are listed in Schedule 5 (Environmental Heritage) of Penrith LEP.

### Penrith Development Control Plan 2010

The Penrith Development Control Plan (DCP) 2010 came into effect in December 2010 and applies to Penrith's rural lands, industrial lands and the St Marys Town Centre. was prepared in accordance with Section 74C '*Preparation of development control plans*' of the *Environmental Planning and Assessment Act 1979* and clause 16 '*In what form must a development control plan be prepared?*' of the *Environmental Planning and Assessment Regulation 2000*. The plan applies to all zoned land under the Penrith LEP 2010.

The purpose of the DCP is to provide guidance and outline specific controls for development relating to heritage items and within heritage conservation areas and to identify potential places of heritage significance.

### 2.3.1 State Significant Development

The proposal will be assessed under Part 4, Division 4.1 of the EP&A Act, which establishes an assessment and approval regime for State Significant Development (SSD). Part 4, Division 4.1 applies to development that is declared to be SSD by a State Environmental Planning Policy (SEPP). If approved as an SSD, further approvals or permits under the Heritage Act will not be required.

The Heritage Council of NSW and Penrith City Council provided input into the Secretary's Environmental Assessment Requirements (SEARs) for the Oakdale West Precinct SSD relevant to this report. The requirements recommended by the Heritage Council and Penrith City Councils are summarised in the tables below along with the section in which the requirements are addressed by this report.



**Table 1: Heritage Council requirements**

Heritage Council Requirement	Section addressed
A search of the Heritage Office Database has found no record of any State Heritage Register items within the SSD site, however the Environmental Impact Statement (EIS) should further scrutinise if there are any listed or potential heritage items within the proposed project area. If any listed or potential heritage items are likely to be affected, a Heritage Impact Assessment (HIA) must be prepared by a suitably qualified and experienced heritage consultant as part of the EIS. The HIA should assess how the development would impact on any places of heritage significance in or surrounding the SSD site.	Section 5.0 Heritage and Archaeological Assessment Section 6.0 Heritage Impact Assessment
A historical archaeological assessment should be prepared by a suitably qualified historical archaeologist in accordance with the Heritage Division, Office of Environment and Heritage Guidelines ' <i>Assessing Significance for Historical Archaeological Sites and Relics</i> ' 2009. This assessment should identify what relics, if any, are likely to be present, assess their significance and consider the impacts from the proposal on this potential resource. Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations	Section 5.0 Heritage and Archaeological Assessment Section 6.0 Heritage Impact Assessment Section 6.3 Mitigation Section 7.0 Archaeological Research Design
The EIS should identify any impacts on places, items or relics of significance to Aboriginal people. Where it is likely that the project will impact on Aboriginal heritage, adequate community consultation should take place regarding the assessment of significance, likely impacts and management/mitigation measures	Aboriginal heritage has been assessed in a separate report see <i>Artefact Heritage 2015 Oakdale West Estate Aboriginal Archaeological Survey Report</i>
Under the sub heading "Heritage and Aboriginal Cultural Heritage", EIS Key Issues should include an assessment of any Aboriginal and non-Aboriginal archaeological impacts, including any impacts on the overall archaeology of the site. It should outline any proposed management and conservation measures to protect and preserve archaeology	See main EIS document
The Office of Environment and Heritage Publications list, found at: ( <a href="http://www.environment.nsw.gov.au/publications/">http://www.environment.nsw.gov.au/publications/</a> ) Should be added to Attachment 1 section of the SEARs "Technical and Policy Guidelines	See SEARs document

**Table 2: Penrith City requirements**

Penrith City Requirements	Section
European and indigenous heritage impact assessment including details of consultation with local Aboriginal stakeholder groups	Section 6.0 Heritage Impact Assessment  See also <i>Artefact Heritage 2015 Aboriginal Archaeological Survey Report</i>

## 3.0 HISTORICAL CONTEXT<sup>1</sup>

### 3.1 Early History of the Kemps Creek and Penrith-1788-1919

#### 3.1.1 Early Settlement

The study area is located in the small suburb of Kemps Creek, Penrith, on land first granted to Nicholas Bayly in 1815. Historically, Kemps Creek was associated with Badgery's Creek, a larger settlement to the west established in 1809. Badgery's Creek was associated with British-born miller and farmer James Badgery and his Exeter Farms Estate. The earliest European land use in the study area was likely to have been associated with timber getting,<sup>2</sup> grazing and pastoralism from the early 19th century onwards.

Early residential settlement in the broader Penrith area was driven by the availability of fertile soil and easily accessible water sources such as creeks and river beds. For example, the Nepean River (to the west of the study area) provided the most fertile soil in the region and occupation and farming took place along its banks and alluvials from 1789 onwards.<sup>3</sup> Over the following decade, frequent flooding forced settlement to spread inland, to the east of the river. At this time, Eastern Creek (east of the study area) became associated with smaller allotments, often given to emancipated convicts while land surrounding the study area-further inland and less fertile-was issued to free settlers in the form of large acreages.<sup>4</sup>

#### First land grants

Kemps Creek, which runs to the west of the study area, is a tributary watercourse to the nearby South Creek and was named after Anthony Fenn Kemp, an English soldier and merchant who arrived in the colony in 1795.<sup>5</sup> Kemp was granted 300 acres of land in 1809 immediately west of the study area (where today's Elizabeth Drive and Mamre Road are situated) and a further 500 acres in 1820 to the south west of the study area. The later grant was named Mount Vernon.<sup>6</sup> The majority of these larger grants were given by Governor Macquarie (Governor from 1810-1821) in 1810 for grazing and pastoral purposes. Generally, forms of farming depended on the experience and resources of their landholders and orcharding (mostly stone fruit), dairying, horse breeding and quarrying were common in the area.

A number of the larger grants that surrounded the study area became well known estates such as Bayly Park (Nicholas Bayly); King's Gift or Horsley Park (George Johnston Snr); Lochwood (George Johnston Jnr); Exeter Farm (James Badgery); Mt. Vernon (Anthony Fenn Kemp); Erskine Park (James Erskine); Minchinbury (William Minchin) and Regentville (James Jamison). Many of these estates were occupied by grand manors such as Bayly's single storey home in Bayly Park and George Johnston Snr's daughter Blanche's Indian colonial style bungalow - Horsley Park.

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<sup>1</sup> The majority of this section was taken from AMBS, 2007. Historical Archaeological Assessment and Heritage Management Strategy; Oakdale Concept Plan, Kemps Creek, NSW. Report prepared for Goodman, unless referenced otherwise.

<sup>2</sup> Reference to the Crown requiring timber for ship building purposes is noted in the Register Book 8, p94 for Lockwood (see Grants Index 1792-1826 Vol. 1) in AMBS, 2007. p. 11.

<sup>3</sup> Thorp, W. 1986. 'Historical Archaeological Component' in Fox and Associates. 1991. Heritage Study of the City of Penrith, Volume 2, Appendix D. Unpublished report to Penrith City Council, p. 27.

<sup>4</sup> AMBS, 2007. p. 11.

<sup>5</sup> Paul Davies Pty Ltd, 2007. Penrith Heritage Study Volume 3. Report prepared for Penrith City Council, p. 112.

<sup>6</sup> Penrith City Council, 2011. Kemps Creek suburb profile. Site accessed on 25 September, 2014 at <http://www.penrithcity.nsw.gov.au/templates/StandardTemplate.aspx?id=44001>.

### 3.1.2 Erskine Park

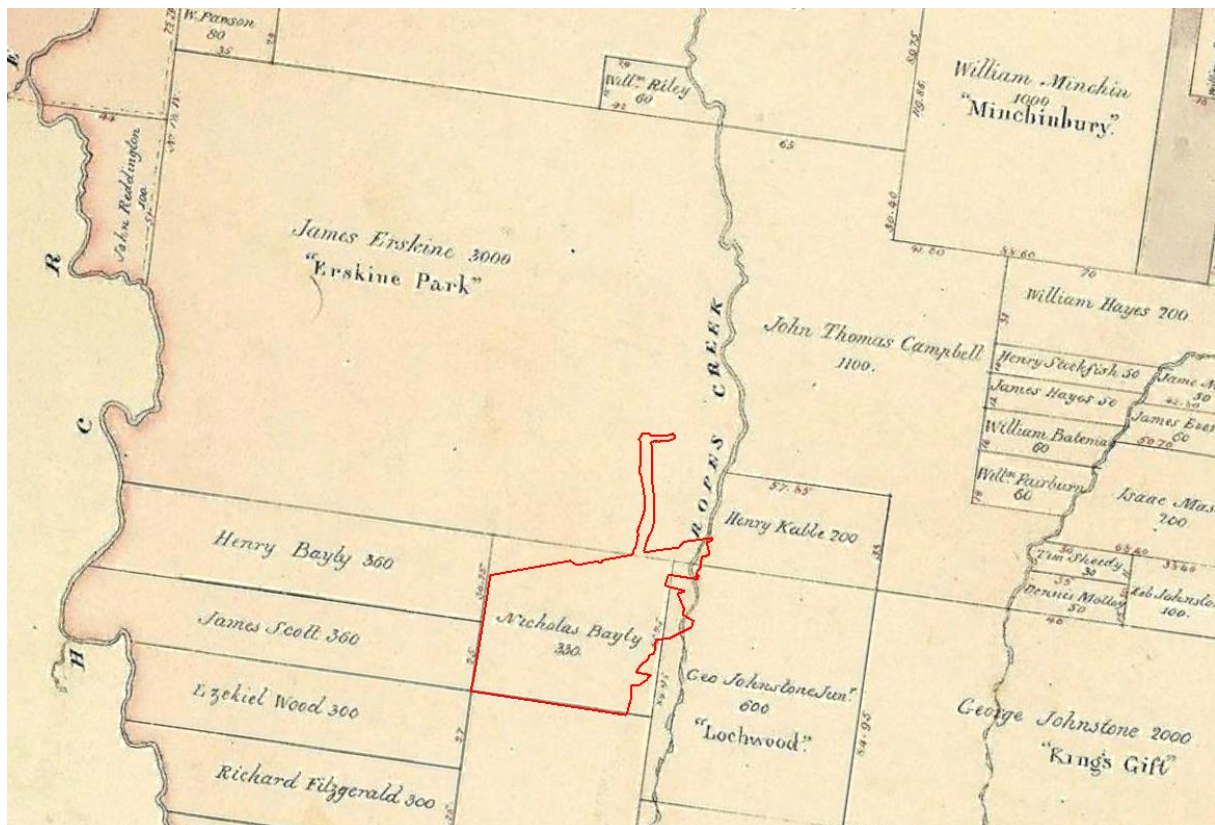
The WNSLR portion of the study area is located within the suburb of Erskine Park named after the first land grant in the area made to James Erskine in 1818 (Pollon 1988) (Figure 4). Erskine arrived in the colony in 1817 and was sworn in as lieutenant-governor soon after (MacMillan 1966). The Erskine Park grant consisted of 3000 acres extending east of the current Mamre Road to Ropes Creek (Penrith Historical Society 2016). Sketches of Erskine Park indicate that the area was extensively cleared and cultivated with homestead with associated buildings (outside of the study area) located on the property by the 1830s.

Mr Andrew Thompson acquired Erskine Park and renamed the property Lenore Farm. Thompson had inherited his father's tanning business at a young age and had expanded the business to a second tannery which formed a 77-hectare property in October 1882. Thompson died at his home at Tyrone Erskine Park on 30 October 1918.

### 3.1.3 Razeville Estate

The entirety of the study area is located within Nicholas Bayly's Estate (also referred to as Razewood). Razeville Estate comprised 330 acres of land, granted to Bayly on 10 June 1815, in the parish of Melville, county of Cumberland (Figure 4). Razeville was one of several estates in the area granted to Bayly with additional lands to the south of the current study area under Bayly's domain. These included the 1070 acres at Macquaries Place, the 660 acres at Kings Down, and the 550 acres of Bayly's original grant Bayly Park.

**Figure 4: Undated parish map of Melville, study area outlined in red. The remainder of Bayley's properties are located to the south and southwest of the study area. Source. SixMaps Historical Viewer.**



## Nicholas Bayly (1770-1823)

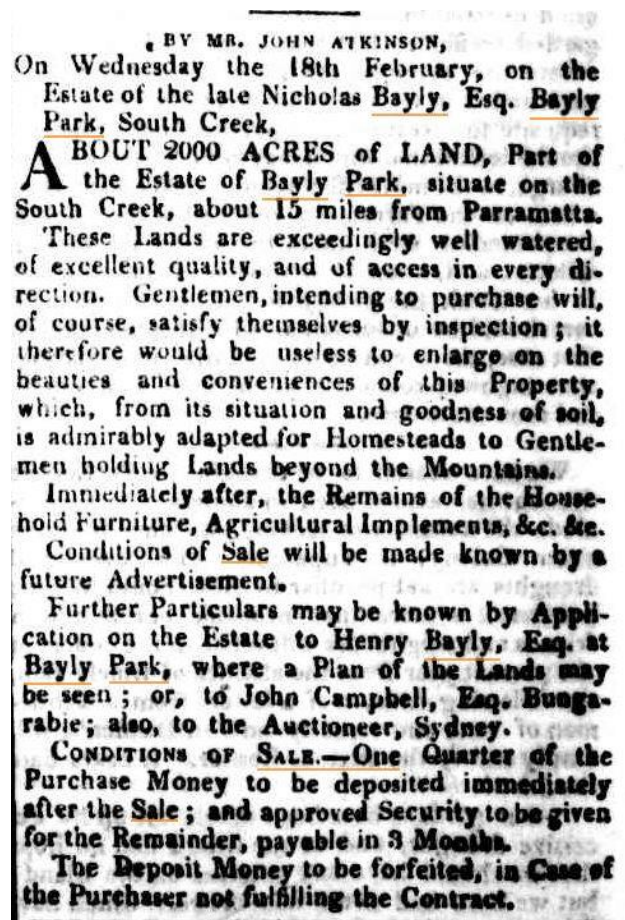
Nicholas Bayly was born in Anglesea, Wales in 1770. Bayly was the son Nicholas Bayly (1749-1814), MP for Anglesea and former colonel of the West Middlesex Militia. As the nephew of the Earl of Uxbridge, Bayly was able to use his connection to procure a commission without purchase into the New South Wales Corps in 1797.

In 1802 he was court martialled by the governor for illegal possession of liquor and by his commanding officer for refusing to attend a meeting on the subject. This marked the beginning of multiple negative interactions with the law with Bayly facing charges for undue severity towards his convict servants in 1802<sup>7</sup>. In 1803 Bayley was charged with slander against Governor King and was later a participant in the rum rebellion which successfully deposed Governor Bligh.

After the arrival of Governor Macquarie in 1810 Bayly was removed from his government position however his land grants were confirmed enabling him to retire to his estates.

Upon his death in 1823, Bayly's estate was put up for auction including a conglomerate 'Bayly estate' listed as consisting of approximately 2000 acres of land (Figure 5). It is likely that this listing consisted of the entirety of Bayly's land holdings including Razewood. Richard Jones purchased the estate in 1824 and renamed it Fleurs Estate.

**Figure 5: Advertisement relating to the sale of Bayly's estate consisting of about 2000 acres of land, Sydney Gazette 12/2/1824, Source Trove**



BY MR. JOHN ATKINSON,  
On Wednesday the 18th February, on the  
Estate of the late Nicholas Bayly, Esq. Bayly  
Park, South Creek,  
**A**BOUT 2000 ACRES of LAND, Part of  
the Estate of Bayly Park, situate on the  
South Creek, about 15 miles from Parramatta.  
These Lands are exceedingly well watered,  
of excellent quality, and of access in every di-  
rection. Gentlemen, intending to purchase will,  
of course, satisfy themselves by inspection; it  
therefore would be useless to enlarge on the  
beauties and conveniences of this Property,  
which, from its situation and goodness of soil,  
is admirably adapted for Homesteads to Gentle-  
men holding Lands beyond the Mountains.  
Immediately after, the Remains of the House-  
hold Furniture, Agricultural Implements, &c. &c.  
Conditions of Sale will be made known by a  
future Advertisement.  
Further Particulars may be known by Appli-  
cation on the Estate to Henry Bayly, Esq. at  
Bayly Park, where a Plan of the Lands may  
be seen; or, to John Campbell, Esq. Bunga-  
rabie; also, to the Auctioneer, Sydney.  
**CONDITIONS OF SALE.**—One Quarter of the  
Purchase Money to be deposited immediately  
after the Sale; and approved Security to be given  
for the Remainder, payable in 3 Months.  
The Deposit Money to be forfeited, in Case of  
the Purchaser not fulfilling the Contract.

<sup>7</sup>Fletcher 2015, 'Bayly, Nicholas (1770–1823)', Australian Dictionary of Biography, National Centre of Biography, Australian National University,



## Richard Jones and the Fleur Estate

Richard Jones was born in Chirbury, England as the eldest son of Thomas Bowdler Jones a small land owner and brewer. He arrived in Sydney in 1809 and set up a mercantile enterprise in 1815 with Alexander Riley. In 1819 Macquarie complained that Jones and Riley was the only mercantile firm in NSW and that 'this sordid Rapacious House' had consequently raised their prices by 100 percent<sup>8</sup>.

Jones left the colony in 1818 with the intention to develop a joint pastoral venture. Between 1823 and 1824 Jones collected a substantial stock of pure bred saxon sheep to import into Australia. In April 1825 he landed in NSW with 488 saxon sheep as well as an additional 184 merino ewes. Based on this import he argued for and was granted an additional 10,000-acre estate in addition to his previous accumulation of 6000 acres.

While Jones agricultural pursuits were focused on wool he used the Fleurs estate for a variety of livestock including dairying, pigs and poultry. In addition, Fleurs estate contained a six-acre vineyard<sup>9</sup>.

By the late 1820's Jones had become a significant public figure in Sydney. He was the director of the bank of Australia and a member of multiple committees including the Chamber of Commerce and the Agricultural and Horticultural society.

Jones was severely hit by the depression of 1843-1844 and declared insolvent in 1843. All of his estates were sold including Fleurs. The land associated with study area was sold multiple times between 1844 and 1909<sup>10</sup> however no significant development seems to have taken place until the reclamation of the land for the Lenore Estate closer settlement scheme.

## 3.2 1919-1960-Lenore Estate Closer Settlement Scheme

In 1919, the land associated with the study area was resumed by the Crown for the Closer Settlement Scheme. The Closer Settlement Scheme (1919-1936) was an initiative set up by the Australian government at the end of World War One as part of the *Returned Soldier Settlement Act* of 1916. The scheme involved the resumption of suitable land for farming in areas such as Bankstown, Grantham, Batlow (Figure 6) and Kemps Creek for the use of honourably discharged ex-servicemen deemed medically unfit for work. The scheme was designed to boost the Australian economy by developing the rural sector. From its establishment in 1919, over 8,819 soldier settlers were granted an estimated four million acres of land in NSW.<sup>11</sup>

In addition to farm land, soldiers who were accepted into the scheme were also promised financial assistance to appropriately set up their farms with additional fencing, drainage and land clearance as well as constructing buildings, purchasing stock pens, agricultural items, plants and seeds. Soldiers were obliged to reside on their land for a minimum of five years. Of the 8,819 soldiers allotted farms under the scheme, only 1,747 subsequently transferred, forfeited, or surrendered their holdings.<sup>12</sup> However, the Soldier Settlement scheme was not a success and led to economic loss across the country.<sup>13</sup> Many of the ex-servicemen experienced great hardship and were often inexperienced and

<sup>8</sup> Shineberg 'Jones, Richard (1786–1852)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, <http://adb.anu.edu.au/biography/jones-richard-2280/text2931>, published first in hardcopy 1967, accessed online 10 November 2015.

<sup>9</sup> Shineberg 2015

<sup>10</sup> AMBS 2007, p.18 provides more detail relating to the transfer of land during this period.

<sup>11</sup> Oppenheimer, M and Yeats, C. 2009. A New Study of WWI soldier settlement in NSW. History, p. 10.

<sup>12</sup> Year Book Australia, 1925. Settlement of Returned Soldiers and Sailors 1914-1918. Site accessed on 30 September 2014 at:

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/featurearticlesbyCatalogue/72BB159FA215052FCA2569DE0020331D?OpenDocument>

<sup>13</sup> New South Wales Parliamentary Papers, Vol 1, Report of the Director of Soldiers' Settlements, 1922, p 23; Justice Pike, 'Report on Losses due to Soldier Settlement,' Commonwealth Parliamentary Papers, (2) 1929.

lacked the appropriate training needed to create an income. In addition, lots were often too small to provide appropriate pasture land for animals and financial assistance promised by the government was withheld or difficult to obtain. A drought and depression in the late 1920s early 1930s made matters worse and forced soldiers to abandon their farms.

**Figure 6: Batlow Soldiers' Settlement Estate - settlers' cottage, 1921. Source. State Records NSW.**



### **Lenore Estate Closer Settlement**

Land to be reserved for the Lenore Estate Closer Settlement was surveyed in 1919 and included the Razewood Estate (the study area), Lochwood Estate (to the east) and portions of Erskine Park (to the north west). In 1920 the surveyed land was resumed and subdivided into seven separate lots. These lots were titled Farms A-G and were all roughly the same size, however their shapes differed. Farms associated with the Lenore Estate were designed around existing farming infrastructure in order to allow for soldiers to easily settle on the land. Therefore, the subdivisions associated with the Soldier Settlement scheme did not adhere to pre-existing land boundaries and was configured to incorporate the various outbuildings, farm structures and dwellings within the allotments.<sup>14</sup>

The study area is located within Farm D. A crown plan of Farm D of the soldier settlement scheme was completed in 1919 (Figure 7). The plan does not indicate the presence of any buildings at this time. Previous assessment by AMBS indicates that a small ruined cottage exists to the southwest of the property that may date to the mid nineteenth century.

Farm D was owned by Arthur Renwick Poolman based on the 1919 crown plan. Farm G was located directly to the west of Ropes Creek. A Penrith Council valuation list from 1935 records the owner of Farm G as Andrew Doonside Fleming and includes a valuation of a cottage on the eastern side of the

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<sup>14</sup> AMBS, 2007, p. 20.



farm, close to Ropes Creek.<sup>15</sup> By 1939, Farm D had been transferred from Poolman to Arthur Stockman and by 1950 Farm E had been purchased by Harrie Davis (Figure 8).

In 1953, Davis sold the property to Colin Henry Stockman of St Marys.<sup>16</sup> The properties owned by the Stockman family were subsequently sold to the Austral Brick Company in the 1960s.<sup>17</sup>

**Figure 7: View of Farm D, Soldier Settlement Scheme, Crown Plan 3296-2030**

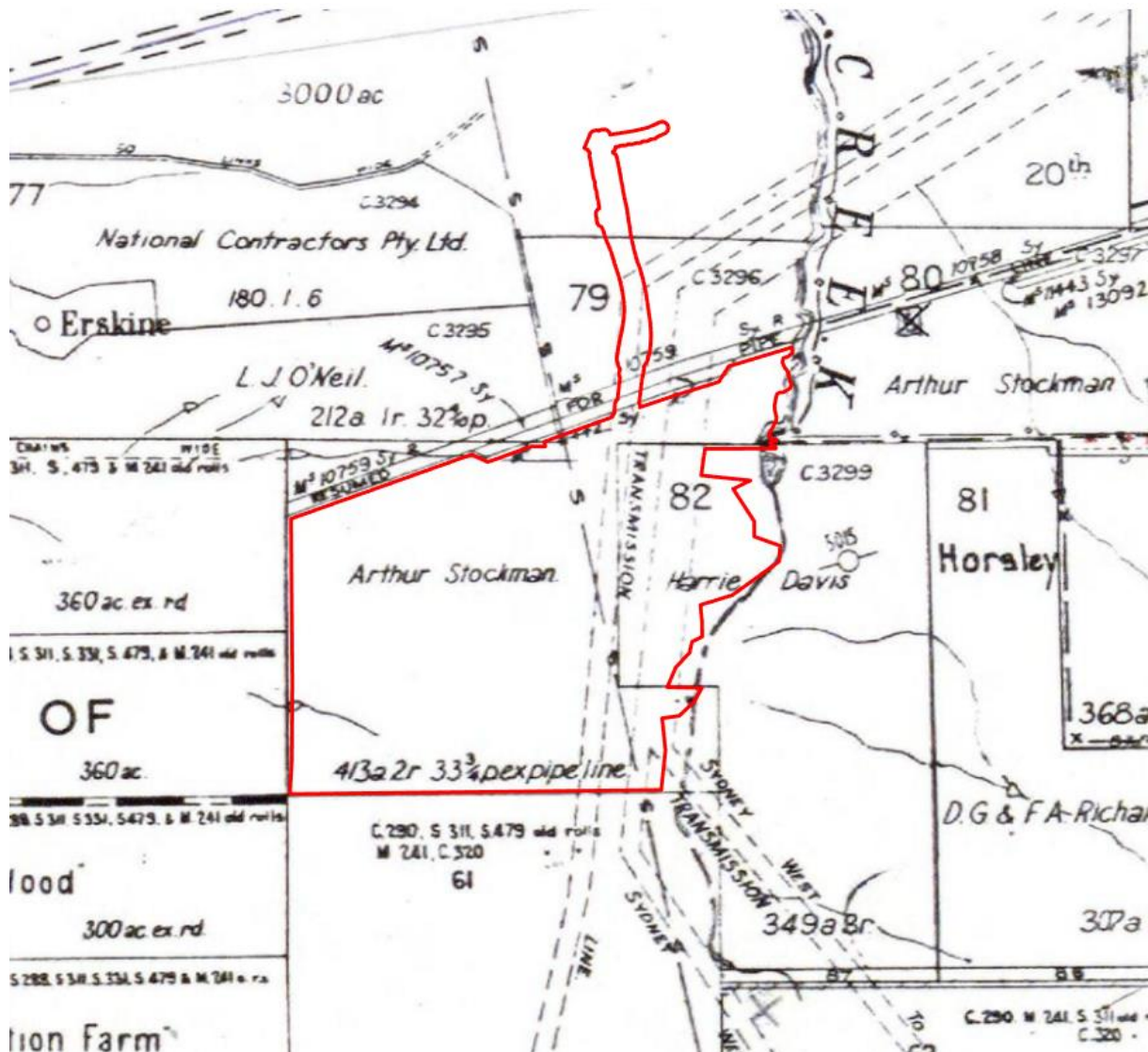


<sup>15</sup> Rates Books. Penrith City Council Valuation List, (1935) Valuation numbers 1210-1624.

<sup>16</sup> AMBS, 2007, p. 22.

<sup>17</sup> AMBS, 2007, p. 22.

**Figure 8: Melville parish map 1968, study area highlighted in red, (Source: LPI Historical Viewer)**



### Structures associated with the Lenore Estate Closer Settlement

Aerial imagery from 1947, 1955 and 1965 show the development of structures within the study area. The cottage mentioned on the 1935 Penrith Council valuation list does not appear on the 1947 aerial (Figure 9). This may be because it was demolished between 1935 and 1947 or may be due to an error in the records which could be referring to the cottage on western side of the property.

The historical aerials indicate that the eastern portion of the study area has remained relatively undeveloped for the past 60 years or so. The collapsed cottage identified by AMBS during their 2007 assessment is discernible in all three of the aerials. It appears that the collapse of the cottage occurred after 2006.

Agricultural activities appear to intensify after 1955 with the construction of new shed complexes and animal pens evident in the central portion of the study area (Figure 10). The two large dams located in the northern and central eastern portions of the study area appear on the 1955 aerial and vegetation clearance also occurs after this time along the eastern portion of the study area (Figure 11).

Aerials covering the last 10 years of the study area indicate that between 1965 and 2005 the majority of the shed structures were demolished.

**Figure 9: 1947 aerial study area outlined in red**

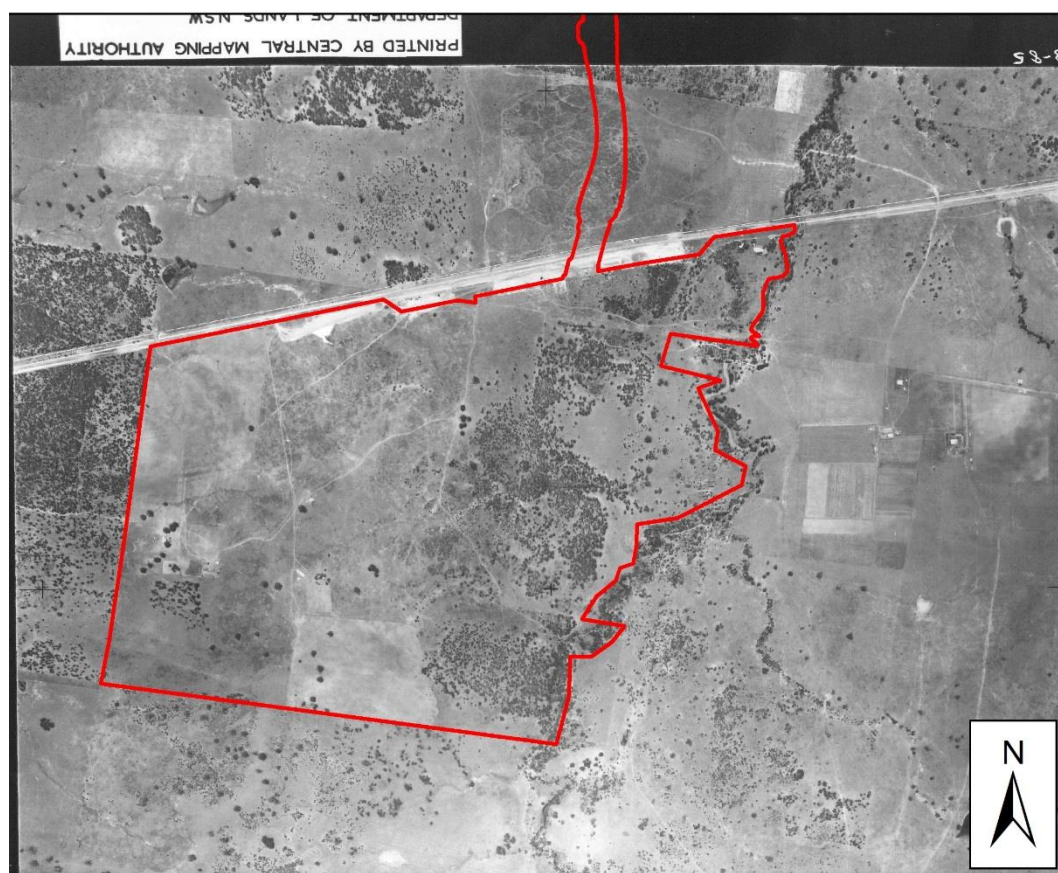




Figure 10: 1955 aerial with study area outlined in red





Figure 11: 1965 aerial study area outlined in red



### 3.3 Warragamba–Prospect Pipeline

The construction of the Warragamba- Prospect pipeline was part of planning to provide Sydney with water. Construction of the prospect reservoir located 5.5 kilometres east of the current study area was completed in 1888. It was constructed to store water from the Upper Nepean scheme for use in Sydney however by 1930 it was recognised that the Upper Nepean Scheme was unable to supply all of Sydney's water needs. This was particularly evident following the drought of 1934-1942 which left prospect reservoir almost depleted.

In order to construct the pipeline large tracts of land were reclaimed including portions of both Fleurs estate and Erskine Park to the north. Within these allotments land for the pipeline was reclaimed between 1940 and 1943<sup>18</sup>. Construction of the pipeline began in 1938 which consisted of a single pipeline with a 48-inch diameter. This was replaced in 1957 with an 84-inch pipeline with a second 84-inch pipeline constructed in 1959<sup>19</sup>.

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<sup>18</sup> Based on 1948 Melville Parish Map, Map no 14016301 , LPI Historical Viewer

<sup>19</sup> Sydney Catchment Authority 2007, Heritage and Conservation register – Wauragamba Prospect Pipelines 1 and 2.

## 4.0 SITE INSPECTION

### 4.1 Overview

A site inspection of the study area was conducted to locate any visible archaeological remains or potential heritage items, understand the site topography, assess the condition of the study area and identify areas of previous disturbance. The survey area was covered on foot and the survey was undertaken in accordance with best practice standards.

The study area is currently used for cattle and horse grazing. The landscape is characterised by a series of ridgelines incised with drainage lines into Ropes Creek to the east and an unnamed modified watercourse to the west.

A 20<sup>th</sup> century modern residential property is located in the south western portion of the study area. Various tracks traverse the study area and there are five dams located around the area. A highly disturbed area was identified just south of the residential property. The area had been scraped back and possibly used as a rubbish dump due to the large amount of construction debris located on the surface and subsurface.

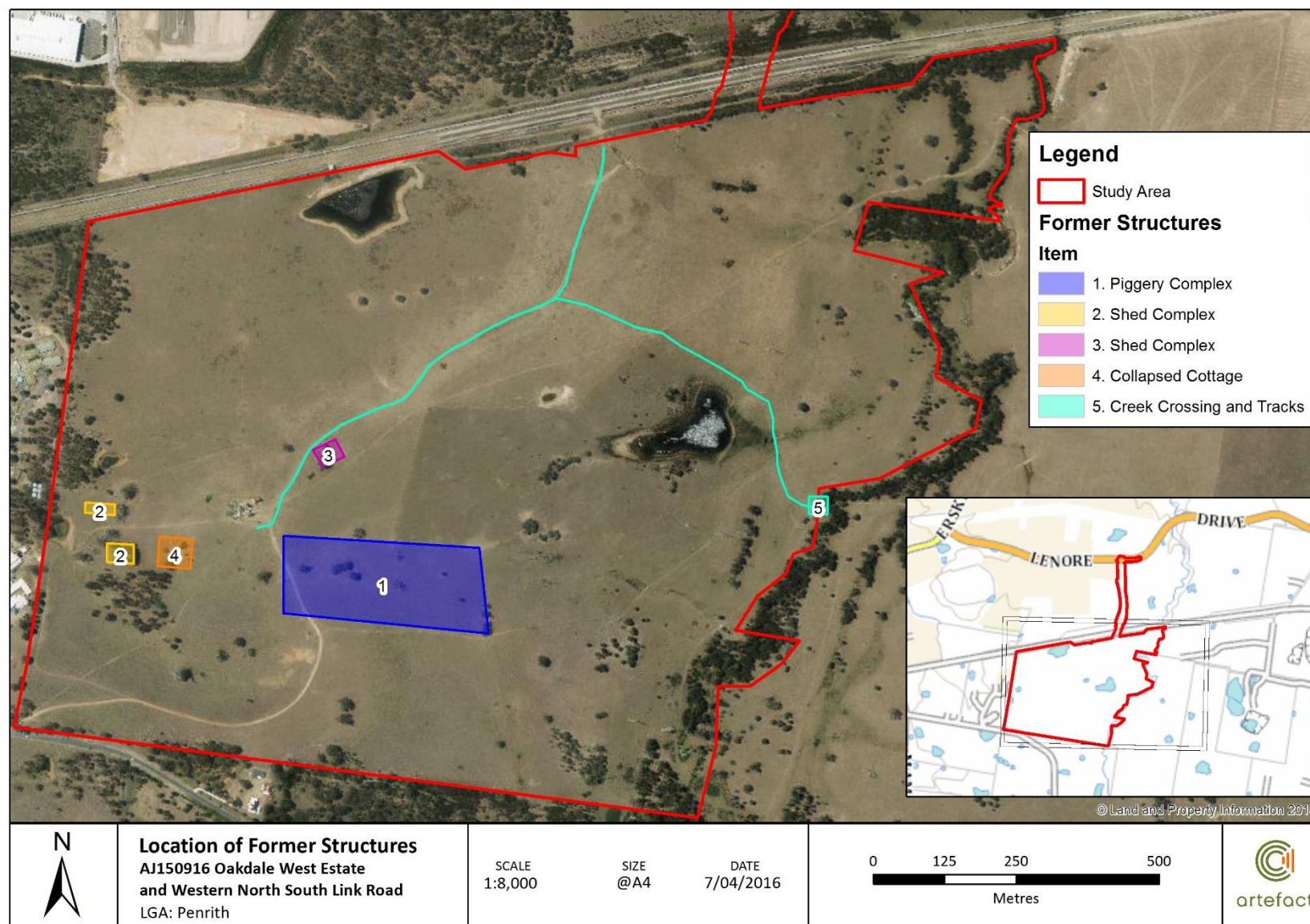
The northern portion of the study area (WNSLR area) is significantly disturbed through the construction of Lenore Drive, Lockwood Road, levelling and clearing of the land, construction of a large business development and minor drainage line and associated earthworks. A portion of the northern section has been completely disturbed in relation to the Warragamba Pipeline.

### 4.2 Site Inspection Results

The survey targeted areas that had been identified during the background research as the locations of former structures, yards and creek crossings. The location of these areas is shown in Figure 12. Each of these areas are summarised below.



Figure 12: Location of former structures (detail), creek crossings and tracks discussed below



#### 4.2.1 Former Structures

##### 1. Piggery complex

These structures and yards were identified on the 1955 and 1965 aerials as a series of small narrow paddocks and sheds. Contamination testing of the area identified the location of a former piggery in this area (AECOM 2012).

The site inspection relocated concrete footings and some building materials such as timber struts that may have been associated with the former structures (Plate 1). There were no remnants of the yards visible at the time of survey. The area was covered by dense grass which is likely to have obscured any physical evidence of the location of the yards that may still exist in the area (Plate 2). A concrete water reservoir which is evident on the 1947, 1955 and 1965 aerials was observed on the site. The water reservoir is constructed of modern concrete and appears to be used as a rubbish dump (Plate 3).

**Plate 1: Concrete footing and timber associated with former structures**



**Plate 2: General location of former structures and yards, view to the north east**



**Plate 3: Concrete well**





## 2. Shed Complex

The aerial imagery analysis identified a series of small sheds and yards located just east of the western boundary of the study area. A concrete slab overgrown with grass and weeds was identified during the site visit (Plate 4). No other remains associated with these structures were found to occur in the area.

**Plate 4: View north across concrete slab**



## 3. Shed complex

This structure is located to the north of item 1. It is evident on the aerial imagery for the site since 1947. There were no remains associated with the structure identified during the site inspection (Plate 5). A line of trees likely to be associated with the yard were identified (Plate 6). The area is currently covered by dense grass and weeds.

**Plate 5: location of shed complex**



**Plate 6: Line of trees**



#### 4. Collapsed cottage

The 2007 AMBS heritage assessment for the study area identified the remains of a collapsed cottage as an example of a timber slab hut dating to around the mid-19<sup>th</sup> century. During the current site inspection, the remains of the cottage were found to have deteriorated further since the original assessment. The cottage appears to have featured timber walls, a corrugated iron roof and brick fireplace and chimney (Plate 7). A combination of 19<sup>th</sup> and 20<sup>th</sup> century materials are present at the site (Plate 8). Some of this appears to have been used in the maintenance of the cottage whilst others appear to have been discarded at the site (Plate 9).

The historical aerial imagery for the study area indicates that a series of outbuildings and yards were associated with the cottage. A concrete slab is located to the east of the cottage; it is likely that this is the remains of an associated outbuilding (Plate 10). No other remains were identified within the vicinity of the cottage although this may be due to the dense grass cover in the area.

**Plate 7: Collapsed timber cottage**



**Plate 8: example of possible mid-19<sup>th</sup> century brick**



**Plate 9: Mix of 19<sup>th</sup> and 20<sup>th</sup> century materials at the site**



**Plate 10: view west towards the cottage showing slab in the foreground**





## 4.2.2 Creek Crossings and Roads

### 5. Ropes Creek crossing and tracks through the study area

The creek crossing consists of introduced building rubble overlain a modern concrete pipe (Plate 11 and Plate 12). The approach to the crossing is cut into the natural bank and also features introduced rubble. A dilapidated timber fence line is located to the south of the crossing (Plate 13).

Early parish maps do not record any tracks or roads through the study area. The aerial imagery analysis indicates that the access to the property was originally north of the current entry. The current access to the property was established by 1965. The original access track would have given direct access to the cottage. It then headed in a northeasterly direction towards the northern boundary of the property. A track branches off this and heads east towards the creek crossing. These gravel tracks are still in use today (Plate 14). It is unlikely that there is any archaeological potential associated with the track or the creek crossing. The fabric of the creek crossing appears to be modern 21<sup>st</sup> century and therefore is not considered to be of heritage significance.

Given this assessment of the creek crossing and tracks through the study area these items are not discussed further in this report.

**Plate 11: View east along creek crossing**



**Plate 12: Modern construction materials and debris**



**Plate 13: Timber post associated with remnant fence line**



**Plate 14: Track approaching central dam**



## 5.0 HERITAGE AND ARCHAEOLOGICAL ASSESSMENT

### 5.1 Potential Heritage Items

The desktop analysis identified five potential heritage items / archaeological sites:

- 1. Piggery Complex**
- 2. Shed Structure**
- 3. Shed Structure**
- 4. Collapsed Cottage**
- 5. Creek Crossings and Roads**

These items were inspected during the site survey and it was found that all the structures had either been demolished or had collapsed. Therefore, the sites of former structures have been assessed for archaeological potential rather than as built heritage items. Other landscape items such as creek crossings and tracks are assessed as having no heritage significance, and are not discussed further.

#### **4. Collapsed Cottage**

The cottage ruin was originally recorded by AMBS in 2007. The cottage was in the collapsed state that it is now however the corrugated iron roof was described as sitting above the collapsed walls and relatively intact. The roof appears to have collapsed further since the original recording. A mix of 19<sup>th</sup> and 20<sup>th</sup> century materials appeared to have been used in the construction of the cottage. This may be the result of maintenance and modifications on the structure throughout its use.

As this item is now in a ruinous state, it no longer retains heritage significance as a built heritage item. However, as the former cottage is likely mid-late 19<sup>th</sup> century in date, the site could retain buried archaeological remains associated with its early use and occupation. This archaeological potential of this site is discussed in more detail below.

### 5.2 Archaeological Potential

Historical archaeological potential is assessed by identifying former land uses and associated features through historical research, and evaluating whether subsequent actions (either natural or human) may have impacted on evidence for these former land uses.

The following discussion of the historical archaeological potential of the study area is not intended to be exhaustive. Based on the history of the site and the likely lack of disturbance that has occurred in some areas, there is always some probability that unexpected historical archaeological remains may be encountered during works.

#### 5.2.1 Land Use Summary

Following land clearance, the majority of the study area was subject to pastoral and other low-intensity rural land uses. Analysis of mid-20<sup>th</sup> century aerial imagery indicates the presence of sheds and yards in the western portion of the study area. These which have since been demolished. Land use within the study area can be separated into two broad phases:

- Phase 1 (1815 – early 20<sup>th</sup> century). This phase is associated with land clearance, low intensity pastoral / agricultural uses, and potential rural domestic occupation (collapsed cottage site).

- Phase 2 (early 20<sup>th</sup> century – present). This phase is associated with an increase in pastoral / agricultural activity following the Lenore Soldier Settlement Scheme. The former shed structures and piggery complex date to this phase. The 19<sup>th</sup> century cottage continued to be occupied during the 20<sup>th</sup> century.

Previous impacts to the study area have been limited. The most substantial impacts are associated with the initial demolition of the sheds and cottage collapse.

### 5.2.2 Pastoral / Agricultural Activity

The study area would have been subject to land clearance and pastoral / agricultural uses from the early 19<sup>th</sup> century. Archaeological remains of these types of activities tend to be ephemeral and could include tree boles, burnt clay, field drains, plough marks, postholes from former paddock fence lines or shed structures.

### 5.2.3 Former Structures

The former structures are associated with mid-20<sup>th</sup> century agricultural uses are:

1. Piggery complex
2. Shed complex
3. Shed complex

There is high potential for buried remains of these former structures. Remains such as ground slabs, footings and postholes are likely to be present below ground. As these sites were not domestic, there is nil-low potential for archaeological deposits containing artefacts. Given the early-mid 20<sup>th</sup> century date for these former structures, their associated archaeological remains are not considered to meet the local significance threshold and are not considered further in this discussion.

### 5.2.4 Collapsed Cottage

The collapsed cottage site is likely to date from the 19<sup>th</sup> century. AMBS identified it as potentially dating to the mid-19<sup>th</sup> century<sup>20</sup>. Site inspection for this report identified mid-19<sup>th</sup> century bricks in the rubble. Therefore, the collapsed cottage is considered a potential archaeological site and its curtilage is shown in Figure 13. The collapsed cottage and associated outbuildings is considered to contain moderate potential to contain archaeological remains. The potential archaeological remains may include:

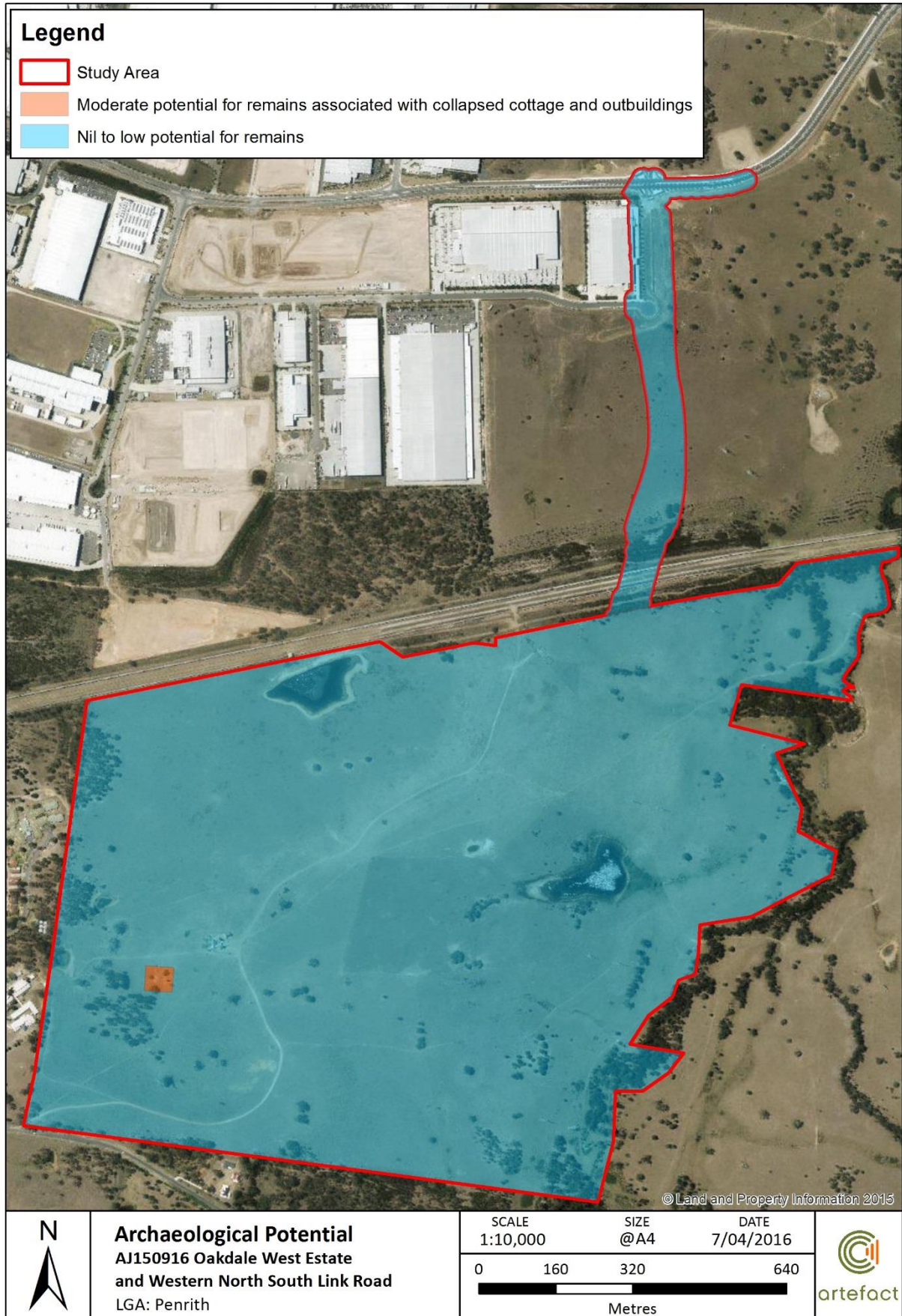
- Structural remains, such as footings and postholes, associated with the original cottage and its later additions,
- Footings and postholes of former outbuildings and sheds,
- Cesspit and a well / cistern,
- Underfloor deposits and artefacts associated with the original cottage,
- Artefact-bearing deposits within structures such as cesspit / well backfills and rubbish pit fills,
- Former yard surfaces, garden beds and walls.

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<sup>20</sup> AMBS 2007: 32



**Figure 13: Archaeological potential**



## 5.3 Archaeological Significance Assessment

### 5.3.1 Methodology

The Heritage Division of the Office of Environment and Heritage (OEH) issued a new set of guidelines in 2009: *Assessing Significance for Historical Archaeological Sites and 'Relics'*. The following section presents a discussion of the potential archaeological resource's research potential and an assessment against the NSW heritage significance criteria.

#### Research Potential

Consideration of archaeological research potential is required when undertaking a significance assessment of an historical archaeological site. Bickford and Sullivan espoused the principles and developed a framework to assess archaeological research potential. These principles have been incorporated into three questions and should be used as a guide for assessing the research potential of an archaeological site<sup>21</sup>:

- Can the site contribute knowledge that no other site can?
- Can the site contribute knowledge that no other resource can?
- Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?

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<sup>21</sup> Bickford, A and S Sullivan, pp. 23-24

## NSW heritage significance criteria

There are seven criteria for assessing heritage significance (table below). These are centred on the *Burra Charter* of Australia ICOMOS and the assessment process is outlined in the *NSW Heritage Manual* and the *Archaeological Assessment Guidelines*<sup>22</sup>. If an item or archaeological site 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 a potential item or 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.

Criteria	Explanation
<b>A – Historical Significance</b>	An item is important in the course or pattern of the local area's cultural or natural history.
<b>B – Associative Significance</b>	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.
<b>C – Aesthetic Significance</b>	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.
<b>D – Social Significance</b>	An item has strong or special association with a particular community or cultural group in the local area for social, cultural or spiritual reasons.
<b>E – Research Potential</b>	An item has potential to yield information that will contribute to an understanding of the local area's cultural or natural history.
<b>F – Rarity</b>	An item possesses uncommon, rare or endangered aspects of the local area's cultural or natural history.
<b>G – Representativeness</b>	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).

### 5.3.2 Archaeological Research Potential

The archaeological resource associated with the collapsed cottage could contribute to questions relating to pastoralism and domestic life in rural NSW during the 19<sup>th</sup> century. There is the potential that the archaeological resource may provide evidence for the transition of ownership during the Lenore Soldier Settlement Scheme. The archaeological resource has potential to contribute information about the constraints of life in an isolated rural environment and the mechanisms of trade in response to domestic and social requirements<sup>23</sup>. Information regarding working-class domestic life in rural NSW during the 19<sup>th</sup> and early 20<sup>th</sup> century is not as readily available from other historical sources and the early history of the cottage is unknown. Recent redevelopments in rural areas around Sydney have provided an opportunity to archaeologically investigate these type of sites, however, archaeological results are not yet readily available for comparison. Archaeological investigation of this site would provide a data set for comparative analysis and provide more information regarding the potential significance of this site type.

<sup>22</sup> NSW Heritage Office 1996; 25-27

<sup>23</sup> AMBS 2007: 37

### 5.3.3 NSW Heritage Significance Criteria

The significance assessment for the archaeological potential of the collapsed cottage and associated outbuildings is as follows:

**Table 3: Heritage significance of the Collapsed Cottage potential archaeological remains**

Criteria	Description
<b>A – Historical Significance</b>	<p>The collapsed cottage archaeological site is associated with the historical development of the local area. The area was first granted to Nicholas Bayly in 1813. The property was acquired by Richard Jones in 1824 and renamed Fleurs. The estate changed hands several times in the 19<sup>th</sup> and 20<sup>th</sup> centuries. Bayley and Jones did not reside on the property and historical resources for the area do not indicate when the area was first settled. The collapsed cottage site is likely associated with farm workers on the estate. The potential archaeological remains are associated with the local area's history, development and rural economy.</p> <p><b>The potential archaeological remains meet the local significance threshold for this criterion</b></p>
<b>B – Associative Significance</b>	<p>Whilst the archaeological resource is associated with early land grants neither Nicholas Bayley nor Richard Jones resided within the study area therefore it is unlikely that the potential archaeological remains will contribute further information about the lives of these men or their families.</p> <p>The potential archaeological remains do not meet the local significance threshold for this criterion</p>
<b>C – Aesthetic Significance</b>	<p>Although it is recognised that exposed in situ archaeological remains may have distinctive/attractive 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 remains do not meet the local significance threshold for this criterion</p>
<b>D – Social Significance</b>	<p>Community consultation was not undertaken for this assessment. However, archaeological remains of the collapsed cottage may be of interest to local residents. Remains associated with the Lenore Soldier Settlement Scheme may have social significance for descendants of former soldiers who settled in the area.</p> <p>The potential archaeological remains do not meet the local significance threshold for this criterion</p>
<b>E – Research Potential</b>	<p>The early history of the study area and its inhabitants is largely unknown therefore the archaeological resource may contribute to an understanding of early settlement and land use patterns in the local area. The archaeological resource may provide information on the transition of ownership during the Lenore Soldier Settlement Scheme contributing to knowledge about the development and history of the local region.</p> <p>The archaeological resource has the potential to contribute information about the constraints of life in an isolated rural environment and the mechanisms of trade in response to domestic and social requirements.</p> <p><b>The potential archaeological remains meet the local significance threshold for this criterion</b></p>



Criteria	Description
<b>F – Rarity</b>	<p>The archaeological resource is not considered rare as there are potentially many similar archaeological sites in NSW</p> <p>The potential archaeological remains do not meet the local significance threshold for this criterion.</p>
<b>G - Representativeness</b>	<p>The archaeological resource is unlikely to demonstrate any particular characteristics of NSW's cultural or natural places of cultural or natural environments or for the local area.</p> <p>The potential archaeological remains do not meet the local significance threshold for this criterion</p>

#### 5.3.4 Statement of Archaeological Significance

There is moderate potential for significant archaeological remains within the study area. The potential remains are associated with the local area's rural history and economy. The remains could contribute information about the early inhabitants of the cottage that is not available from documentary resources. The potential archaeological resource is of local significance therefore are considered to be relics under the Heritage Act.

## 5.4 Summary

The archaeological assessment is summarised in the table below:

**Table 4: summary of heritage significance and archaeological significance**

Item	Archaeological potential	Significance
1. Piggery Complex	High	N/A
2. Shed Complex	High	N/A
3. Shed Complex	High	N/A
4. Collapsed Cottage	Moderate	Local

## 6.0 HERITAGE IMPACT ASSESSMENT

### 6.1 Proposed Works

The proposal involves the subdivision of the study area for an industrial warehouse estate (Figure 2). The works would involve the construction of warehouse facilities and associated infrastructure such as access roads and subsurface services.

The development would be executed in four stages and include the following ground disturbance works:

- Significant cut to fill across the site in order to level the terrain
- Construction of retaining walls
- Stormwater infrastructure including site based detention basins
- Sewer services
- Water services.

### 6.2 Heritage and Archaeological Impacts

The initial bulk earthworks involved in levelling the terrain of the study area would involve removing earth from the ridgelines up to 11 metres in depth. The infill of earth to the slopes, drainage gullies and low lying portions of the study area, including dams would be up to 12 metres in some places.

#### 1-3. Piggery and Shed Complex Sites

The proposed works would result in the complete removal of the any remains of the piggery and shed complexes. However, these are not considered to have archaeological significance and the proposal would therefore not result in a heritage impact by removing these remains.

#### 4. Collapsed Cottage Site

The location of the cottage remains would be cut back to approximately five metres. The concept design indicates that a road and two-metre-high retaining wall are proposed in this area. This would result in the removal of remaining fabric of the ruins and significantly impact / remove archaeological relics associated with the cottage.

The table below provides a summary of the significance assessment and impact assessment of each item located within the study area.

**Table 5: Summary of significance and impacts to items within the study area.**

Item	Significance	Potential Impact
1. Piggery Complex	N/A	High
2. Shed Complex	N/A	High
3. Shed Complex	N/A	High
4. Collapsed Cottage	Local	High

## 6.3 Mitigation

### Items 1. Piggery Complex, 2. Shed Complex, 3. Shed Complex

Impacts to these items would be mitigated by the implementation of an unexpected finds policy. This would include:

- Stop work, protect item and inform supervisor / project manager
- Contact an archaeological consultant to provide an assessment of the find
- Preliminary assessment and recording of the find by the archaeologist. Following the production of the document some, or all works, may be able to proceed
- Notify the regulator, if required
- Implement any archaeological mitigation recommended by the archaeologist
- Resume work.

### Item 4. Collapsed Cottage

Impacts to the collapsed cottage would be mitigated by a program of archaeological investigation and recording. This program would include:

- Monitoring the removal of the remaining structure of the cottage
- Test excavation within the curtilage defined in Figure 13 to determine the presence and absence of archaeological remains, define the extent of the remains and refine the assessment of significance
- Salvage excavation based on the results of the monitoring and test excavation.

Section 7.0 provides a detailed archaeological methodology and research design to mitigate development impacts.

As the proposal will be assessed as SSD, approval under the Heritage Act and an archaeological excavation permit from the NSW Heritage Division are not necessary. However, archaeological investigation must be undertaken in accordance with NSW Heritage Division guidelines, standards and requirements.

## 7.0 ARCHAEOLOGICAL RESEARCH DESIGN

### 7.1 Introduction

Potential historical archaeological remains associated with the collapsed cottage are of local significance under criteria A (historic) and E (research potential) of the significance assessment criteria outlined in Section 5.3 above. As there is a moderate potential for archaeological relics, an Archaeological Research Design (ARD) has been prepared to guide archaeological investigation of the site.

This ARD has been prepared in accordance with the *Guidelines for the Preparation of Archaeological Management Plan* (NSW Heritage Branch 2009), specifically Section 4 Research Framework guidelines (NSW Heritage Branch 2009: 27 – 8).

### 7.2 Research Framework

#### 7.2.1 Previous Studies

A number of previous architectural, historical and archaeological studies on timber slab huts have informed this ARD. These studies are discussed below.

##### **Miles Lewis's structural analysis of timber slab huts (Lewis n.d.)**

Timber slab huts were constructed as rural dwellings from the beginning of the European settlement of Australia. These buildings were constructed out of local hard-wood timber, and consist of a mortise and tenon outer frame to which long thick slabs of wood are affixed to the outside forming the walls. The mortise and tenon structural frame required very few nails to put together, which made it a common choice for rural dwellings early in the history of the colony when nails were scarce and expensive.

While the slab hut could be constructed with predominately local materials in areas where landholdings were being cleared of timber for farming, the mortise and tenon frame required speciality carpentry skills to create. The late-19<sup>th</sup> century development of cheaper, machine-made nails reduced the need for the mortise and tenon frames. While timber slab huts became less frequently built over time, they were still constructed up until the early 20<sup>th</sup> century.

##### **Ian Jack's historical analysis of timber slab structures in the Blue Mountains (Jack 2009)**

Jack compiled oral historical accounts of the Maxwell family who lived in the Kedumba Valley in the Blue Mountains, from the mid-19<sup>th</sup> century until the early-20<sup>th</sup> century. The Maxwell family were pastoralists who helped clear timber in the remote valley for cattle and horse rearing. From the 1890s until the 1920s they constructed a number of timber slab buildings, both for residences and for animal stabling.

One of these timber slab buildings remain, with photographic evidence and oral accounts used to partially reconstruct several others. Jack concludes that construction techniques used to establish slab huts were largely similar throughout the 19<sup>th</sup> and early 20<sup>th</sup> century. Because of this, Jack cautions that material and construction techniques alone may be insufficient to date the construction of timber slab buildings.



### **Edd's study of slab barns in the Hawkesbury area (Edds et. al. 2010)**

An architectural study of remaining timber slab structures in the Hawkesbury City Council area was compiled, which located 106 timber slab barns and outbuildings. These structures date in construction from 1795 up until 1925. These buildings were photographed and recorded for the report. It is noted by the authors that while these slab barns are constructed in similar ways, their architectural layout differed for each building.

### **Higginbotham's archaeological excavation of the "small miserable hut", Camden NSW (Higginbotham 2009)**

Higginbotham and Associates conducted an archaeological excavation on the site of John and Elizabeth Macarthur's Belgenny Farm in Camden. Their aim was to locate evidence of a former farm outbuilding described in early 19<sup>th</sup> century accounts as a "small miserable hut" and which was likely to be a timber slab hut built for the Macarthur's convict and rural workers.

The excavation located the remains of a structure which was likely to be the hut. The archaeological investigation determined the extent of the building and the likely internal layout of the structure. However, the subsurface deposits of the timber slab building were determined to be archaeologically ephemeral and difficult to locate. Fireplaces and deposits located below stone or brick hearths were determined to be the most likely place to locate datable and intact archaeological remains.

## **7.2.2 Potential Archaeological Resource**

Timber slab cottages in the Sydney area are a rare remaining type of vernacular residential architecture, with a history of construction dating from European settlement up until the early 20<sup>th</sup> century. AMBS in their discussion of the collapsed cottage (2007: 31) have estimated a construction date of the 1840s to the 1860s for the slab hut. Aerial photographs from the 1940s to the 1960s show that the cottage was likely still in use during this time. These aerial photographs also show that the cottage had an extended roof to the east which incorporated the possible laundry/outhouse area. The aerials also show the existence of a shed or garage to the northeast of the cottage.

It is likely that the cottage was built for the residential use of tenant farmers during the mid- to late-19<sup>th</sup> century on the Razewood/Fleurs estate. Despite the property being successively sold a number of times during this time, it is unlikely that the landowners would have lived in the cottage.

The land was subdivided in 1919 following its resumption by the crown for the Lenore Estate Closer Settlement Scheme. It is possible that the collapsed cottage was the residence of returned soldiers from the First World War. With the development of agricultural infrastructure in the area during the mid-20<sup>th</sup> century, it is likely that the cottage remained the residence of tenant farmers.

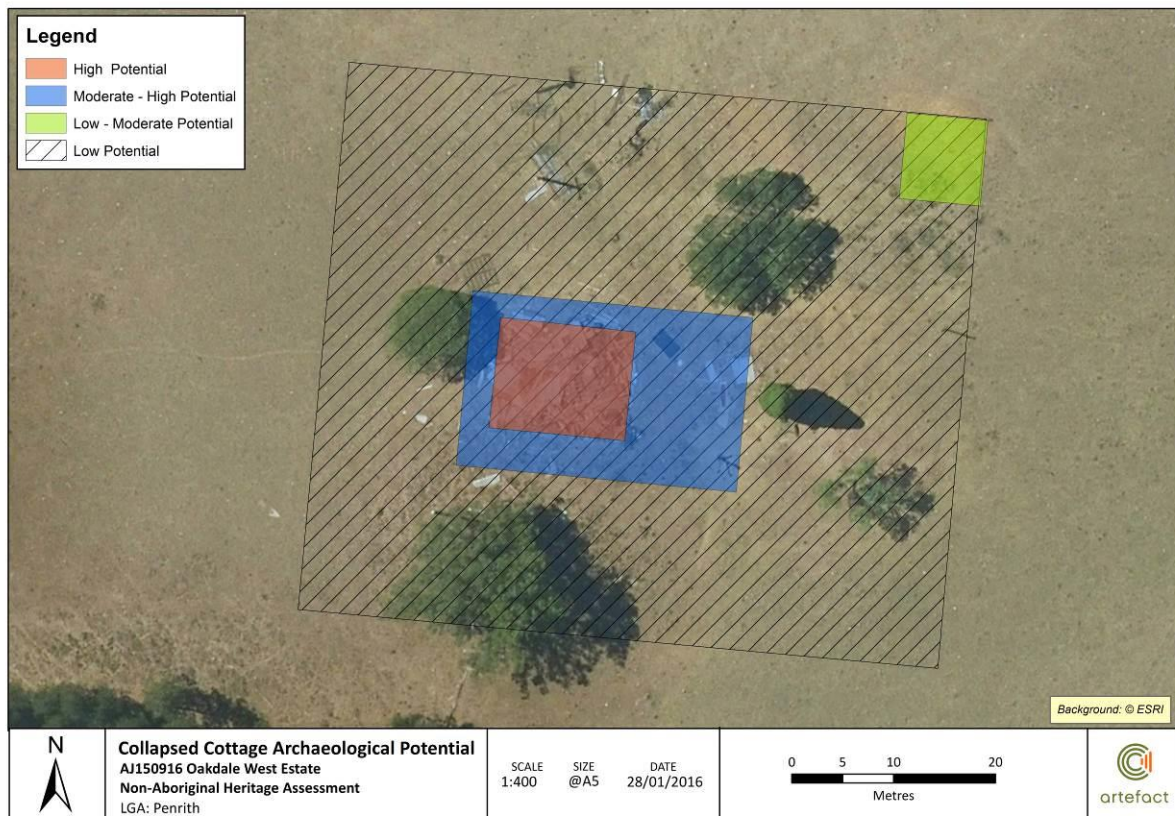
The potential archaeological remains consist of:

- The collapsed structural remains of the timber slab cottage
- A partially intact brick chimney on the southern wall of the cottage
- Footings, timber supports and postholes of the cottage
- Underfloor archaeological deposits and artefacts associated with occupation
- A concrete slab to the east of the cottage that may represent an outhouse or laundry area
- Possible cesspits, wells or cisterns that may lie below the outhouse or laundry area or other areas within the site

- Subsurface remains (such as footings, postholes and artefact-bearing deposits) of a former shed located to the northeast of the collapsed cottage site
- Rubbish dumps, fills and deposits containing artefacts and other evidence of occupation
- Former yard or path surfaces, garden beds and walls.

Areas of archaeological potential for the collapsed cottage are illustrated in Figure 14 below. The area of highest archaeological potential (filled in red) represents the footprint of the collapsed cottage. The moderate-high archaeological potential area (filled in blue) represents the area immediately surrounding the collapsed cottage including where the 1940s extended roof and possible laundry/outhouse area. The low-moderate archaeological potential area (filled in green) represents the approximate location of the shed/garage represented on 1940s aerial imagery. The remainder of the area has a low potential for archaeological remains.

**Figure 14: Areas of archaeological potential at the collapsed cottage site**



### 7.2.3 Historical Themes

Historical themes are a way of describing important processes or activities which have significantly contributed to Australian history. Historical themes are described at both a national and state level. The Heritage Council of NSW has prepared a list of 35 state historical themes relevant to the physical, economic and cultural development of the state. The use of these themes provide historical context in order to allow heritage and archaeological items to be understood and compared to one another.

Relevant historical themes that are pertinent for the collapsed cottage site are listed in Table 6 below.

**Table 6: Historic themes for NSW relevant to the study area**

Australian theme	NSW theme	Explanatory notes	Relevance to potential archaeological remains
3. Developing local, regional and national economies	Pastoralism	Activities associated with the breeding, raising, processing and distribution of livestock for human use	The archaeological resource is associated with the working of pastoral landholdings in Western Sydney, from sheep-rearing in the 19 <sup>th</sup> century to pig-farming in the 20 <sup>th</sup> century.
4. Building settlements, towns and cities	Accommodation	Activities associated with the provision of accommodation, and particular types of accommodation – does not include architectural styles	The timber slab cottage site is an example of a rural, working class residential dwelling. The construction and renovation of these huts offer insight into local adaptive building practices.
7. Governing	Welfare	Activities and processes associated with the provision of social services by the state or philanthropic organisations	The land the cottage is located on was part of the Lenore Estate Closer Settlement scheme to reward agricultural land to returned soldiers from World War I.
8. Developing Australia's cultural life	Domestic life	Activities associated with creating, maintaining, living in and working around houses and institutions.	As a residential dwelling with a potentially century-long occupation history, archaeological remains could offer significant insight into rural working class living conditions and practices.

#### 7.2.4 Research Questions

The archaeological resource has the potential to answer a number of research questions. Additional research questions may be added if the archaeological resource allows for further, or more in-depth, investigation. The following research questions would guide this archaeological program:

- When was the timber slab cottage originally constructed? Who was the cottage constructed for, and what was their relationship with the landowner?
- Could artefactual remains provide information about the occupants' professions and their involvement in the early establishment of agricultural activities on the estate?
- How was the timber slab cottage originally constructed and with what materials? To what extent were construction materials sourced locally or imported from other areas? How did the builders and inhabitants of the cottage adapt to local conditions of possible material scarcity during the settling of the estate?
- How many rooms were there inside the cottage and how were they arranged? Could the layout of the rooms and potential underfloor artefactual deposits provide information on the domestic arrangements of the occupants of the cottage?
- Could artefactual remains provide information on the type of agricultural activity that the Razewood estate was practicing in the 19<sup>th</sup> and early 20<sup>th</sup> centuries?

- When and how was the cottage renovated over time? Do the renovation materials and construction techniques during renovation show a continuity of occupancy or refurbishment for new occupants?
- Do architectural and artefactual remains provide evidence that the cottage was inhabited by returning soldiers under the Lenore Estate Closer Settlement Scheme?
- Does the timber slab cottage possess a recognisable subsurface archaeological signature? How does this compare with excavations conducted at the Macarthur farms' 'Small Miserable Hut'?
- Due to the continuity of timber slab construction practices from the late 18<sup>th</sup> century into the early 20<sup>th</sup> century, could associated archaeological remains assist in identifying differing construction phases of timber slab cottages?

## 7.3 Methodology

### 7.3.1 Archival Recording

An archival record of the structural remains of the collapsed timber slab cottage would be made. As the cottage remains is in a collapsed and ruinous state it will be mechanically removed. It is proposed that an historical archaeologist monitor the process and record the remains. The above surface remains of the collapsed cottage can be physically removed without approval from the NSW Heritage Division prior approval if there are no ground disturbances with the potential to impact archaeological relics.

During the monitoring and recording program, building components (roofing, walls, windows etc.) would be assessed for their approximate age and technique of construction. As the cottage has collapsed *in situ*, some of these building components may still remain in structural relationship with each other. Establishing the association of material components of the cottage is useful in assessing the phases of construction and renovation of the building over time.

The material removal process would entail the following activities:

- The supervised machine removal and collection of structural remains for disposal off-site
- The remains of the standing brick chimney on the southern wall would not be demolished
- The careful clearing of the ground below the collapsed cottage to ensure that potential underfloor archaeological remains are not disturbed.

Archival recording would take place during the removal process and would entail the following activities:

- Physical components of the cottage would be assessed and recorded by the archaeologist
- Samples of construction material (timber, bricks, nails etc.) may be collected for material analysis
- A photographic record of the removal process, structural features and physical components would be created
- Once the surface material has been removed, a ground plan would be made to accurately record the location of any potential archaeological deposits.



### 7.3.2 Excavation Methodology

Once development consent has been received, a combination of archaeological open-area and test excavation, and archaeological monitoring would be enacted. The excavation areas are illustrated in Figure 15 below.

#### Open-area excavation

The primary focus of these excavations would be to explore the area of high archaeological potential area of the cottage footprint. This area of high archaeological potential is approximately 12m by 12m in size. The excavation would entail:

- The removal of topsoil and any overburden or fills with a machine (flat bucket) to reveal the extent of any potential archaeological remains. This work would be directed by the archaeologist on site.
- Once archaeological features and deposits are exposed they would be excavated and recorded stratigraphically within a site grid.
- Excavation of archaeological features and deposits would be conducted with hand tools.
- Any intact underfloor deposits would be excavated stratigraphically within a 1m by 1m grid system. Underfloor material would be sieved and artefacts and other occupation-related evidence collected.

#### Testing

To explore the wider area of moderate archaeological potential surrounding the cottage, five test trenches would be excavated. A sixth test trench would also be excavated to investigate the location of the former shed/garage. These test trenches would be excavated with a machine (flat bucket) to reveal the extent of any archaeological remains within each test trench. This work would be monitored by the archaeologist on site. On identification of potential archaeological deposits or remains, investigation would be undertaken by hand. Archaeological remains would be cleaned by hand to allow archaeologists to understand the nature of the potential archaeological resource within the trench.

The location of the excavation area and test trenches are illustrated in Figure 15. The test trenches are described below:

Test Trench 1 (TT1) would be located directly to the east of the collapsed cottage and would be approximately 2m wide by 12m long. It is located in an area which an aerial photograph from 1947 shows was covered between the cottage and the adjoining outhouse/laundry structure. The eastern extent of the test trench would also investigate any archaeological remains associated with the outhouse/laundry structure.

Test Trench 2 (TT2) would be located directly to the south of the collapsed cottage and would be approximately 2m wide by 6m long. It is located in an area near the residual brick chimney of the house, and would attempt to confirm the sub-surface footprint of the cottage, as well as locating any possible rubbish deposits and garden beds to the south of the house.

Test Trench 3 (TT3) would be located directly to the north of the collapsed cottage and would be approximately 2m wide by 6m long. It is located near a possible doorway to the cottage on the north side of the house. The trench would attempt to confirm the sub-surface footprint of the cottage, as well as locating any possible rubbish deposits and garden beds to the north of the house.

Test Trench 4 (TT4) would be located directly to the west of the collapsed cottage would be approximately 2m wide by 6m long. It is located near a possible doorway to the cottage on the west

side of the house. The trench would attempt to confirm the sub-surface footprint of the cottage, as well as locating any possible rubbish deposits and garden beds to the west of the house.

Test Trench 5 (TT5) would be located in the north-eastern corner of the collapsed cottage curtilage, and would consist of a north-south trench approximately 2m wide and 12m long. This trench would attempt to locate any archaeological remains associated with the former shed/garage near the collapsed cottage.

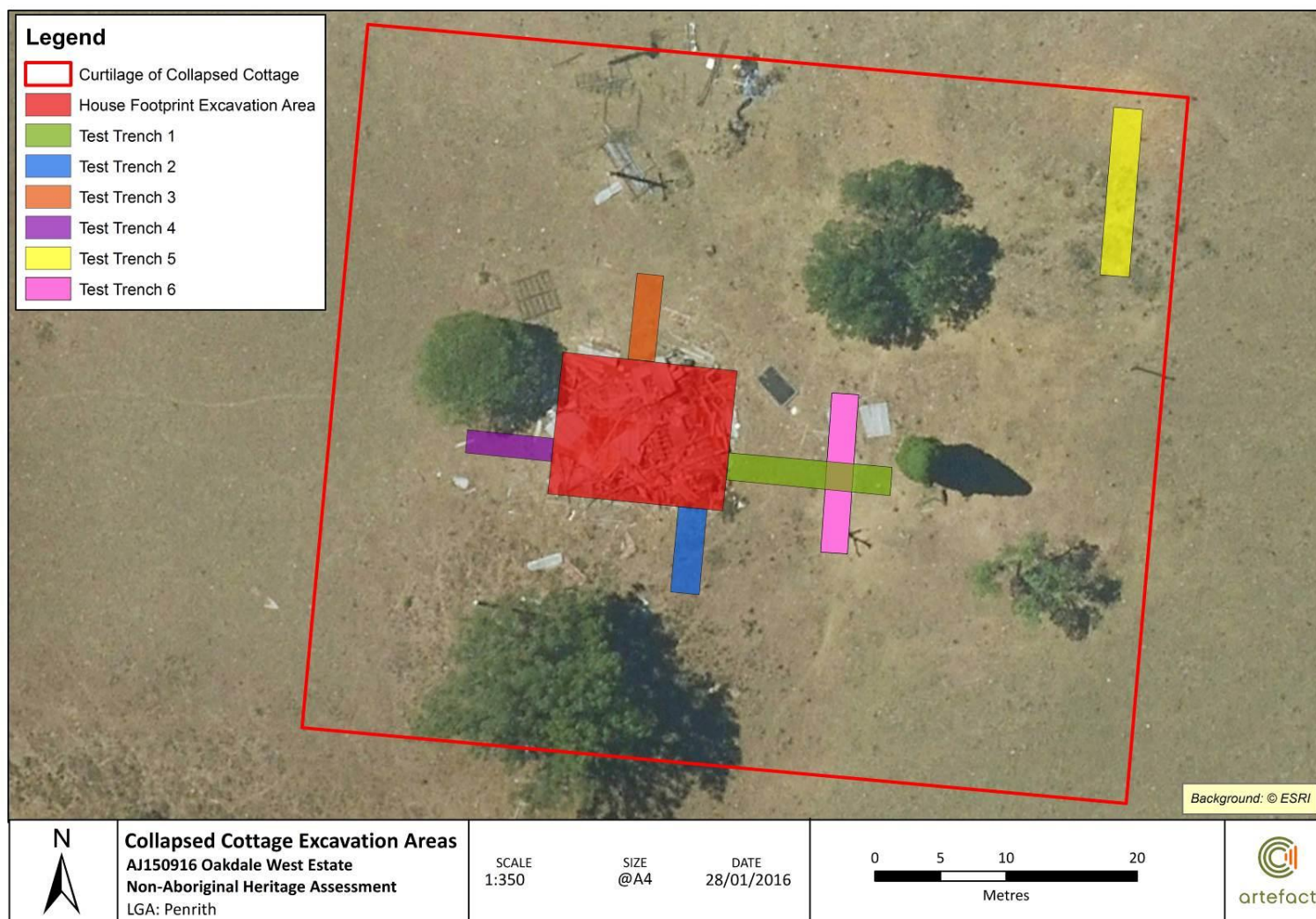
Test Trench 6 (TT6) would be located to the east of the cottage, running north-south across Test Trench 1. The trench would be 2m wide and 12m long. This trench would attempt to locate features associated with the outhouse/laundry, in particular to try to locate cesspits, sumps and rubbish deposits.

Should archaeological remains be identified in any of the test trenches, the area would be opened-up to allow for archaeological salvage excavation.

### **Archaeological monitoring**

Archaeological monitoring of topsoil removal in the area of low archaeological potential indicated in Figure 14 would be undertaken. Any archaeological remains would be investigated and recorded as necessary.

**Figure 15: Approximate location of collapsed cottage excavation areas. Archaeological monitoring would be undertaken elsewhere within the site curtilage (red outline).**



### 7.3.3 Recording and Sampling

Recording would include the following elements:

- Survey and scaled plans of the open area, trench locations and any significant archaeological features uncovered in the test and salvage program. The plans would include levels.
- Scaled section drawings where necessary.
- Digital photography, in RAW format, using photographic scales and photo boards where appropriate.
- Written records including assigning context numbers to archaeological features, and describing the features on context forms.
- Registers of photographs, plans, sections and contexts.
- Artefact collection by context.

If present, soil and other organic samples would be collected for environmental analysis, to ensure that the palaeobotanical environment is assessed, as part of the overall site analysis.

### 7.3.4 Artefact Analysis and Storage

Artefacts would be retained from significant deposits. In general, these would be collected during manual excavation; however, underfloor deposits would be sieved, as they are likely to contain smaller items. Bulky items, such as building materials, would be recorded on site and/or sampled, then discarded. Diagnostic artefacts may be retained from non-significant deposits, such as fills, where they may provide information about the date or origin of the material.

The artefacts would be cleaned and bagged and labelled according to context. They would be catalogued and analysed off-site. On completion of the analysis, the artefact assemblage would be returned to the proponent, for secure long-term storage.

### 7.3.5 Analysis and Final Report

The excavation data, artefact and any sample analysis would be analysed following the completion of fieldwork, and the results presented in a final excavation report. The report would contain written descriptions, photographs, illustrations and plans. It would address the research design, and other relevant research questions that emerge in the course of the investigation. The heritage significance of the archaeological resource would be re-assessed. The final report would be prepared in accordance with NSW Heritage Division guidelines and standards.

### 7.3.6 Public Information and Interpretation

The potential archaeological remains are of local heritage significance, and are part of the material heritage of the local community. In recognition of this, information relating to the history and archaeology of the site would be made publicly available. Depending on the extent of the archaeological resource and opportunity within the development program, public information and interpretation could include the following:

- Signage on the property boundary.



- Information on the developer's website, if possible.
- Liaising with the nearby schools (Emmaus College, Kemps Creek; Trinity Catholic Primary, Kemps Creek; and Mamre Anglican School, Kemps Creek) to encourage educational programs regarding the heritage of the site. This may include providing written material suitable for classroom discussion, and/or organising school groups to observe archaeological excavations.
- Media release by the developer.
- If archaeological finds are substantive and deemed of high heritage significance, opportunities to present these items with interpretive displays within the Oakdale Estate development would be encouraged.
- Lodgement of the final excavation report with the Penrith City library and the NSW Heritage Division library.

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

### 8.1 Conclusions

- The study area has largely been used for pastoral purposes since the 19<sup>th</sup> century
- There are no listed or unlisted heritage items located within the study area
- The majority of the study area has nil-low potential for archaeological remains
- In the southwest of the study area there is a potential archaeological site—the collapsed cottage site. This site has moderate potential to contain locally significant archaeological relics associated with the cottage and outbuildings potentially dating from the mid 19<sup>th</sup> century
- The proposed works would result in the complete removal of any archaeology within this site. This impact would be mitigated by a program of archaeological investigation
- As the proposed works are to be assessed as an SSD it is not necessary to acquire approvals under the Heritage Act to impact the archaeological relics. However, the archaeological investigation must be undertaken in accordance with the NSW Heritage Division guidelines, standards and requirements for historical archaeological excavations.

### 8.2 Recommendations

- Impacts to the collapsed cottage archaeological site would be mitigated by a program of archaeological investigation and recording as outlined in the Archaeological Research Design (section 7.0). This would include the following:
  - Monitoring the removal of the remaining structure of the cottage
  - Test excavation within the curtilage defined in Figure 13 to determine the presence, or absence, of archaeological relics, define the extent of the remains and refine the assessment of significance
  - Salvage excavation based on the results of the monitoring and test excavation
  - Analysis and preparation of a final archaeological investigation report.
- In those areas of the site identified as having nil-low archaeological potential, it is recommended that an unexpected finds policy, outlined below, be implemented during excavation
  - Stop work, protect item and inform environment staff
  - Contact an archaeological consultant to provide an assessment of the find
  - Preliminary assessment and recording of the find by the archaeologist. Following the production of the document some, or all works, may be able to proceed
  - Notify the regulator, if required
  - Implement any archaeological mitigation recommended by the archaeologist
  - Resume work.

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