

Macarthur Memorial Park (Varroville)

Revised Historical Archaeological
Impact Assessment

Report to Catholic Metropolitan
Cemeteries Trust
October 2017



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EXECUTIVE SUMMARY

The Catholic Cemeteries and Crematoria/Catholic Metropolitan Cemeteries Trust (the proponent) has engaged Artefact Heritage to prepare a Historical Archaeological Impact Assessment (HAIA) in support of a Development Application (DA) for the establishment of a cemetery at the subject site, known as 166-176 St Andrews Road, Varroville. The purpose of this HAIA is to consider the historical archaeological potential and significance of the subject site, and provide an evaluation of potential impacts of the proposed activity on the archaeological resource.

In 2015, Artefact Heritage was engaged by Urbis to prepare a historical archaeological assessment intended to inform a Conservation Management Plan (CMP), which was prepared as part of the DA. The report concluded that the areas around the outbuildings precinct and the terraced hillsides (former vineyards) have potential contain in-situ archaeological relics and features of local or State significance.

This current impact assessment draws upon the findings of the 2015 report, addresses any gaps in the assessment, and evaluates the impacts of the current proposal, 'Macarthur Memorial Park' as it has moved from concept to preferred design stage.

Catholic Cemeteries and Crematoria/Catholic Metropolitan Cemeteries Trust proposes to develop cemetery parklands within the study area. The cemetery parklands will consist of 136,000 burial spaces, landscaped public parklands, chapels and condolence rooms, vehicle access roads and pedestrian footpaths. These would result in extensive subsurface impacts to the majority of the site.

The proposed use of the site has been divided into five stages (Stages 1-5). Each stage will be gradually enacted over 150 years, with Stages 1 and 2 being developed in the next 5 years and Stages 3-5 being developed for the remainder of this period. However, construction activities such as the development of roads and landscaping will take place across the entire site at varying times. At present, the proponent is applying for DA approval for Stages 1-5.

Conclusions

- The subject site is partially located within the Campbelltown LEP (2015) listed Varro Ville Homestead Group (Item ID I105) and presently located outside of the SHR listed curtilage for Varroville (Item ID 00737);
- In July 2017, the Office of Environment and Heritage (OEH) provided notice of a proposal to extend the SHR curtilage of Varroville House (Draft Plan no. 1798). It is expected that should the expanded curtilage be approved, changes to the proposed design and subsequent proposed mitigation measures and excavation permits may be required;
- The subject site was once part of the Varroville estate dating from the early 19th century and contains a complex of outbuildings in the southwest. The estate has been associated with various farming activities, viticulture, orcharding, stock breeding, a horse stud, pasture and dairying.
- Project works may impact archaeological resources assessed as having the potential to contain local or State significance across preliminary development Stages 1 – 5. Excavation works include, but are not limited to: impacts to dams, paddocks, contoured trenches, the Outbuilding's Precinct structures/landscapes and the construction of service/utility trenches, roads, paths and buildings;
- As the subject site has been assessed as having the potential to contain State significant archaeological relics associated with the Varroville Estate, and the proposed works may impact on

these remains, a program of archaeological investigation should be undertaken prior to works commencing;

- Archaeological investigation would include test excavation, archaeological monitoring and potential salvage excavation. This program would identify the extent and nature of potential archaeological relics or deposits within the subject site, inform future detailed designs and prioritise the conservation of State significant remains; and
- Findings from test excavations, archaeological monitoring and potential salvage excavations would inform future methodologies for archaeological management and interpretation.

Recommendations

- Applications for appropriate archaeological excavation permits, excavation exceptions or exemptions (dependant on the statutory listing of the area at the time the application is made) would be prepared for the NSW Heritage Division for areas where subsurface impacts are proposed. Site wide permits may be required. As excavation permits remain valid for 5 years only, they would need to be updated throughout the 150-year development process;
- An Archaeological Research Design (ARD) would be prepared to accompany all excavation, excavation exception or exemption permit applications. The ARD would detail the archaeological methods to be employed, and research questions to be adopted, during excavation works in development Stages 1-5.
- The ARD would nominate an Excavation Director who meets the NSW Heritage Council requirements for the removal of state significant archaeological remains;
- The ARD would include provisions for archaeobotanical analysis in the subject site, primarily within areas associated early viticulture ventures (contoured terracing) and the kitchen garden. Results of the analysis would feed into future landscaping designs for the proposed reinstatement of vineyards and historical plantings;
- The results of archaeological test excavations, monitoring and/or salvage excavations would inform future designs and Heritage Interpretation Strategies and Plans. Appropriate archaeological management and conservation for the project would then be recommended; and
- If the nominated SHR curtilage extension for Varroville (Draft No. 1798) is approved by the Minister for Heritage, this HAIA would be updated to reflect any subsequent changes to excavation permit requirements or mitigation measures.

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Acronyms

Acronym	Definition
CMP	Conservation Management Plan
CHL	Commonwealth Heritage List
EP&A Act	<i>Environmental Planning and Assessment Act</i>
LEP	Local Environmental Plan
LGA	Local Government Area
NHL	National Heritage List
NSW	New South Wales
OEH	Office of Environment and Heritage
REF	Review of Environmental Factors
SHI	State Heritage Inventory
SHR	State Heritage Register
SLNSW	State Library New South Wales
WHL	World Heritage List

1.0 INTRODUCTION

1.1 Project Background

The Catholic Cemeteries and Crematoria/Catholic Metropolitan Cemeteries Trust (the proponent) has engaged Artefact Heritage to prepare a Historical Archaeological Impact Assessment (HAIA) in support of a Development Application (DA) for the establishment of a cemetery at the subject site, known as 166-176 St Andrews Road, Varroville. The purpose of this HAIA is to consider the historical archaeological potential and significance of the subject site, and provide an evaluation of potential impacts of the proposed activity on the archaeological resource.

In 2015, Artefact Heritage was engaged by Urbis to prepare a historical archaeological assessment intended to inform a Conservation Management Plan (CMP), which was prepared as part of the (DA). The report concluded that the areas around the outbuildings precinct and the terraced hillsides (former vineyards) have potential contain in-situ archaeological relics and features of local or State significance.

This current impact assessment draws upon the findings of the 2015 report, addresses any gaps in the assessment, and evaluates the impacts of the current proposal, 'Macarthur Memorial Park' as it has moved from concept to preferred design stage.

1.2 The Subject Site

The subject site is located within a rural setting at 166 -176 St Andrews Road, Varroville and forms part of what was the original 1,000 acres Varroville Estate (c.1810) situated in the City of Campbelltown Local Government Area in the Macarthur region (or 'Scenic Hills') of south-western Sydney.

The Hume Highway lies to the south of the study area, rural and residential properties are located along the northern and eastern boundaries. St Andrews Road bounds the study area to the west. The Scenic NSW Equine Centre (formally known as Scenic Hills Riding Ranch) borders the subject site to the east and was part of the original grant. The subject site is approximately 113.37 hectares (ha) and comprises the following four lots (Figure 1):

- Lot 22 DP 564065;
- Lot B DP 370979; and
- Lot 1 DP 218016.

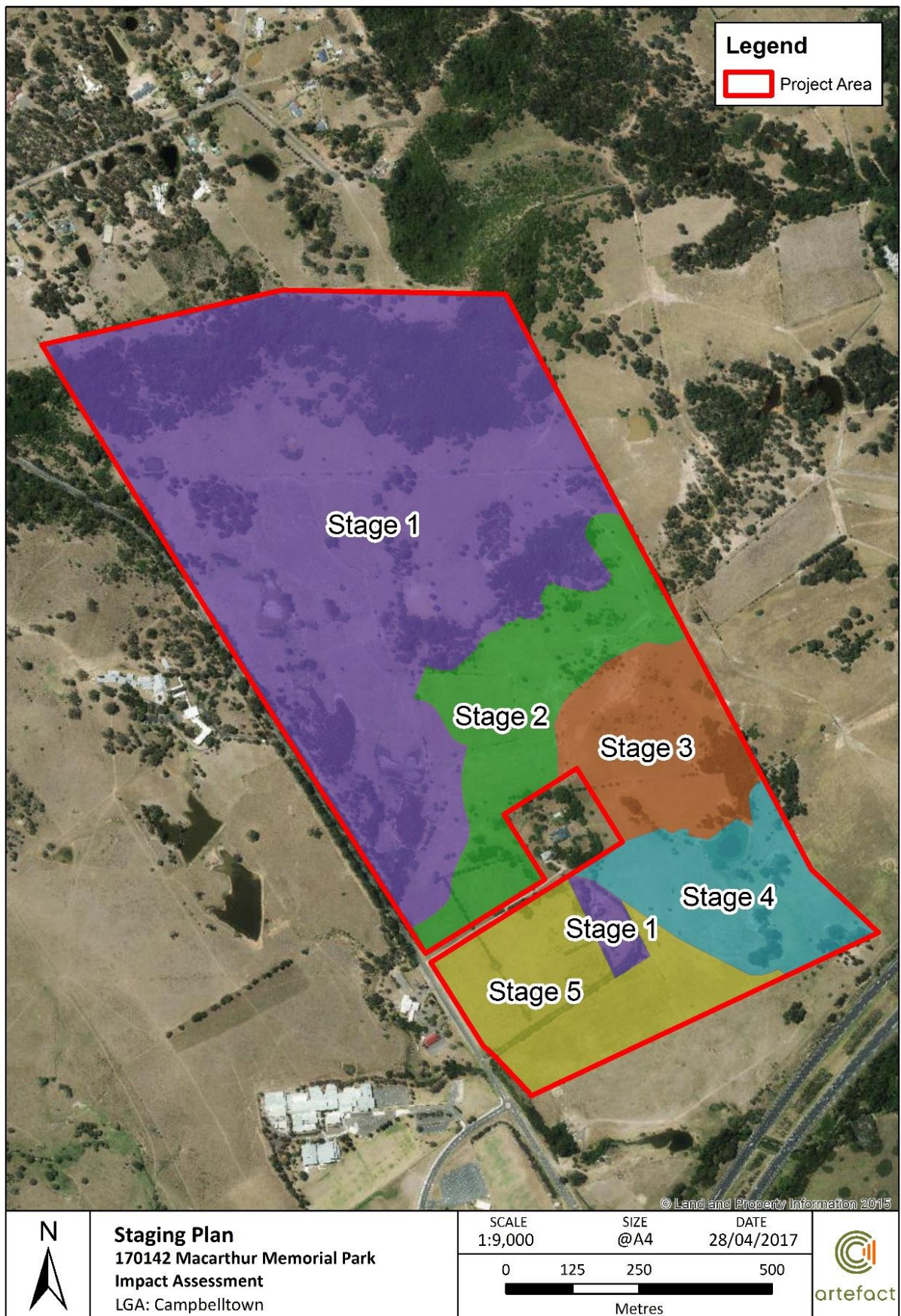
The subject site surrounds and excludes the approximately 8-hectare 'Varroville House' lot (Lot 21 DP 564065) which is listed on the State Heritage Register (SHR) and identified as a local heritage item of the Campbelltown Local Environmental Plan District 8 (Central Hills Lands).

Lots 1 and 22 (along with Lot 4 DP 239557 and Lot 21 DP 564065) were recently listed on the Campbelltown LEP as an item of Historic Significance as item I105, and incorporate built and landscape elements associated with the former Varroville historic estate.

In July 2017, the Office of Environment and Heritage (OEH) provided notice of a proposal to extend the SHR curtilage of Varroville House (Draft Plan no. 1798). It is expected that should the expanded curtilage be approved, changes to the proposed design and subsequent proposed mitigation measures and excavation permits may be required.

The proposed staging plan for the use of the cemetery use is shown at Figure 2, construction will take place across the site in varying stages.

Figure 2: Preliminary development staging plan as of April 2017. Base map Source. SixMaps.



1.3 Project Overview

Project details have been obtained from the CMCT website for Macarthur Memorial Park, as outlined below. The project outline below is indicated in Figure 2 via the planned five stage delivery of the project.

Catholic Metropolitan Cemeteries Trust (CMCT) has launched plans to create cemetery parklands and 136,000 burial spaces in Varroville in an effort to alleviate Sydney impending shortage of burial sites. Macarthur Memorial Park will be situated on land that was once in the sights of home builders and commercial developers, with 35 per cent of the area proposed to be used as public parkland for the fast-growing Macarthur community over the first 60 years.

The CMCT plans to spend an estimated \$40 million in the first stage covering 70 acres, on the construction of two chapels, office, condolence room, workshop and landscaping, with no crematorium planned for the site. The park will provide the Macarthur region a peaceful and caring place for families and friends to visit their loved ones.

1.4 Impact Assessment Methodology

This report aims to:

- Provide a revised assessment of historical archaeology potential and significance gradings for the subject site based on new research and specialist inputs;
- Assess the potential for significant archaeological remains located within the project footprint;
- Assess the impacts on archaeological significance as a result of the Proposal; and
- Provide advice on appropriate approvals pathways, such as the preparation of an Archaeological Research Design (ARD) and archaeological excavations under the appropriate permit application.

1.5 Report Authorship and Acknowledgments

This draft report was prepared by Erin Finnegan, Jenny Winnett and Adele Zubrzycka (Senior Heritage Consultants). The map overlays were prepared by Stephanie Moore (Heritage Consultant). The report was reviewed by Josh Symons (Principal) and Sandra Wallace (Principle).

The assistance of the following people is acknowledged:

- Fiona Binns, Urbis Associate Director;
- Florence Jaquet, Landscape Architect;
- Scott Rossiter, Landscape Designer;
- David De Angelis, NettCorp Director; and
- John Richardson, Catholic Cemeteries and Crematoria Director (Planning and Infrastructure).

2.0 PLANNING FRAMEWORK AND STATUTORY REQUIREMENTS

The subject area is affected by a number of statutory controls for the planning and management of historical heritage and archaeological resources. Statutory requirements for the study area are summaries below.

2.1 National Legislation

2.1.1 National Legislation

2.1.1.1 *Environment Protection and Biodiversity Conservation Act 1999*

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) defines 'environment' as both natural and cultural environments and therefore includes Aboriginal and non-Aboriginal cultural heritage. Under the Act, protected heritage items are listed on the World Heritage List (WHL), National Heritage List (items of significance to the nation) or the Commonwealth Heritage List (items belonging to the Commonwealth or its agencies). These lists contain places or groups of places with outstanding heritage value to Australia – either natural, Indigenous, historic, or a combination of these.

As there are no WHL, NHL or CHL items that will be affected by the project works, or that are located in the vicinity of the project area, the EPBC Act does not apply.

2.2 State Legislation

2.2.1 Environmental Planning and Assessment Act 1979

The NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) and its associated regulations provide the framework for determining planning approvals for developments and activities in NSW. Environmental impacts are interpreted as including impacts to cultural heritage.

The EP&A Act allows for the preparation of planning instruments to direct development within NSW. This includes Local Environment Plans (LEP) and Regional Environment Plans (REP), which are administered by local government, and principally determine land-use and the process for development applications. LEPs include clauses requiring that heritage be considered during development applications and a schedule of identified heritage items be provided (see Section 1.3.1 for discussion of the relevant REP).

2.2.2 The Heritage Act 1977

The NSW *Heritage Act 1977* (the Act) is the primary item of State legislation affording protection to items of environmental heritage (natural and cultural) in NSW. The 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.

The State Heritage Register

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 maintained by the Heritage Council of the OEH and includes a diverse range of over 1,500 items, in both private and public ownership. To be listed, an item must be deemed to be of heritage significance for the whole of NSW. Listing on the SHR controls activities such as alteration, damage, demolition and development. When a place is listed on the SHR, the approval of the Heritage Council of NSW is required for any major work.

- Whilst the subject site is not presently a listed item on the SHR, it surrounds the SHR listed Varroville Homestead (SHR no. 00737). Particular elements such as the outbuildings and former contoured (viticultural) landscapes are noted in the SHR listing.

N.B. In July 2017, the OEH provided notice of a proposal to extend the SHR curtilage of Varroville House (Draft Plan no. 1798). It is expected that should the expanded curtilage be approved, changes to the proposed design and subsequent proposed mitigation measures and excavation permits may be required.

Section 170 Registers

Under Section 170 of the Heritage Act NSW government agencies are required to maintain a register of heritage assets. The register places obligations on the agencies, but not on non-government proponents, beyond their responsibility to assess the impact on surrounding heritage items.

The 'Relics Provision'

Archaeological features and deposits are afforded statutory protection by the 'relics provision'. Section 4(1) of the *Heritage Act 1977* (as amended 2009) defines 'relic' as follows:

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.

Section 139 to 146 of the Act require that excavation or disturbance of land that is likely to contain, or is believed may contain, archaeological relics is undertaken in accordance with an excavation permit issued by the Heritage Council (or in accordance with a gazetted exception under Section 139(4) of the Act). In addition, Section 139[1] of the Heritage Act states that:

A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.

In such cases, an excavation permit under section 140 is required. The Heritage Council can, under Section 139(4) of the Act, also grant an exception in certain circumstances from the need for a permit. Note that no formal listing is required for archaeological relics; they are automatically protected if they are of local or state significance

2.3 Local Legislation

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 requires that environmental impacts are considered prior to land development; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits. The proposal is subject to assessment under Part 5 of the EP&A Act.

The EP&A Act also requires that local governments prepare planning instruments (such as LEPs and Development Control Plans [DCPs]) in accordance with the EP&A Act to provide guidance on the level of environmental assessment required.

2.3.1.1 Campbelltown Local Environmental Plan 2015 (CLEP 2015)

The study area falls within the boundaries of the Campbelltown 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 subject site is partly listed on the CLEP 2015, within the heritage curtilage of:

- Varroville – Varro Ville Homestead Group (Item ID I105)

2.4 Summary of Heritage Status

The subject site has been identified as holding local significance and is partly listed on the Campbelltown LEP 2015 (Item ID I105). Statutory listings are summarised in Table 1 and shown in Figure 3.

Table 1: Results of register search for the subject site (excluding Varroville House)

Heritage register	Listing
World Heritage List	The subject site is not registered on the World Heritage List
National Heritage List	The subject site is not registered on the National Heritage List
Commonwealth Heritage List	The subject site is not registered on the Commonwealth Heritage List
State Heritage Register	<p>The subject site is not registered on the State Heritage Register.</p> <p>N.B. A proposed extension to the existing Varroville Homestead SHR curtilage was submitted to the Heritage Council of NSW in July 2017. This includes land within the subject site. The nomination submission is currently under consideration by the Minister for Heritage and the proposed curtilage does not presently have statutory power over the subject site.</p>
Section 170 Registers	The subject site is not registered on any Section 170 Registers
Campbelltown LEP 2015	The subject site is partly listed on the CLEP 2015 (I105)

2.4.1 Other Heritage Items

A search was undertaken for heritage items within 1,000m of the subject site. As noted previously, the subject properties form part of the cultural setting of greater 'Varroville Estate', including the heritage-listed house. The SHR listing for the homestead notes features and attributes associated with the estate that are situated within the subject site, specifically the outbuildings and vineyard terracing. It has been acknowledged, through various studies and assessments that the existing SHR curtilage is not sufficient to preserve the heritage values of the place.

The heritage items relevant to the subject site are summarised in Table 2 and shown in Figure 3.

Table 2: Summary of heritage items within proximity of the subject site

Item	Address	Register listing	Significance
Varroville	196 St Andrews Road, Varroville Part Lot 21, DP 564065	SHR no. 00737	State
Varroville – Varro Ville Homestead Group	196 St Andrews Road, Varroville Part Lot 21 DP564065	CLEP 2015 Item no. 1105	Local

2.4.2 Additional Heritage Nominations

A proposed extension to the existing Varroville Homestead SHR curtilage was submitted to the Heritage Council of NSW in July 2017 (Draft Plan no. 1798). This includes land within the subject site, as shown in Figure 4. The nomination submission is currently under consideration by the Minister for Heritage and the curtilage does not presently have statutory power over the proposed development.

2.4.3 Non-Statutory Listings

2.4.3.1 National Trust Register

The National Trust of Australia is a private, not-for-profit organisation committed to conserving Australia's heritage. Listing with the National Trust of Australia is not statutory; however, it does have a role in raising public awareness of heritage issues.

- 'Varro Ville' and its curtilage was listed on the National Trust Register in December 1976. The cemetery development proposal is within the Trust's listed curtilage.

2.4.3.2 Register of the National Estate

The Register of the National Estate (RNE) is no longer a statutory list; however, it remains available as an archive.

Varro Ville, St Andrews Rd, Varroville, NSW, Australia (Item No. 3268)

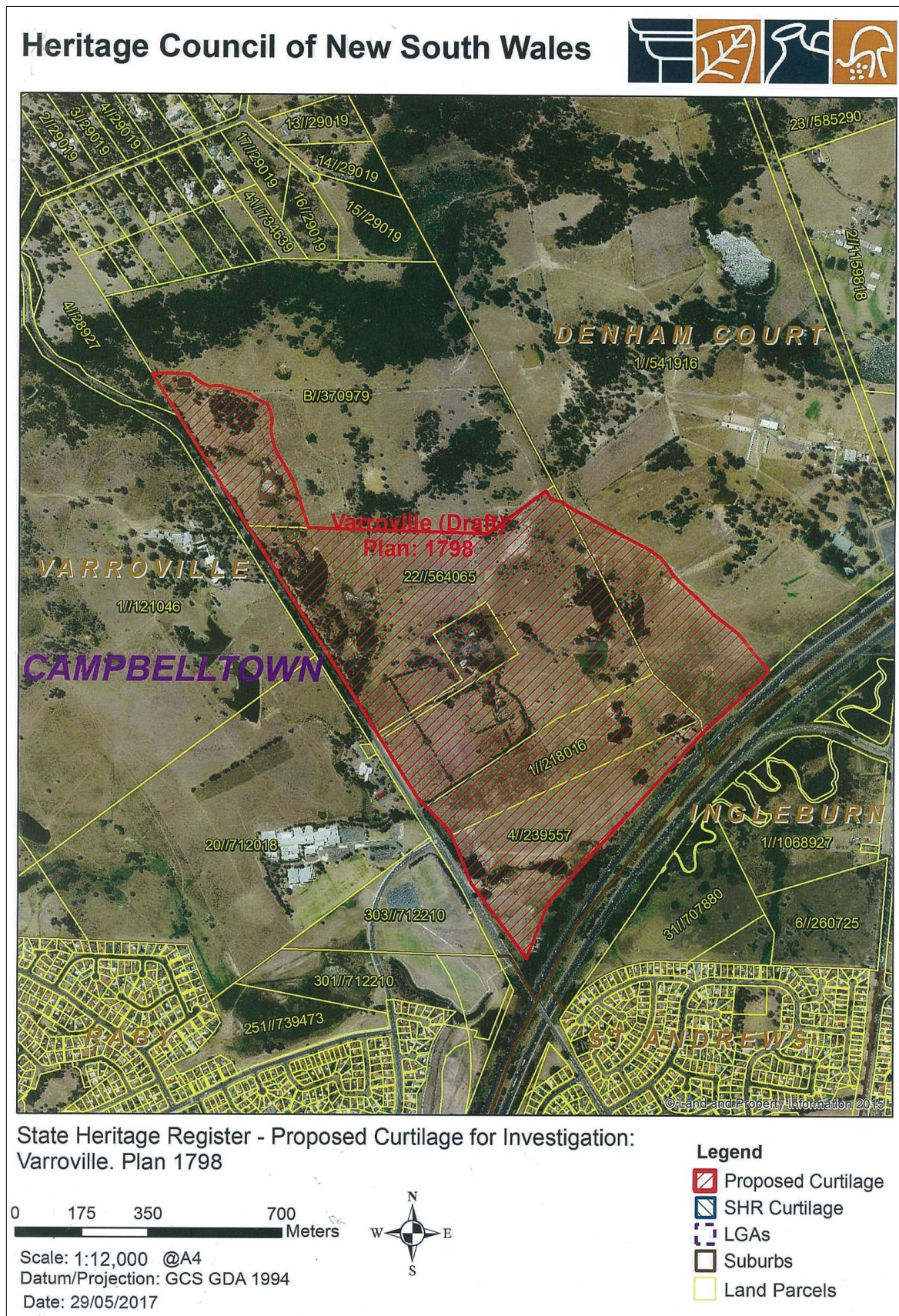
The RNE Statement of Significance focuses on the homestead however the description includes the outbuildings:

Constructed of rendered sandstock bricks on stone foundations with outbuildings in the same brick. Plan is rectangular with two wings at rear, all single storey. Joinery is cedar. Some details such as cast iron verandah supports, French windows, chimneys, marble fireplaces probably later additions. Built probably by Dr Robert Townson (1763-1827) on land granted to him in 1810.

Figure 3: Relevant heritage curtilages for Varroville House and subject site.



Figure 4. Proposed Varroville SHR curtilage extension, 2017 (Draft Plan no. 1798). Source: Heritage Council of NSW.



3.0 HISTORICAL CONTEXT

The following discussion is not intended to be an exhaustive ethnographic, archaeological or historical study for the historic Varroville property, but rather aims to provide a historical overview of the subject site only. A detailed history of Varroville is provided in both the Historical Archaeological Assessment (Artefact Heritage, 2015) and the Conservation Management Plan (Urbis, 2016). The following section is drawn from these key documents and provides the context for the following discussion on archaeological potential, significance and impact analysis.

3.1 Development of Varroville Estate

3.1.1 Early European Settlement of the Cowpastures

The south west region of Sydney, formerly known as The Cow Pastures, has been called the birthplace of the pastoral industry in NSW. The discovery in 1795 of a fine herd of cattle, whose progenitors had been brought from England and strayed into the bush, gave rise to the name 'Cow Pastures' for the fertile land along the Nepean River. The name 'Cowpasture Plains' first appeared on a map dated August 1796 denoting land on the west side of the Nepean, but eventually came to be used for a much more extensive regional area. Subsequent visits by Governor and Mrs King and by various members of the 'colonial gentry' led to the area being opened up for settlement within ten years of its discovery.¹

3.1.2 Phase 1 (1810 – 1827): Original Land Grants and Establishment of Varroville

In 1811, Dr Robert Townson was granted 1,000 acres at Minto district and called it 'Varro Ville' after the Roman agriculturalist Marcus Terentius Varro (Figure 5). Townson arrived in the colony in 1807 and was the Colony's most highly regarded academic; having studying mineralogy, chemistry, botany, rural economy, technology, politics and ethics in the Universities of Gottingen, Vienna, Paris and Edinburgh.²

In November 1810, Governor and Mrs Macquarie visited Varroville and climbed Bunbury Curran Hill for the views across the Cumberland Plain to Sydney. The landscape design of Varroville was discussed between Townson and the Macquaries at this time.³ Governor Macquarie thought the siting of the house 'ill-advised'. His journal does not record his preferred location, but he may have thought that the house should have been located higher on the slope to capture more of the scenic views of the surrounding area.⁴

Circa 1812-1813, Townson replaced his initial rudimentary shelter (possibly a timber slab hut) on his property with a more substantial dwelling of sandstock brick on stone foundations. He also had a bridge built over the creek, but by 1813 it had washed away. In 1809, a productive kitchen garden was laid out; the garden was noted for its extensive fruit varieties by the early 1820s.⁵

¹ Scenic Hills Association, 2016 http://www.scenichills.org.au/history_6.html

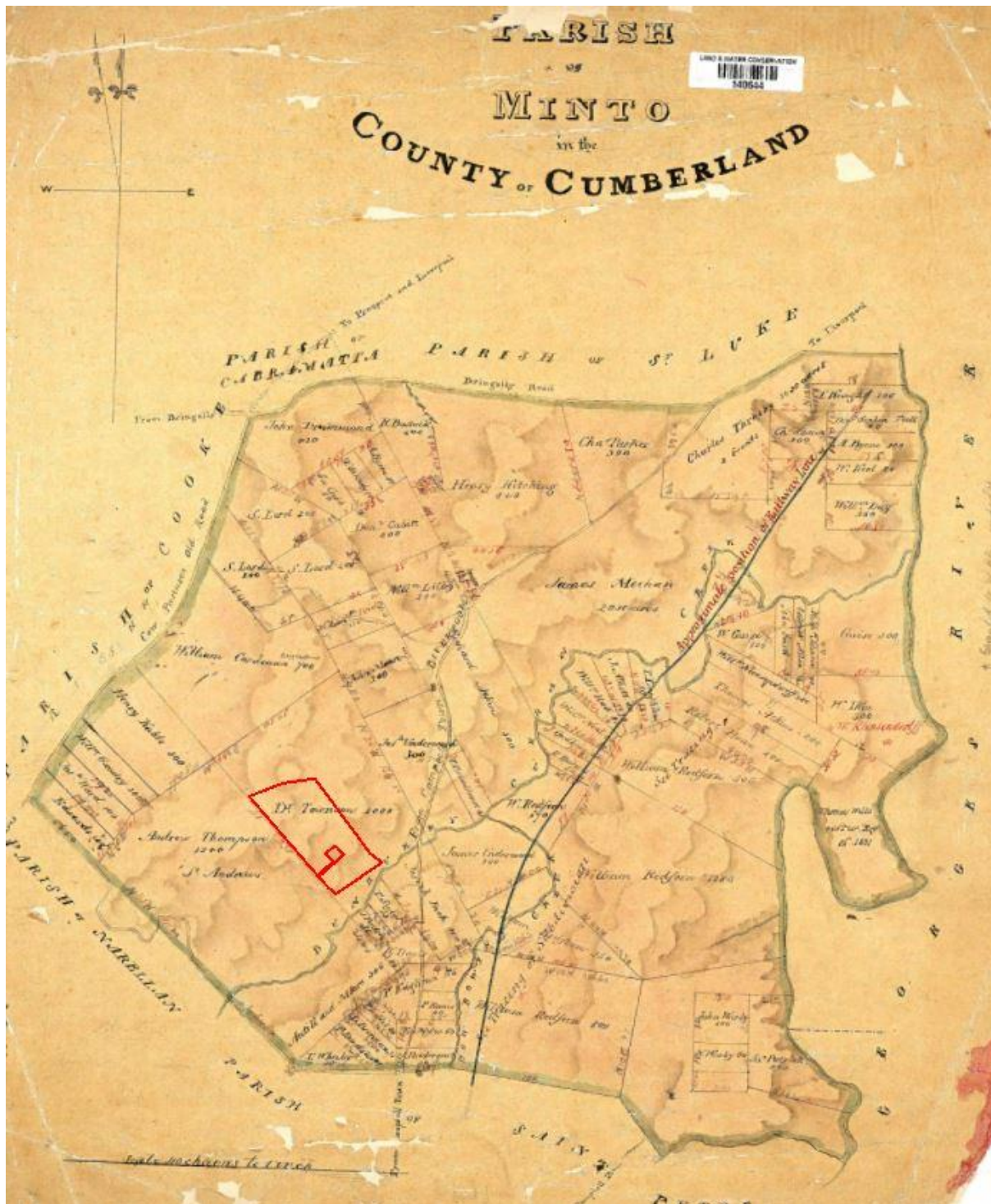
² OEH, Heritage Division: 'Varroville' SHR listing

³ Ibid

⁴ Paul Davies Pty Ltd in association with Geoffrey Britton (Environmental Design Consultant). 2011. *Visual Analysis of Campbelltown's Scenic Hills and East Edge Scenic Protection Lands*, report prepared for Campbelltown City Council, p.84.

⁵ OEH, Heritage Division: 'Varroville' SHR listing

Figure 5: Parish of Minto, undated map showing location of subject site in relation to original grants⁶



By 1817, Townson was granted a license to establish a slaughterhouse on the estate and by 1819, he had obtained a permit to pasture cattle across the escarpment. During this period, Townson supplied meat to the Sydney, Liverpool and Parramatta commissariat stores. The house, outbuildings and gardens were firmly established by 1820. Wool sales were held at the property in the 1820s, implying

⁶ NSW Department of Lands Parish Map Preservation Project PMapMN04

the property also contained stockyards and barns. The overseer and the convict labour also lived on the property. A significant part of the property was also being used to grow crops during this period.⁷

By 1822, historical sources indicate that a manager was hired to oversee Townson's Varro Ville and Goulburn properties. In addition to 400 head of cattle, 3,350 sheep and 24 hogs, Townson had 20 acres under wheat cultivation, 5 of barley, 6 acres of a garden/orchard and a thriving vineyard, which became a showpiece and 'second only to Gregory Blaxland'.⁸ Upon Townson's death in 1827, Varro Ville was advertised for sale and described as:

The Estate was the Residence of the late Dr. Townson, and possesses one of the first Vineyards in this Colony, planted with the choicest Grape Trees, together with an Orchard, having a great variety of the best Fruit Trees in it.

3.1.3 Phase 2 (1827 – 1858): Estate Expansion Under Charles Sturt and James Raymond

The property was owned by explorer Charles Sturt (1795-1869) from 1837 to 1839 and by the first Post Master General James Raymond from 1839 until his death in 1851, upon which Varroville occupation passed to his daughter and her family until 1858.

Sturt described himself as 'an enthusiastic horticulturalist' and, when writing to his brother William in Calcutta in 1835, as he was planning the purchase of a property, Sturt begged for fruits, plants, bulbs or seeds, 'the rarer the better'. Sturt established dams and modified watercourses, maintained the thriving kitchen garden, orchard and vineyard and took a keen interest in the birdlife at Varroville.⁹

Sturt is recognised as a pioneer in the science of water conservation within the early Colonial landscape and recorded constructing a 'dam in every paddock' on the property. This was one of the earliest known attempts at water conservation in the Colony, and indeed Sturt later cited Varroville as a model of water conservation during his term as Assistant Commissioner of Lands in South Australia¹⁰. The Sturts moved to Adelaide in 1839 and later returned to England in 1853. The sale notice for the property, advertised in 1839 mentions additional outbuildings which likely correspond to extant structures, particularly the coach-house:

*...This compact and beautiful property has proved its value by the abundance of its crops this season. It contains 1000 acres, 600 of which are cleared and 25 under cultivation...the farm has an abundant supply of purest water in **several tanks of great depth and is laid out into numerous paddocks**. The cottage is convenient and an excellent kitchen and wash house have been added to it. The out-houses consist of stables, coach-house, verandah, dairy, store, barn etc. and there is a well-stocked garden and vineyard.'*

Following Sturt, the estate was purchased by the first Postmaster of the Colony, James Raymond, who held the property for over a decade.¹¹ An 1850 plan dating to the Raymond-era of ownership shows a scatter of buildings in the general location of the homestead and outbuilding precinct and an approach by a track from Campbelltown Road (Figure 6). This road continued in use until possibly as late as the 1940s, but a new entry from St Andrew's Road was established as the main driveway in the 1950s.

⁷ OEH, Heritage Division: 'Varroville' SHR listing

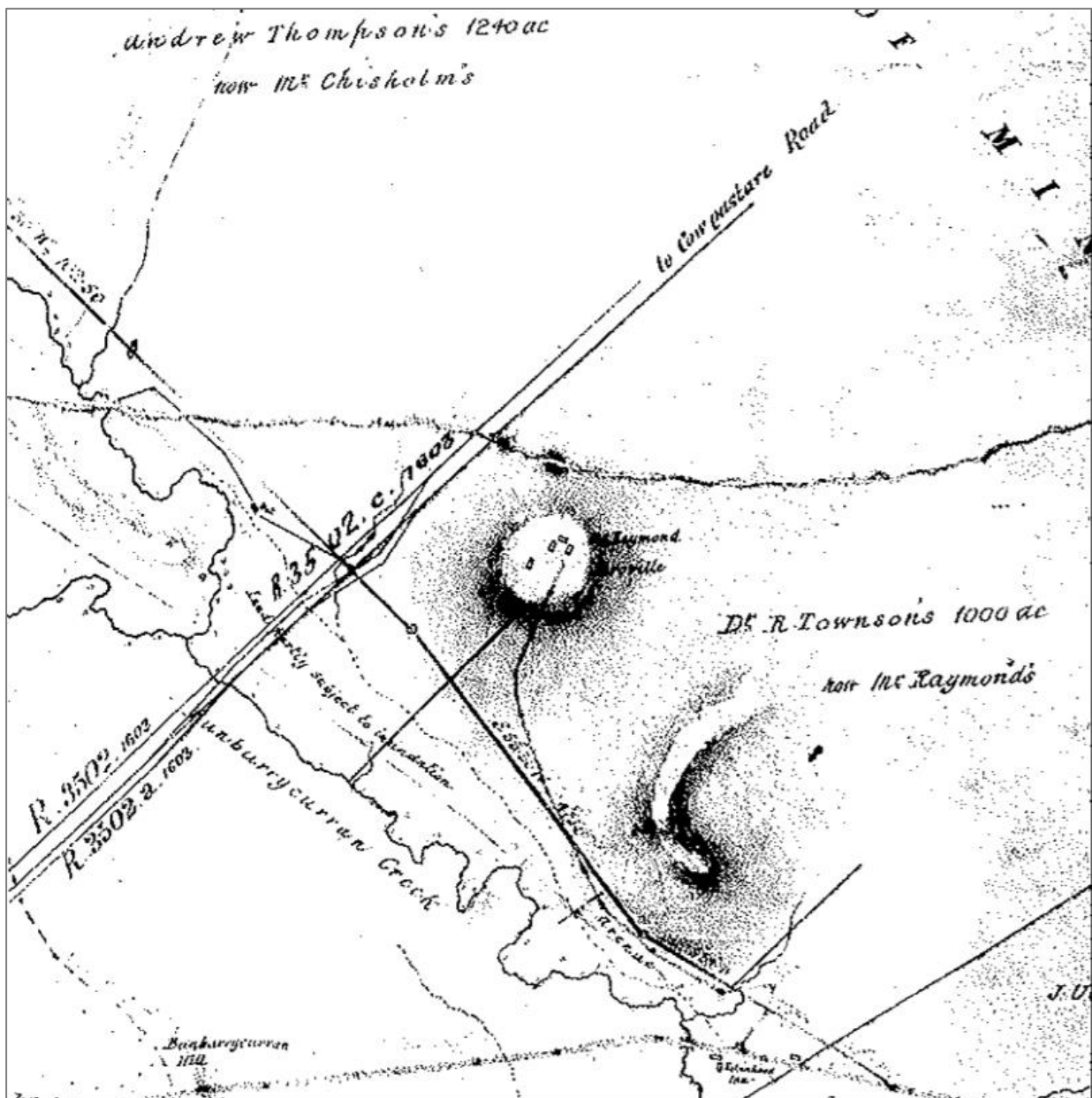
⁸ OEH, Heritage Division: 'Varroville' SHR listing

⁹ Urbis 2015: 37

¹⁰ Mrs Napier George Sturt, Life of Charles Sturt, Elder & Co., London, 1899, 125, cited in OEH Heritage Division SHR listing: 'Varroville')

¹¹ Camden News, Thu 16 Oct 1941, p 7

Figure 6: Detail of an 1850 plan showing the homestead core area and an outbuilding¹²



3.1.4 Phase 3 (1858 – 1876): The Cheeke Era, second house and horse stud

Justice Alfred Cheeke, a Judge of the Supreme Court of NSW, purchased Varroville in 1859 from George T. Rowe. Sources indicate that Cheeke completed the construction of Varroville house, likely started by Rowe. This second house is thought to be located on nearly same site as the first (built by Townson and lived in by Sturt and Raymond). The 1858 house was designed by the firm Weaver and Kemp, one of the partners of which, William Weaver, was Government Architect from 1854 to 1856. The new house retained an early stone chimney and hearthstone from the previous house.¹³

¹² Survey of a proposed new line of road from the Campbelltown Road near Denham Court to the Cowpasture Road near Molles Main', NSW State Records, AO Map 5155

¹³ OEH, Heritage Division: 'Varroville' SHR listing

Cheeke established a private horse stud and had success with his 'blood stock'. His horse *Clove* won the first recorded AJC Derby in 1865 and by 1872, his stable on the estate was being managed by a John Chaffe.¹⁴ He also maintained a racecourse on the flat below the house in the vicinity of Bunbury Curran Creek. Sources indicate that the racecourse may have been established as early as 1827.¹⁵ The land remains as open paddocks although partly covered by the Hume Highway, and now sits outside the boundary of the subject properties.

Following Cheeke's death in 1876, an auction notice published by Richardson & Wrench, indicated that the house was built of brick and stone, surrounded by verandahs, and included a hall, drawing and dining rooms, six bedrooms, a dressing room, patent closet, stove, kitchen and oven, servant's hall, wine cellar, laundry with copper, larder, pantry, and china closet.

*There is an additional residence of six apartments a few yards from the above...and approached by a fine carriage drive from the main road...The outbuildings are very numerous and comprise gardener's house, barn, cow-pastures, calf pens, dairy, piggery with coppers, stock and drafting yards, complete range of stabling including a number of well finished spacious loose boxes for blood stock.*¹⁶

3.1.5 Phase 4 (1876-1950): Cottage industries to commercial dairying (Smith Brothers)

Varroville remained intact until Cheeke's death in 1876. Subsequent owners began leasing out extensive tracts for dairy farming, which by the 1890s was the main rural industry in the Campbelltown area.

In the 1920s, the consolidation of the dairy industry was reflected at Varroville, when local dairyman WH Staniforth was bought out by Percy, Austin and Arthur Smith dairymen of Concord, whose company 'Smith Bros' became a large milk distribution firm. They operated dairies at Robin Hood Farm (Ingleburn, also SHR-listed) and Varroville until 1958 and 1950, respectively, running their own dairy herd and purchasing milk from local farmers.¹⁷ Meanwhile the homestead was falling into disrepair.

3.1.6 Phase 5 (1950 – 1990): Jackaman family ownership

Alfred L M (Morris) and Cherry Jackaman purchased Varroville in 1950 and commenced a series of renovations and upgrades to the homestead. The outbuildings were also in a state of disrepair and extensive reconstruction works, particularly on the cottage, were undertaken. The former coach house was modified for use as a machinery shed, with works including the addition of the front verandah and removal of the former timber doors and valance. A new dairy building was constructed as well as a new driveway established from St Andrews Road in the 1950s.¹⁸ The new driveway can be seen in an aerial photograph taken in 1961 and shown in Figure 7.

In 1964, Morris and Cherry Jackaman opened Varroville as part of house inspections by the National Trust of Australia (NSW) Women's Committee (another opening was held in 1968). The tour brochures indicated the Jackman's considered the house to predate the 1850s, with the verandas and marble chimneypieces described as later additions. Mrs Jackaman's guests included her friend, the British actress Vivienne Leigh, Sir Laurence Olivier and Princess Michael of Kent.

¹⁴ Urbis 2015: 41

¹⁵ Information is based on local historian Verlie Fowler's primary research. The History Buff (Campbelltown City Library Local Information Blog, Jan 16, 2013, retrieved from: <http://campbelltown-library.blogspot.com.au/2015/08/where-was-our-first-racecourse.html> on 15/02/2017)

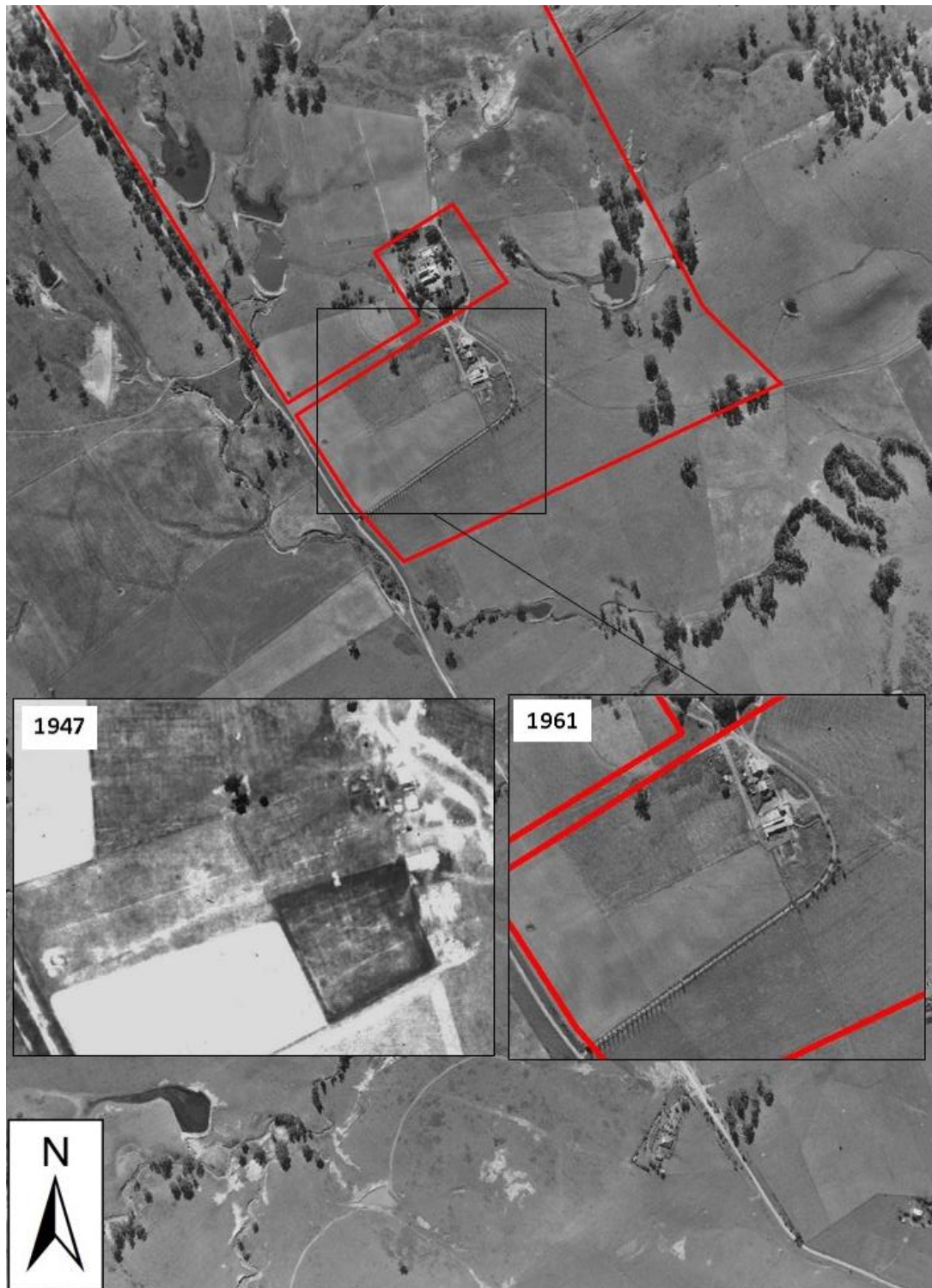
¹⁶ *Sydney Morning Herald*, 15 April 1876, cited in 'Varroville' House SHR listing

¹⁷ OEH, Heritage Division: 'Varroville' SHR listing

¹⁸ Urbis 2015: 48-49. The CMP provides detail on all phases of modifications to the buildings and structures comprising the outbuilding complex and will not be reproduced here.

The property was subdivided in the 1970s and in 1976, Lot 21 of DP564065 which contained the main house was created out of the larger property with the intention of enabling the bequest of the homestead to the National Trust.¹⁹ In the 1980s land in the southern portion of the property was resumed for the M5 freeway.²⁰

Figure 7. 1961 aerial photograph showing detail of outbuilding precinct and 1950 driveway. The site prior to the driveway's construction is shown in the 1947 aerial to the left.



¹⁹ Urbis 2015: 52

²⁰ OEH, Heritage Division: 'Varroville' SHR listing

3.1.7 Phase 6 (1990 – present): Recent History

In 1990, Varroville was acquired by the National Trust. The Trust, however, did not have the resources to conserve or use the property and it resolved to sell the homestead into private ownership. In 1992, a Conservation Plan for the main house was prepared by Orwell and Peter Phillips which formed part of the contract of sale when the house was purchased by new property owners Ken and Virginia Pearson-Smith. The remainder of the subject properties (including the outbuildings precinct) remained in the ownership of the Jackaman family until 2007.²¹ Numerous heritage studies have been undertaken to resolve the issue of an SHR boundary extension, which is shown in the overlay at Figure 8. The CMP provides a detailed history of this contentious phase in Varroville's history.²²

Figure 8: Overlay of the SHR heritage curtilage and proposed extension on the 1947 aerial photograph



²¹ Urbis 2015: 53.

²² Urbis 2015: 53-55.

4.0 PHYSICAL EVIDENCE

This section describes the components that comprise the Varroville estate lands. The elements which make up the setting, landscape and built character (omitting the homestead core) have direct implications for the presence of archaeological evidence. This purpose of this section is not to provide a detailed site-specific analysis but rather to highlight those areas where markers of past activity may be evident across the subject site.

4.1 Setting

The subject site is situated parallel to St Andrews Road along the southeast slope of the vegetated towards Bunbury Curran Hill escarpment. Visual amenity and scenic values of Varroville was assessed as part of the *Visual analysis of Campbelltown's Scenic Hills and East Edge Scenic Protection Lands* (2011). The subject properties are included in the Scenic Hills Landscape Unit 1 (SH-LU1), which is centred on the region's early Colonial land grants. The landscape of the original estate has retained its early pastoral character and includes significant plantings, outbuildings, remnant contour trenching for vineyards and evidence of early infrastructure such as Charles Sturt's chain of hand-formed dams.²³ The alignment of the route of the original carriage drive to the house from Campbelltown Road is still visible as a depression in the paddock (Figure 9).

Figure 9: Aerial view of the outbuildings precinct with the location of the original driveway indicated²⁴



The SHR listed heritage curtilage extends around the house and its immediate garden; with the subject site containing the bulk of the original Varroville grant including Charles Sturt's dams and the farm outbuildings. The low-lying area near the creek that was the original eastern boundary of Varroville that has been excised for the Hume Highway.²⁵

²³ Paul Davies Pty Ltd in association with Geoffrey Britton (Environmental Design Consultant). 2011. *Visual Analysis of Campbelltown's Scenic Hills and East Edge Scenic Protection Lands*, report prepared for Campbelltown City Council

²⁴ Urbis 2015:19

²⁵ Davies, 2011: 84.

The listing describes the house within its setting, noting particular landscape attributes which will be considered in this assessment as contributory to the place's heritage significance (emphasis added):

*Varroville, occupying the site of a previous c 1810 house has important relationships with features associated with the Townson, Wills and Sturt periods of ownership and occupancy of the estate (1810-1839). The **original driveway** from Campbelltown Road, **outbuildings grouped in relation to the entrance drive** on the ridge to the southern side of the house, the **remnant vineyard terracing** that wraps around the hillside in view of the house, **a track to Bunbury Curran Hill**, **post and rail fences** and **dams and modified watercourses** believed to have been made by the explorer, Charles Sturt.²⁶*

These built and landscape features are discussed in detail in the following sections.

4.2 Landscape Character

4.2.1 Dams and Modified Watercourses

There are presently ten dams on the subject site, at least half of which are visible from the homestead core group (Figure 10 and Figure 11). The 'chain of ponds' drainage system along the western valley would have been a key feature of the estate, as described in James Meehan's 1809 survey of the original grant. Thomas Wills and Charles Sturt both exploited this natural system by installing many dams across the estate. Sturt specifically cited the Varroville dam network when writing about the vital necessity of water conservation in South Australia.

Analysis of historical aerial photographs indicate that five of the ten dams were present prior to 1947 – dams nos. 2, 4, 6, 10 and 11 (Figure 12). Whilst sources indicate that Sturt altered watercourses and constructed dams 'in every paddock' in the 1830s, the exact number is not known. It cannot be determined if pre-1940s dams correspond to Sturt's phase of occupation or were constructed later. Many of these dams appear to have survived in what is likely to be their original, hand formed configuration. Dam nos. 3 and 5 may have been constructed in the late 1950s and dam nos. 7 – 9 in the north of the subject site post-date 1955.

Dam 11 is associated with a 60-metre ditch that has been dug into the landscape. The ditch is approximately 1.2 metres wide and is shown in Figure 13 and Figure 14 and is orientated east-west and leads towards a smaller, dry dam that occupies a vegetated area to the east. The now dry dam may have acted as an overflow pond at times of heavy rainfall.

The dam numbering corresponds to a 2013 watercourse assessment report.²⁷

Figure 10: Chain of ponds, western valley (Dams 2, 3 and 4)



²⁶ OEH, Heritage Division: 'Varroville' SHR listing

²⁷ Travers Bushfire and Ecology, 2013. Watercourse Assessment, Lot 1 DP 218016, Lot B DP 370979 & Lot 22 DP 564065, 166-167 St. Andrews Road, Varroville.

Figure 11: Eastern valley dams (Dams 10 and 11)



Figure 12: Aerial view showing locations of dams with numbering as per the Watercourse Assessment Report 2013²⁸



²⁸ Urbis 2015: 15

Figure 13: Ditch associated with Dam 11. View east towards creek.



Figure 14. Satellite image of aerial view showing Dam 11. Ditch is indicated. Source. Google Earth, 2016.



4.2.2 Colonial Contour Trenching - Viticulture and Orcharding

Viticulture and orchard activities at the new Varroville estate required extensive land modification, which was designed by Townson and built using convict labour from the early days of the grant (Figure 15 and Figure 16). This feature likely dates to 1810-1820s and has been identified as ‘contour trenching’, as opposed to ‘terracing’.²⁹ In terracing, wide steps are cut around the slopes of hills to prevent soil erosion. Terrace farming alters the shape of the slope to produce flat areas that provide a catchment for water.

Contour ploughing follows the “natural shape” of the slope without altering it, and these trenches capture water runoff. The soil excavated from the ditch is used to form a berm on the downhill edge of the ditch and the berm is planted with permanent vegetation (vines or trees in this case) to stabilize the soil.³⁰

John Busby and William Macarthur both noted the importance of adding stones to soil and onto of terracing to allow water infiltration, avoid erosion and reduce evaporative losses in clay rich landscapes.³¹

Figure 15: Contour trenching impressions along the hillside, view facing southeast.



Figure 16: View facing northeast



²⁹ Britton, Geoffry, Letter to Jacqui Kirkby and Peter Gibbs, Varroville, ‘Re: Reconciliation of the Catholic Metropolitan Cemeteries Trust (CMCT) Masterplan Proposal with the assessed cultural significance of Varro Ville’s Contextual Landscape’, dated 14 April 2016.

³⁰ Design Manual: Contour Trenches Daniel Sussman, Bren School of Environmental Science and Management, University of California Santa Barbara

³¹ Busby, J. 1825. A treatise on the culture of the vine, and the art of making wine, Government Printer, Australia; Busby, J. 1830. A manual of plain directions for planting and cultivating vineyards, and for making wine in New South Wales, printed by R. Mansfield, Sydney and Macarthur, W. (Maro) 1844. Letters on the culture of the vine, fermentation, and the management of wines in the cellar (sic), Statham and Forster, Sydney.

Evidence of ground modelling associated with the early contour trenching is clearly visible across the landscape was identified in the Artefact Heritage 2015 report, as well as described in the CMP as seven hectares “primarily focused around the hill to the northeast of Varroville House and slopes the east in front of the house”. This area has been included in the proposed extended heritage curtilage, only a small part of what was an extensive landscape feature.

According to a recent landscape study,³² the subject site contains at least 20 hectares of this contoured landscape, which can be clearly seen in the 1955 aerial (refer Figure 17). The aerial shows the site as largely cleared land and clearly indicates that the contour terracing around the main house extends to St Andrews Road, as well as across all aspects of the knoll to the northeast of the homestead. The contoured trenching around the homestead core also testifies to a very early attempt to conserve water by capturing rainfall and surface runoff into the trenches of the vineyards and orchards.³³

This remnant colonial contour landscape has been assessed as having exceptional research potential based on the unusual extent and early dating of this feature, making it a rare cultural and archaeological resource.

Figure 17: Detail of the 1955 aerial photograph showing main homestead, outbuildings complex and the extensive evidence of contour terracing extending to St Andrews Road and around the hill to the north of the main house.



³² Britton, 2016 and *in prep.*

³³ Britton, 2016.

4.3 Outbuilding Precinct

4.3.1 Overview of the Outbuilding Precinct

The subject properties incorporate a group of 19th and 20th century outbuildings sited to the south of the main homestead. The buildings are oriented to the northeast and the original carriageway from Campbelltown Road. They comprise the former coach house/machine shed, a cottage, a timber slab hut (which may represent one of the oldest buildings of the original estate), timber barn, as well as ruins of a large shed, chicken coop and other modest structures (Figure 18).

Figure 18: Outbuilding precinct with cottage and coach house (machinery shed).



The area around the outbuildings appears to have been impacted to a higher extent than the rest of the study area. Regrowth scrub is present throughout the area and has completely enclosed the rear of the slab hut. Two cistern/wells were identified in the study area around the outbuildings. One cistern/well is situated at the northern end of the slab hut and one is located to the rear of the dairy.

The homestead and many of the outbuildings, particularly the cottage, were in a state of disrepair when the Jackamans purchased the property in 1950. Mrs Jackaman recalled that the cottage had a dirt floor and no internal walls.³⁴ Extensive reconstruction works were undertaken between 1952-55. The founding president of the Campbelltown and Airds Historical Society visited the property in 1952 and photographed the house and outbuildings (refer Figures 15, 17 and 19). The slab hut was being lived in at the time, and now has a collapsed roof and is structurally unsound. The former coach house was modified for use as a machinery shed, a new dairy building was constructed, and a new driveway to the property from St. Andrews Road was also established as 'an avenue of trees' along an older farm track.

The current proposal includes a reconstruction program of the outbuildings as a priority. Full restoration of cottage and barn structures will be undertaken. The slab hut to be maintained and used in interpretations. The dairy and other shed structure would be removed. The remainder of the land will remain unchanged and predominantly grassed, although some additional plantings such as trees and gardens will be incorporated near memorial gardens and an education space and living chapel.

³⁴ Urbis, 2015: 48.

Figure 19: Coach house with slab hut at rear, c.1952³⁵ Figure 20: Coach house, 2015.



Figure 21: Slab hut, c1952.



Figure 22: Slab hut with collapsed roof, 2015



Figure 23: Front elevation of cottage, c1952.



Figure 24: Front elevation of cottage, 2015.



³⁵ Courtesy Ivor G. Thomas Collection, Campbelltown & Airds Historical Society.

5.0 REVISED ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL AND SIGNIFICANCE

5.1 Preamble

The potential for the survival of archaeological relics in a particular place is significantly affected by activities which may have caused ground disturbance. These processes include the physical development of the site (for example, phases of building construction) and the activities that occurred there. The likelihood for the survival of these relics (i.e. their archaeological potential) is distinct from the archaeological/heritage significance of these remains, should any exist. For example, there may be 'low potential' for certain relics to survive, but if they do, they may be assessed as being of State significance. This is further discussed in Section 5.4.

Identification of the potential historical archaeological resource of the subject site is based on the review and understanding of its land use and development (site formation processes) through historical research, and evaluating whether subsequent actions (either natural or human) may have impacted on evidence of former land use phases.

5.2 Previous Historical Archaeological Assessment (2015)

In 2015, Artefact Heritage prepared an historical archaeological assessment for the subject site. This study was a high-level assessment undertaken as support documentation for the submission of a Concept Plan DA. The key findings of this study provided a baseline for archaeological potential and significance assessment and were incorporated in the Conservation Management Plan for the site.

In light of new specialist research on the historic Varroville cultural landscape, a prudent course of action has been followed and a gaps analysis of the 2015 assessment has been undertaken. Based on the findings of this analysis, a revised assessment of archaeological potential and significance has been prepared and is presented below. This revision has allowed for a 'fine-tuning' of the archaeological resource potential and significance, which will have implications for the archaeological testing program.

For comparative purposes, the 2015 assessment of archaeological potential for the subject properties is summarised as follows:

- The outbuildings complex was identified as having **moderate potential for local and state significant archaeological relics**. The archaeological resources in this area include evidence associated with previous phases of domestic occupation and farming activities, dating from c.1810 – present.
- An area in the southeast of the subject site was identified as having **high potential for archaeological remains of terracing and other landscape features associated with viticultural activities** dating from c.1810 to c.1912.
- The remainder of the subject site (Area 3) was identified as having **low potential** for archaeological remains associated with land clearance, water storage (dams) and former paddock divisions, dating from c.1810 to present. The assessment evaluated these potential remains as having little research potential or archaeological significance.

5.3 Revised Assessment of Archaeological Potential

This section presents a revision of land use phasing (as per the historical context presented in Section 3.0), and archaeological potential for the subject site.

5.3.1 Revised Land Use Phasing

- **Phase 1 (1810-1827): First grants, construction of the first cottage, orcharding, farming and viticultural activities**

This phase is associated with Dr Robert Townson's occupation of Varroville estate from 1810 until his death in 1827. The following activities appear to have occurred on the estate during this period: land clearance, the erection of paddock fencing, contour trenching for vine cultivation, erection of housing for Townson and convict labourers as well as other animal husbandry and agriculture related structures.

- **Phase 2 (1827-1858): Water Management, extension of Varroville house, pastoral, orcharding and farming activities.**

This phase is associated with various owners, but most significantly the tenures of Thomas Wills, Captain Charles Sturt and Post Master James Raymond. Thomas Wills and Sturt both established and extended of a water management and conservation system, the extension of Varroville house, and pastoral, orcharding and farming activities.

- **Phase 3 (1858-1876): Second Varroville house and horse stud**

This period is associated with Judge Alfred Cheeke and his blood stock breeding and establishment of a stud, the construction of the second Varroville house (likely started by Rowe) and additional farming activities.

- **Phase 4 (1876 – 1950): Cottage industries to commercial dairying activities (Smith Bros.)**

This period is associated with an intensification of dairying activities which increased from small cottage industry scale to a larger regional supplier (Smith Bros.).

- **Phase 5 (1950-1990): Jackaman family ownership**

This period is associated with conservation of the existing historical buildings and furthering a local dairy venture.

- **Phase 6 (1990-present): Recent history**

This period is associated with National Trust ownership and challenges around conservation of the estate.

5.3.2 Discussion of the Potential Archaeological Resource by Element

The subject properties contain remnant features of a colonial landscape that are rare in their degree of integrity and intactness, and contribute towards the creation of the character of the place. Some of the historical features identified in this report span multiple land phases, and archaeological evidence may be difficult to attribute to one particular phase or ownership.

Therefore, potential archaeological evidence is discussed below within element categories. The discussions will include identification of archaeological evidence associated with the element, and will also note their location within the proposed Preliminary Staging Plan (Figure 2) to bridge this section with the following section on assessment of potential impacts. Table 4 presents a summary of the potential historical archaeological resource.

5.3.2.1 Colonial Contour Trenching

As discussed in Section 4.2.2, evidence of an extensive contoured landscape exists across the subject site – trenching that is likely to be that of original grantee Dr Robert Townson using assigned

convict labour. The findings of a recent landscape study suggest that the nature of contour trenching would leave in-situ evidence (barring previous excavation in those areas to a depth of 1 metre, which is unlikely), even in those areas where the modification is not visible on the ground. Possible subsurface indicators include earthen ditches (cut and fill lines), soil discolouration in contour alignment (plough marks within subsoils) and use of stone or clay for berm construction.

The subject site has high (and in some areas, moderate) potential to contain archaeological evidence associated with agricultural activities (viticulture and orcharding), the remains may extend across preliminary development **Stages 2, 3, 4 and 5** and include the following:

- Contour trenching slope modification (as discussed above);
- Environmental data/ecological samples;
- Evidence of the formalisation of agricultural precinct boundaries, such as postholes associated with early fence lines;
- Postholes for lightweight structures for agricultural purposes, such as timber shelters; and
- Additional outbuildings not illustrated on early plans.

5.3.2.2 Water Conservation and Management System

Extensive networks of water conservation systems exist across the subject site in the form of dams as well as wells and cisterns. There is potential for some of these water conservation systems to represent colonial-era occupation of Varroville. Some of these potential colonial -era dams appear to have survived in what may be their original configuration (based on aerial photographs, their form and surrounding vegetation) and have the potential to provide archaeological evidence of local significance of this important technological innovation from the period of early colonial settlement.

The subject site has moderate potential for archaeological evidence associated with water conservation and management systems spanning early land use phases within preliminary development **Stages 1, 2, 3 and 4**. Remains may include the following:

- Evidence of land clearance (tree boles, etc);
- Evidence of early dam construction (earthen bunds, timber-lining of sections);
- Dam embankments may contain historical fills including artefactual material;
- Evidence of early watercourse modification associated with natural courses or management of runoff from contoured hillsides (such as earthen ditches with battered sides excavated into underlying soils); and
- Opportunistic dumps of soil and rubbish.

5.3.2.3 Original Carriageway, Track Network and Watercourse Crossings

The former early 19th century carriageway from Campbelltown Road is evident as an alignment depression in the paddocks to the southeast of the homestead and outbuildings precinct. There is high potential for archaeological evidence associated with the carriageway and let-down areas to be present, and some potential for evidence associated with other early tracks, farm road and watercourse crossings across the remainder of preliminary development **Stages 1 - 5**. Remains may include the following:

- Evidence associated with the original carriageway, let-down area, and other property tracks (earlier surface: packed earth, gravel, pavers, cobblestones, stone flagging); and
- Evidence of early watercourse crossings (postholes, stone alignments, earthen bunds with remnant earthenware pipe as culverts, timber remnants).

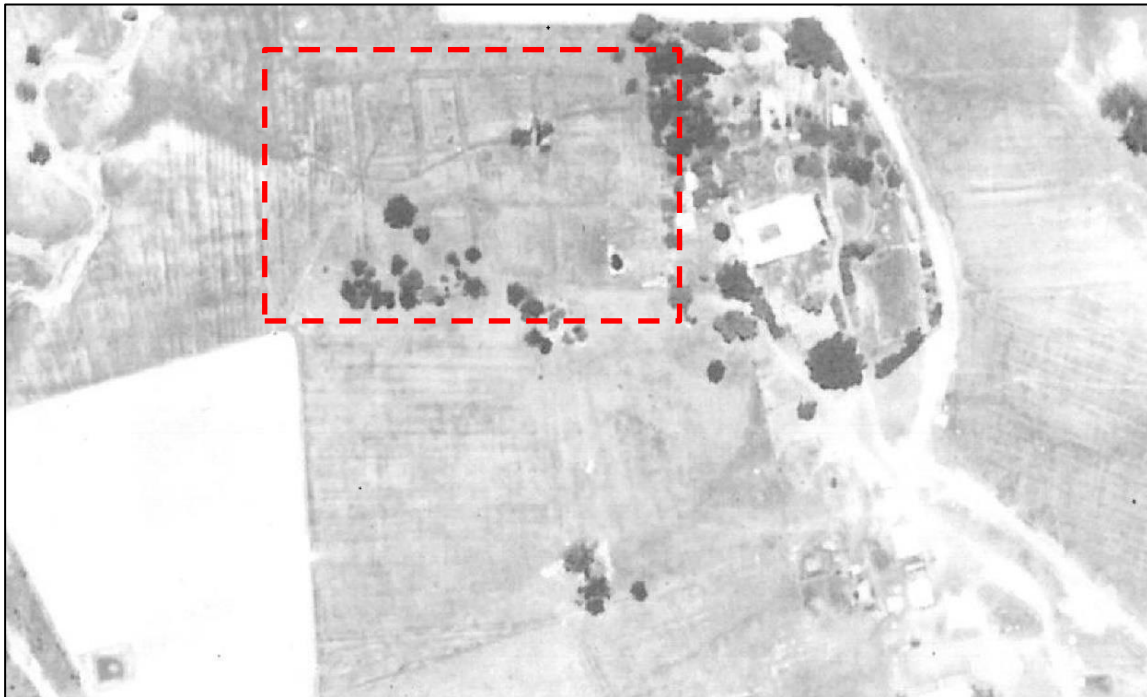
5.3.2.4 Landscape Garden

A major landscape feature characterised by orthogonal compartments is shown on the 1947 aerial photography running down the western slope towards the dam (Figure 25). A recent landscape study suggests that the layout is similar to typical colonial kitchen gardens and orchards of an 'ambitious scale'. Townson is known to have had such a garden which he told Lachlan Macquarie he had installed in the 1810s.³⁶

There is moderate potential for archaeological evidence associated with this feature, which is primarily situated in preliminary development **Stage 2**, although may extend slightly into **Stage 1**. Evidence of this feature has potential to be of Stage significance, if determined that it relates to Townson's original c1810 kitchen garden.

- Evidence of kitchen garden layout (including battered drainage /irrigation ditches, imported soils, plough marks);
- Post holes associated with fence lines;
- Yard scatters or isolated artefacts;
- Evidence of landscaping (such as stone or brick retaining walls, hard surfaces indicating former pathways, stone flagging); and
- Rubbish pits.

Figure 25: 1947 aerial photograph of Varroville with landscape feature to rear of homestead



5.3.2.5 Outbuilding Precinct

Historical sources indicate that the following structures were located on the estate spanning various phases. Potential features from this phase include cottages, accommodation for labourers, a kitchen and other outbuildings, a slaughterhouse, a granary, offices (1812-1817), coach-house, additional farm buildings for cattle and livestock (stables, barn, store, dairy), a piggery with coppers, stock and drafting yards, complete ranges of stabling, landscaped gardens and the original carriageway and entrance.

³⁶ Britton, 2016.

Historical sources do not indicate the precise location of these former structures, although it is likely that they were located in the approximate position of the existing outbuilding precinct as well as the Varroville homestead core area. Therefore, part of preliminary development **Stage 1** has high potential to contain archaeological evidence associated with the outbuilding precinct. These types of remains may include:

- Evidence of former masonry buildings or structures (brick or stone footings, associated deposits);
- Evidence of early services (earthenware drains, and service lines);
- Post holes associated with ephemeral structures such as coops, stalls, stables, stock yard fencing;
- Indicators of natural flooring including areas of compacted earth or paving indicating the location of flooring, occupation or underfloor deposits, hard stands/working surfaces;
- Evidence of landscaping (such as stone or brick retaining walls, garden soils, terracing);
- Structures typically located in rear yards such as privies, wells, cisterns or cesspits; and
- Rubbish pits.

5.3.2.6 Racecourse

Judge Cheeke is attributed with the establishment of a respected horse stud and private racecourse on the property, however sources suggest it may pre-date his ownership and been established as early as 1827. The exact siting of the racecourse is not known, although it may have been located on the flat southeast of Varroville House, near Bunbury Curran Creek – the only area level enough for this use and function. However, the majority of the southeast boundary lands in this area were alienated for the M3 highway and it is likely that ephemeral archaeological remains associated with the racecourse (hard surfaces, postholes for fencing or viewing stands, was removed at that time.

5.3.3 Discussion of Previous Land Disturbance

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

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

From the 1810 to present, the study area has been associated with rural and agricultural related activities. It has however undergone several changes of use, initially being utilised for agriculture and viticulture, then cattle grazing and dairying, and a horse stud. Previous impacts identified within the study area include:

- Vegetation clearance throughout the majority of the subject site from 1810 onwards;
- Construction of 19th to mid-20th century buildings and structures (e.g. c1950 dairy building);
- Later additions to outbuildings such as verandas. Adaptation and modification of earlier outbuildings (e.g. coach house as machinery shed);
- Landscape gardens, tree plantings, ground modification and machining;
- Disturbance to the ground through viticultural practices;
- Continual disturbance of the hill slopes and low lying portions of the study area by horses and other livestock; and
- Recent impacts such as construction of new pens and yards for livestock, vehicle movement, and localised ground modification.

Numerous utility service corridors were identified in the subject site. Services range from electrical conduits, telecommunications wiring, water and sewerage services, and a large network of

stormwater drainage services throughout the site. The installation of these services would have involved ground disturbing works that would have impacted archaeological remains across the subject sites to varying degrees.

5.3.4 Summary Statement of Significance for the Potential Archaeological Resource

In summary, this assessment of archaeological potential is based on readily available information including photographic evidence, previous historic heritage assessments and site visits. The identified historical archaeological resource has the potential to provide material evidence of pastoral activities, farming practices, rural lifeways and living conditions of owners and farm workers during early colonial and later 19th century settlement and occupation.

An archaeological resource within the subject site that could meet the State significance threshold would include:

- Archaeological remains associated with Townson's occupation and the early 19th century development of the Varroville estate (phases 1 and 2), particularly the convict-constructed contour trenched landscape. Substantial and/or intact archaeological remains of potential State significance (research potential) include: evidence of the early estate layout, cottage, farm buildings and structures such as wells and cesspits, drainage systems, intact occupation and underfloor deposits containing artefacts, rubbish pits and well/cesspit backfills containing artefacts.

An archaeological resource within the subject site that could meet the local significance threshold would include:

- Archaeological remains of mid-19th to early 20th century development and use (phases 3 and 4), such as relatively intact remains of former farm buildings and structures, drainage systems, intact occupation and underfloor deposits containing artefacts, rubbish pits and well/cesspit backfills containing artefacts.

Remains associated with land clearance and post holes of former paddock boundaries or fence lines would have little research potential or archaeological significance. Archaeological remains dating from the early-mid 20th century (phase 5) would also have little research potential or archaeological significance. These archaeological features would not meet the threshold for local significance.

Archaeological potential and potential level of significance of the archaeological resource is summarised in Table 4 and illustrated in Figure 26, following Section 5.4 'Revised assessment of archaeological significance'. The significance level of the potential resource cannot be determined until such time that it is identified through excavation and subsequently analysed.

N.B. Regardless of the subject site's level of 'potential' for archaeological remains, a development-wide archaeological excavation permit would be required for any subsurface excavation works in the project area. This would be supported by an updated ARD which would be prepared following archaeological test excavations under an approved excavation permit. The updated ARD would recommend a range of archaeological management strategies which would be informed by the level of archaeological potential and assessed significance of archaeological remains within identified historical land use areas. Archaeological management strategies would include, but is not limited to, Unexpected Finds Procedures, archaeological monitoring and recording, salvage excavations and *in situ* retention.

5.4 Revised Assessment of Archaeological Significance

5.4.1 Assessing Archaeological Significance

Archaeological significance refers to the heritage significance of known or potential archaeological remains. As with other types of heritage items, archaeological remains should be managed in accordance with their significance. In situations where development is proposed, this can influence the degree of impact that may be acceptable or the level of investigation and recording that may be required.

While archaeological remains often form an integral component of the overall significance of a heritage place, it is necessary to assess them independently from above ground and other historic elements. Assessing the heritage value of archaeological remains is made more difficult by the fact that their extent and nature is often unknown. It becomes necessary for judgement to be made on the basis of expected or potential attributes.

The NSW Heritage Manual guidelines provide the framework for the following significance assessment of the study area. These guidelines incorporate the aspects of cultural heritage value identified in the Burra Charter. The Heritage Branch (now Heritage Division) has also issued the guidelines, *Assessing Significance for Historical Archaeological Sites and 'Relics'*. The assessment of historical archaeological sites requires a specialised framework in order to consider the range of values of archaeological site.

The most widely used framework is that developed by Bickford and Sullivan and comprises three key questions which can be used as a guide for assessing the significance of an archaeological site:

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

The emphasis in these three questions is on the need for archaeological research to add to the knowledge of the past in an important way, rather than merely duplicating known information or information that might be more readily available from other sources such as documentary records or oral history. As a result, archaeological significance has usually been addressed in terms of Criterion (e) of the NSW Heritage assessment criteria that is '*the potential to yield information...*'.

The following assessment of archaeological significance for the study area responds to both the Heritage Branch and the Bickford and Sullivan questions.

5.4.2 Revised Significance Assessment of the Potential Archaeological Resource

Determining the significance of heritage items is undertaken by utilising a system of assessment centred on the *Burra Charter* of Australia ICOMOS. The principles of the charter are relevant to the assessment, conservation and management of sites and relics. The assessment of heritage significance is outlined through legislation in the Heritage Act and implemented through the *NSW Heritage Manual* and the *Archaeological Assessment Guidelines*.³⁷ If an item meets one of the seven heritage criteria, and retains the integrity of its key attributes, it can be considered to have heritage significance. The item or potential archaeological site is assessed as having significance to either an

³⁷ NSW Heritage Office 2009; 25-27

area or to NSW (local or State) in relation to its historical, scientific, cultural, archaeological, architectural, natural or aesthetic values.³⁸ As with other types of heritage items, archaeological remains should be managed in accordance with their significance level.

The following table presents an assessment of the potential archaeological resource of the subject site against NSW Significance Criteria.

Table 3: Consideration of the potential archaeological resource of the subject site against NSW heritage assessment criteria

Criteria	Discussion
<p>A – Historical Significance</p> <p>An item is important in the course or pattern of the local area's cultural or natural history.</p>	<p>If an archaeological resource is identified within the subject site that is associated with early land phases, it may have the ability to provide information relating to the development of the Varroville estate and contribute to our knowledge of the development of early agricultural settlement in western Sydney and early nineteenth-century agricultural activities.</p> <p>If a substantial archaeological resource associated with phases 1 and 2 survives, with the ability to answer research questions and contribute to historical knowledge, this resource would be of contributory value to this criterion at a State level.</p> <p>Archaeological evidence of structures, buildings and agricultural activities dating from the late nineteenth century to early twentieth century (phases 3 and 4) would have contributory value to this criterion at a local level.</p>
<p>B – Associative Significance</p> <p>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</p>	<p>Varroville house has strong associations with Dr Robert Townson, who arrived in the colony in 1807 and established himself as a pastoralist and trader. The estate was occupied by explorer, soldier and public servant, Captain Charles Sturt in 1836. He established numerous dams throughout the property and he was known for his water conservation measures. James Raymond, the first Postmaster General of the Colony of New South Wales, purchased the property in 1839. Followed by Judge Alfred Cheeke who established a private racecourse in Varroville.</p> <p>It is unlikely that any potential intact archaeological deposit at the subject site, other than the contour trenching landscape or the identification of the first masonry house (both attributed to Townson), have any direct historical association with any one particular owner of Varroville, or in NSW's cultural or natural history, at local or State level.</p>
<p>C – Aesthetic Significance</p> <p>An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area.</p>	<p>The contour trenching across an extensive part of the Varroville estate (only part of which has left visible ground surface indicators) may date to as early as 1810 and is associated with the original grantee, Dr Robert Townson who used assigned convict labour for the work. This land modification for an early viticultural scheme, which would be among the first of its kind in NSW, demonstrates an aesthetic and technical achievement which would be of contributory value to this criterion at a State level.</p>

³⁸ This section is an extract based on the Heritage Office Assessing Significance for Historical Archaeological Sites and Relics 2009, p.6.

Criteria	Discussion
<p>D – Social Significance</p> <p>An item has strong or special association with a particular community or cultural group in the local area for social, cultural or spiritual reasons</p>	<p>The social significance of the potential archaeological remains of earlier phases of Varroville estate has not been researched, however, it is likely that an archaeological resource has the potential to contribute to the local community's sense of place and provide a connection to local history. Special interest groups within the area, such as local historical societies, may have an interest in potential archaeological remains.</p> <p>This resource is likely to have contributory value to this criterion at a local level.</p>
<p>E – Research Potential</p> <p>An item has potential to yield information that will contribute to an understanding of the local area's cultural or natural history</p>	<p>If intact archaeological deposits are identified at the subject site, it could be associated with any phase of occupation. The subject site has 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 locations of Townson's cottage and house are unknown, it is possible that archaeological remains may provide some insight into the early layout of the estate.</p> <p>Potential archaeological remains dating to early settlement and establishment of Varroville Estate (phases 1 and 2), if found to be substantially intact and extensive, this resource would be of contributory value to this criterion at a State level</p> <p>Archaeological evidence of structures, buildings and agricultural activities dating from the late nineteenth century to early twentieth century (phases 3 and 4) would have contributory value to this criterion at a local level.</p>
<p>F – Rarity</p> <p>An item possesses uncommon, rare or endangered aspects of the local area's cultural or natural history</p>	<p>Few examples of intact colonial agricultural estates are known in the archaeological record and potential archaeological remains dating to early settlement as well as <i>in situ</i> evidence of early and rare agricultural practices (phases 1 and 2), if found to be substantially intact and extensive, would be of contributory value to this criterion at a State level.</p> <p>Archaeological remains associated with phases 3 and 4 would not be considered rare, and would not meet the local significance threshold under this criterion.</p>

Criteria	Discussion
<p>G – Representative</p> <p>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).</p>	<p>The potential archaeological remains within the study area are likely to be representative of remains and deposits associated with landscape modification, pastoral land use and occupation found on rural estates throughout the nineteenth (phases 1 and 2) and into the mid twentieth century (phases 3-4). Archaeological remains associated with phase 1 and 2 would have the potential to demonstrate the principal characteristics associated with early settlement, occupation and land use in the area.</p> <p>Potential archaeological remains dating to early landscape modification, pastoral land use and occupation of the Varroville Estate (phases 1 and 2), if found to be substantially intact and extensive, would be of contributory value to this criterion at a local level</p> <p>Potential archaeological remains dating to early landscape modification, pastoral land use and occupation of the Varroville Estate activities dating from the late nineteenth century to early twentieth century (phases 3 and 4) would have contributory value to this criterion at a local level.</p>

5.4.3 Response to Bickford and Sullivan Questions

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

Much is already known about the historical development of Varroville and specific land use owing to a substantial archival resource. However, there are a number of gaps in the historical record. Any archaeological evidence related to the early development of the estate and the landscape may provide insight into the lives of the former Varroville owners / residents and how they addressed and managed particular challenges on their property over time, particular in terms of water management and road construction.

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

Any archaeological evidence relating to the original layout of the Varroville estate contained within estate would be quite rare amongst Cumberland Plain colonial rural estates. The potential archaeological resource may provide physical evidence that could be used to supplement and test what is known about Varroville and other colonial estates in the Cumberland Plain. The archaeological resource has the potential to enhance knowledge about the early history of Varroville that is not available from the documentary sources. In particular, the archaeological resource could confirm the location of the earlier phases of the main Varroville homestead. The study area could also yield artefacts and other evidence relating to the lives of the occupiers and workers at Varroville that would not be available in other historical sources. The archaeological remains associated with items such as the coach house, carriage way, cisterns, dams and contour trench landscape could provide information about the early use of the outbuildings in relation to the function of Varroville estate. Additionally, the potential archaeological resource could provide information regarding the specific layout, form and function of the early 19th and 20th century agricultural and commercial dairying activities. These resources are also likely to contribute information about the historical development of Varroville estate.

- **Is this knowledge relevant to general question about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?**

Potential archaeological evidence contained within the subject site is likely to contribute to knowledge on a number of questions relevant to major or broader research questions relating to NSW history, such as:

- Peopling Australia – Convict – Activities relating to incarceration, transport, reform, accommodation and working during the convict period in NSW (1788-1850);
- Developing local, regional and national economies – Agriculture – Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes; and
- Developing local, regional and national economies – Environment; cultural landscape – Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings.

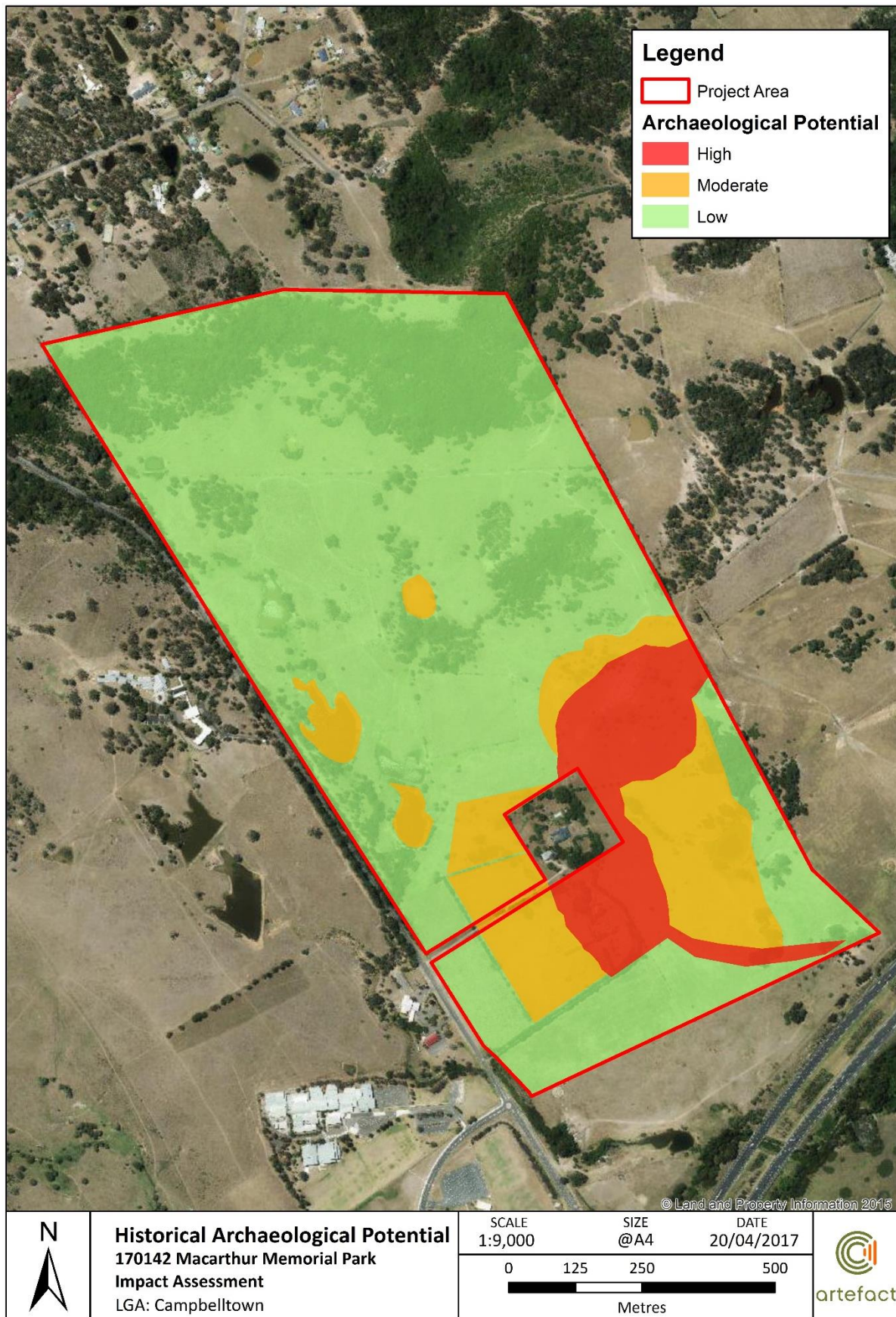
Table 4: Revised summary of historical archaeological potential of the subject site.

Potential archaeological resource	Location	Phase/Date	Processes affecting survival of archaeological resource	Grading of Potential for survival of evidence	Potential archaeological significance
<p>Estate paddocks</p> <ul style="list-style-type: none"> evidence of land clearance such as tree boles and areas of burning post holes associated with paddocks and stockyard/boundary fencing soil deposits containing plough marks and agricultural furrows tracks and former creek crossings (corduroy road or simple bridge), weirs or bunds or stone arrangement). Postholes for lightweight structures for agricultural purposes, such as timber shelters for storage Additional outbuildings not illustrated on early plans. Evidence related to other possible outbuildings 	All stages	Phases 1 – 4 (c1809 – 1950)	<p>Pastoral activities (clearing, grazing, construction of new pens and yards for livestock, vehicle movement) and environmental impacts (fires, floods, erosion) are likely to have impacted on above-ground structural features and likely to have removed sections of earlier internal roads and tracks. Some sections of track may have been 'recycled' for internal vehicle roads which would have impacted on any in situ cart ruts or edge features that may have existed along the alignment.</p> <p>Sub-surface features and deposits such as postholes, dumps, foundations/footings, and wells, cisterns and privies may remain in situ.</p>	Low to moderate	Local (although evidence related to convict labour such as former quarters site may elevate this to State. However - it is more probable that labourer's quarters were located near the existing Outbuildings Precinct, but a different location cannot be ruled out entirely.)
Evidence of dam and ditch construction including timber lining, embankments with historic fills, landform modification	Stage 1, 3 and 4	Phases 1 – 4 (c1809 – 1950)	Some evidence of hand-formed dams (embankments) timber lining may exist, particularly in the less modified of the older dams. Presumably any artefacts would be located in redeposited fills and therefore would have limited research potential	Moderate	Local (phases 1-4) Note: post-1920's dams and ditch construction would not reach the threshold for local or state significance under this criterion.

Potential archaeological resource	Location	Phase/Date	Processes affecting survival of archaeological resource	Grading of Potential for survival of evidence	Potential archaeological significance
Contour trenched agricultural landscape (Viticulture) <ul style="list-style-type: none"> earthen ditches (cut and fill lines), soil discolouration in contour alignment (plough marks within subsoils), use of stone or clay for berm construction. Evidence of the formalisation of agricultural precinct boundaries, such as postholes associated with early fence lines Environmental data/ecological samples 	Stages 2 - 5	Phases 1 – 2 (c1809 – 1858)	Continual disturbance of the hill slopes and low-lying portions of the area by horses and other livestock as well as erosional processes. Sub-surface indicators may exist in areas where ground surface impressions are no longer evident.	Moderate to High	State
Landscape kitchen garden <ul style="list-style-type: none"> Evidence of kitchen garden layout (including battered drainage /irrigation ditches, imported soils, plough marks) Yard scatters or isolated artefacts Evidence of landscaping (such as stone or brick retaining walls, hard surfaces indicating former pathways, stone flagging) Rubbish pits 	Stage 2	Phases 1 – 2 (c1809 – 1858)	The 1947 aerial photograph indicated the impressions of a landscape garden to the rear of the Varroville homestead which may be remnant Townson kitchen. Continuous impacts to the hillslope from human and animal activity as well as erosional processes may have impacted on ground surface indicators, however sub-surface evidence may exist. Impacts from late 20th century use of the site including the construction of new buildings and installation of services may have impacted on remains	Moderate	State
Original carriageway <ul style="list-style-type: none"> Evidence associated with the original carriageway, let-down area, and other property tracks (earlier surface: packed earth, gravel, pavers, cobblestones, stone flagging) 	Stage 4 and 5	Phases 1 – 2 (c1809 – 1858)	Historic roads and tracks were generally unsealed and therefore highly susceptible to erosion and impacts from human activities. Nevertheless, earlier phases of road can often exist, particularly where they have been sealed under later deposits.	High	State

Potential archaeological resource	Location	Phase/Date	Processes affecting survival of archaeological resource	Grading of Potential for survival of evidence	Potential archaeological significance
<p>Outbuilding Precinct</p> <ul style="list-style-type: none"> • structural elements such as post holes associated with former structures such as coops, stalls, stockyard and stables; • structural elements such as post holes, brick or stone footings, hearths associated with the former cottage, outbuildings or similar structures • wells/cisterns • underfloor deposits with artefacts • yard surfaces and deposits with artefacts • rubbish pits containing artefacts and other archaeological material • deposits and backfill containing artefacts within cisterns/wells • evidence of small scale farm industry such as smithying and coopering • drainage channels, brick, stone, ceramic or terracotta • surfacing of former garden paths • road base, drainage and artefacts associated with the carriage way let-down area • soils containing palynological evidence 	Stage 1	Phases 1 – 4 (c1809 – 1950)	Archaeological remains may include structural remains of former buildings and outbuildings and associated subsurface features such as dumps, cesspits, wells, and occupation deposits. Other potential remains include postholes, evidence of landscaped grounds, and paths. Impacts from late 20 th century use of the site including the construction of new buildings and installation of services may have impacted on remains. Subsurface structural features have a greater likelihood of survival than occupation deposits or more ephemeral features such as postholes.	High	Local to State

Figure 26: Revised assessment of archaeological potential (refer to Table 4 which indicates which area of potential may include an archaeological resource of local or State significance)



6.0 IMPACT ASSESSMENT AND MANAGEMENT STRATEGY

This section assesses the key areas of known and/or potentially significant historical archaeological resources within the subject site as identified in Section 5.0 which may be impacted by the project.

6.1 Project Description

Catholic Cemeteries and Crematoria/Catholic Metropolitan Cemeteries Trust proposes to develop cemetery parklands within the study area. The cemetery parklands will consist of 136,000 burial spaces, landscaped public parklands, chapels and condolence rooms, vehicle access roads and pedestrian footpaths.

The proposed use of the site has been divided into five cemetery use stages (Stages 1-5), as shown in Figure 2. Each stage will be gradually enacted over 150 years, with Stages 1 and 2 being developed in the next 5 years and Stages 3-5 being developed for the remainder of this period. At present, the proponent is applying for DA approval for Stages 1-5. Construction activities such as the development of roads and landscaping works will take place across the entire site at varying times. The overall design is shown in Figure 27.

The establishment of the memorial park would result in numerous excavation impacts throughout the study area. These impacts would vary in width and depth and would be associated with the following:

- The establishment of roads and pathways;
- The establishment of a sculpture garden;
- The removal of invasive vegetation such as African olive trees;
- The construction of buildings and car parks;
- Excavations within areas for internments including areas for plaques and headstones (excavation extent for internments is approximately 2.1 metres x 0.7 metres);
- Addition of a lookout platform and path (proposed design shown in Figure 32); and
- Revegetation of areas including lawns, trees, vineyards and internment hedges.

The establishment of the memorial park will also include the partial retention of an original carriageway, a portion of the well-preserved vineyard contour trenches and adaptive re-use/interpretation of structures in the Outbuildings Precinct. This would involve:

- Retention of part of the existing well-preserved vineyard contour trenches and partial reinstatement of vineyards in south-west portion of the study area (shown in Figure 27, Figure 28 and in detail in Figure 29);
- A portion of the contoured trenches to the south of the Outbuildings Precinct would be removed but interpreted through the grave/path alignment;
- Adaptive re-use of structures in the Outbuildings Precinct would involve landscaping works and the addition of underground services (shown in Figure 27 and Figure 30);
- Retention and restoration of the barn and cottage for use as interpretation and teaching space;
- Removal of the dairy building and associated sheds;
- Addition of a toilet block within the dairy building footprint (shown in Figure 27 and Figure 30);
- Interpretation of the dairy building sheds through low plantings and paving (shown in Figure 27 and Figure 30);

- Addition of groves comprising of small distinctive trees, gardens and platform seating in a grid layout to reflect previous plantings and cultivation at the site (species to be informed by archaeological excavations and subsequent pollen analysis), shown in Figure 27 and Figure 30; and
- An interpretive path and boardwalk (including a heritage interpretation) along and around the original carriageway route would be incorporated into the site (shown in Figure 31).

Figure 27. Proposed design and impacts for Macarthur Memorial Park. Source. Florence Jaquet, Landscape Architect.



Figure 28. Location of contoured trench plan for retention, interpretation and re-use (outlined in red) regarding the overall project site. Source. Florence Jaquet, Landscape Architect.



Figure 29. Proposed design plan for retention and reinstatement of well-preserved vineyard contour trenches and vineyards. Source. Florence Jaquet, Landscape Architect.



Figure 30. Proposed design plan for outbuildings precinct. Source. Florence Jaquet, Landscape Architect.

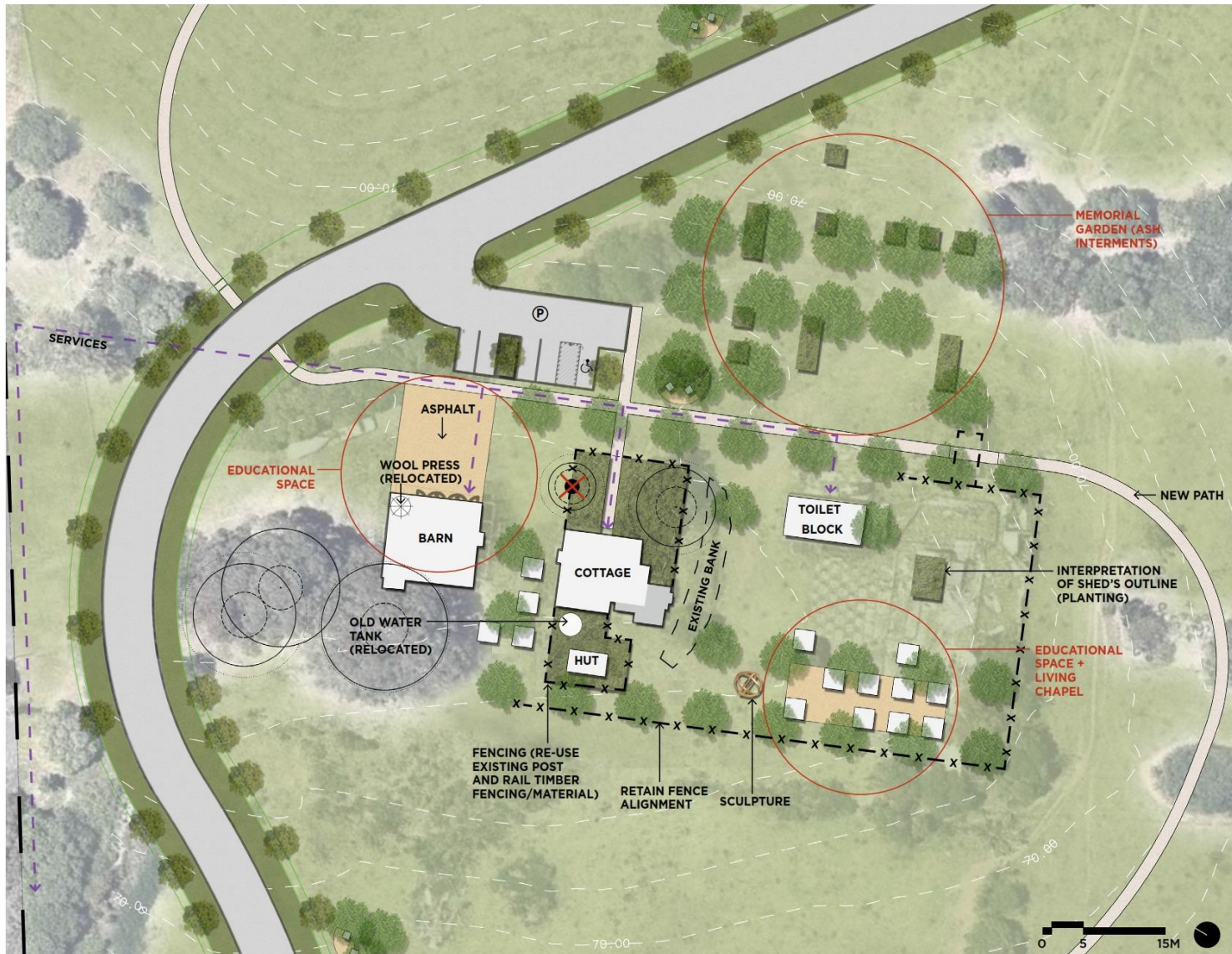


Figure 31. Proposed design plan for carriageway interpretation. Source. Florence Jaquet, Landscape Architect.

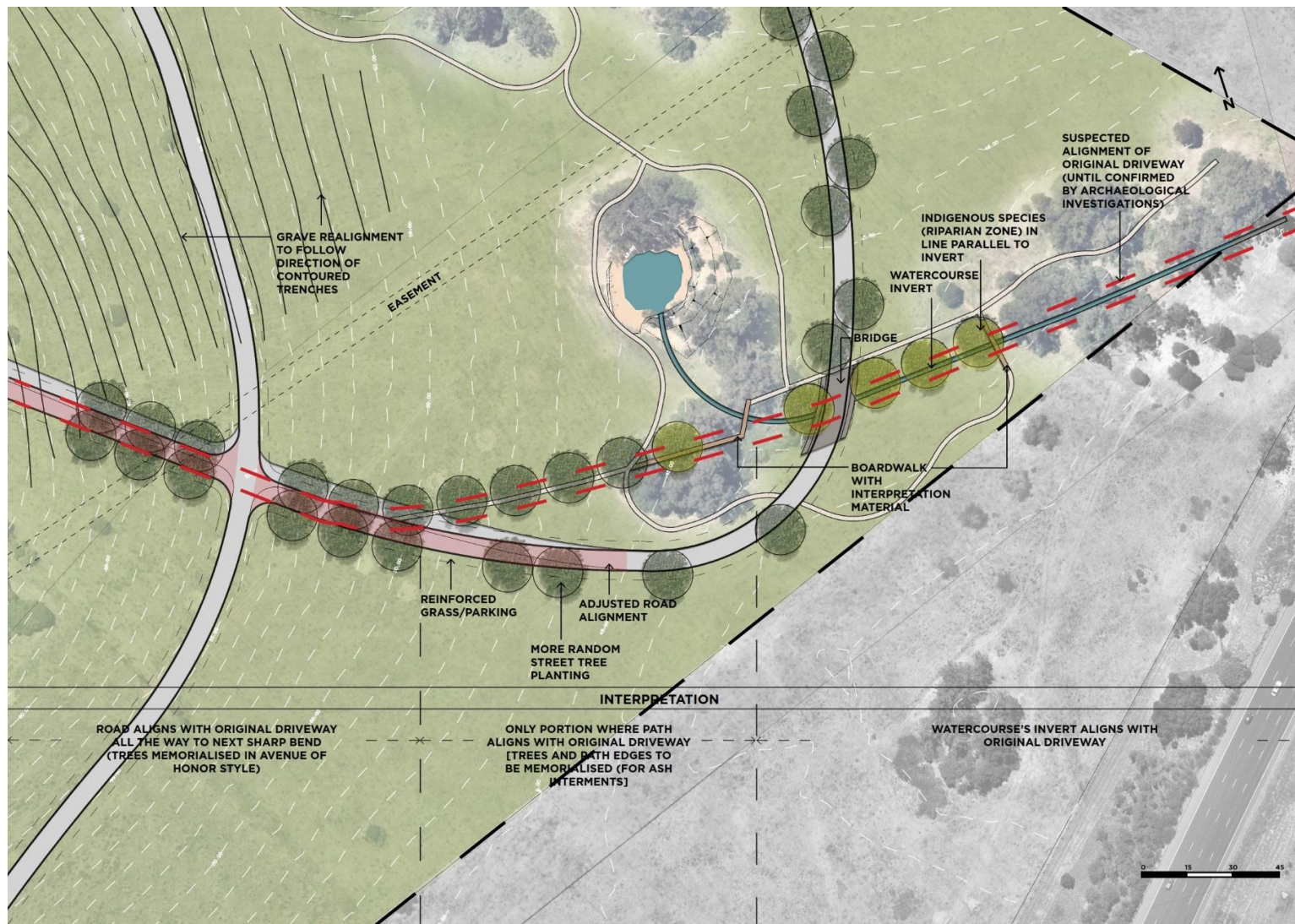
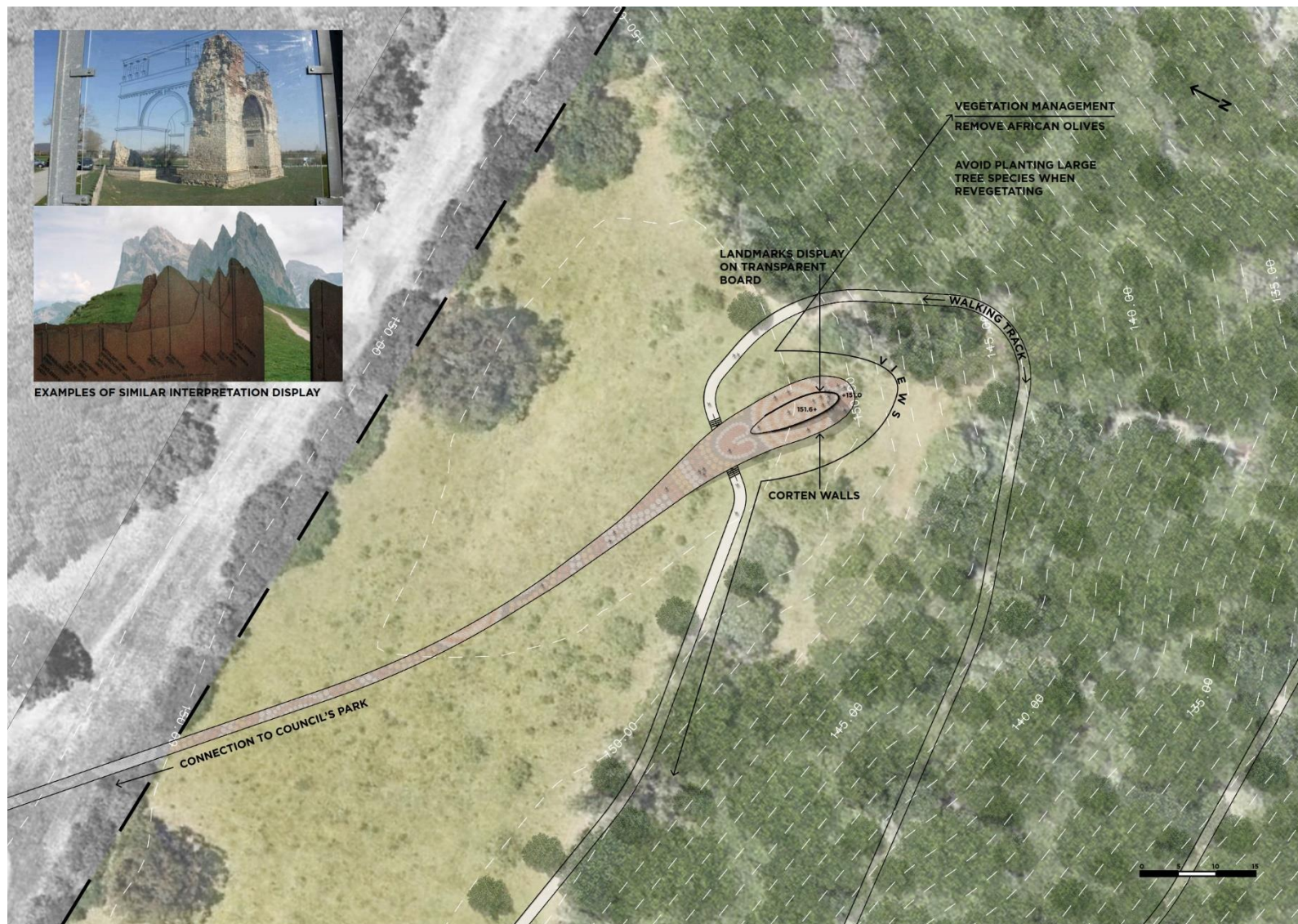


Figure 32. Proposed design plan for lookout platform and paths. Source. Florence Jaquet, Landscape Architect.



6.2 Assessment of Impacts

6.2.1 Stage-Specific Impacts

Table 5: Potential impacts to the historical archaeological resource – Stage 1

Stage 1	
Proposed Use	<p>Burial area to include:</p> <p>Paths, lookout platform, roads, headstones, memorial headstones, memorial plaques, sculptures, boardwalks, general landscaping, dam maintenance and upgrading</p> <p>Outbuildings precinct to include:</p> <p>Restoration and adaptive re-use of the barn and cottage, retention and stabilisation of the slab hut, removal of the dairy building and sheds, heritage interpretation, service trenches, paths and general landscaping.</p>
Listings	<p>No statutory listings apply.</p> <p>N.B. In July 2017, the OEH provided notice of a proposal to extend the SHR curtilage of Varroville House (Draft Plan no. 1798). It is expected that should the expanded curtilage be approved, changes to the proposed design and subsequent proposed mitigation measures and excavation permits may be required.</p>
Archaeological potential	<ul style="list-style-type: none"> • High – Outbuildings Precinct • Moderate – Dams 2, 4 and 6 • Low - remainder of paddocks
Potential significance	<p>Potential local significance (Criteria A) within areas of low to moderate potential</p> <p>Potential State significance (Criteria A, C, E, F) within areas of moderate potential</p>
Mitigation and recommendations	<ul style="list-style-type: none"> • An archaeological testing program and/or archaeological monitoring within the outbuildings precinct and Dams 2, 4 and 6 would be implemented under an appropriate excavation permit in accordance with an approved ARD. The ARD and permit application would be prepared and approved prior to works commencing. • The archaeological testing program and/or archaeological monitoring would inform future archaeological management and heritage interpretation across the site. • If highly intact State significant archaeological remains were identified during the testing program and or archaeological monitoring, the excavation permit may condition in situ retention. Should impacts to identified State significant archaeology be unavoidable, documentation supporting the excavation permit would need to include thorough justification for impacts and a methodology for comprehensive salvage and recording. An interpretation strategy may also be required. • Post-excavation reporting, artefact analysis and relics conservation would be required if relics are identified. • Unexpected Finds Procedure in areas of low archaeological potential. • Heritage induction for all contractors prior to works commencing.
Conclusions	<ul style="list-style-type: none"> • Archaeological testing and/or archaeological monitoring required in areas of moderate and high potential • Redesign of some elements may be required to avoid impact to significant relics or sites

Table 6: Potential impacts to the historical archaeological resource – Stage 2

Stage 2	
Proposed Use	<p>Open Public Space:</p> <p>Roads, paths, general landscaping</p>
Listings	<p>CLEP 2015 listing (Item No. I105)</p> <p>N.B. In July 2017, the OEH provided notice of a proposal to extend the SHR curtilage of Varroville House (Draft Plan no. 1798). It is expected that should the expanded curtilage be approved, changes to the proposed design and subsequent proposed mitigation measures and excavation permits may be required.</p>
Archaeological potential	<ul style="list-style-type: none"> • Moderate - identified kitchen garden area, areas of former contour trenching • Low -remainder of paddocks
Potential significance	<p>Potential State significance (Criteria A, C, E, F) within areas of moderate potential</p>
Mitigation and recommendations	<ul style="list-style-type: none"> • An archaeological testing program and/or archaeological monitoring within the former kitchen garden area would be implemented under an appropriate excavation permit in accordance with an approved ARD. The ARD and permit application would be prepared and approved prior to works commencing. • The archaeological testing program and/or archaeological monitoring would inform future archaeological management and heritage interpretation across the site. • If highly intact State significant archaeological remains were identified during the testing program and or archaeological monitoring, the excavation permit may condition in situ retention. Should impacts to identified State significant archaeology be unavoidable, documentation supporting the excavation permit would need to include thorough justification for impacts and a methodology for comprehensive salvage and recording. An interpretation strategy may also be required. • Post-excavation reporting, artefact analysis and relics conservation would be required if relics are identified. • Unexpected Finds Procedure in areas of low archaeological potential. • Heritage induction for all contractors prior to works commencing.
Conclusion	<ul style="list-style-type: none"> • Archaeological testing and/or archaeological monitoring required in areas of moderate and high potential • Redesign of some elements may be required to avoid impact to significant relics or sites

Table 7: Potential impacts to the historical archaeological resource – Stage 3

Stage 3	
Proposed Use	<p>Burial area to include:</p> <p>Paths, roads, headstones, memorial headstones, memorial plaques, sculptures, boardwalks, general landscaping</p> <p>Vineyard contour retention and reinstatement to include:</p> <p>Partial replanting of vines, addition of memorial plaques and removal of African olive trees</p>
Listings	<p>CLEP 2015 listing (Item No. I105)</p> <p>N.B. In July 2017, the OEH provided notice of a proposal to extend the SHR curtilage of Varroville House (Draft Plan no. 1798). It is expected that should the expanded curtilage be approved, changes to the proposed design and subsequent proposed mitigation measures and excavation permits may be required.</p>
Archaeological potential	<ul style="list-style-type: none"> • High & Moderate – colonial contoured trench landscape • Low – remainder of paddocks
Potential significance	<p>Potential State significance (Criteria A, C, E, F) within areas of high and moderate potential</p>
Mitigation and recommendations	<ul style="list-style-type: none"> • An archaeological testing program and/or archaeological monitoring within the colonial contoured trench landscape would be implemented under an appropriate excavation permit in accordance with an approved ARD. The ARD and permit application would be prepared and approved prior to works commencing. • The archaeological testing program and/or archaeological monitoring would inform future archaeological management and heritage interpretation across the site. • If highly intact State significant archaeological remains were identified during the testing program and or archaeological monitoring, the excavation permit may condition in situ retention. Should impacts to identified State significant archaeology be unavoidable, documentation supporting the excavation permit would need to include thorough justification for impacts and a methodology for comprehensive salvage and recording. An interpretation strategy may also be required. • Post-excavation reporting, artefact analysis and relics conservation would be required if relics are identified. • Unexpected Finds Procedure in areas of low archaeological potential. • Heritage induction for all contractors prior to works commencing.
Conclusions	<ul style="list-style-type: none"> • Archaeological testing and/or archaeological monitoring required in areas of moderate and high potential • Redesign of some elements may be required to avoid impact to significant relics or sites

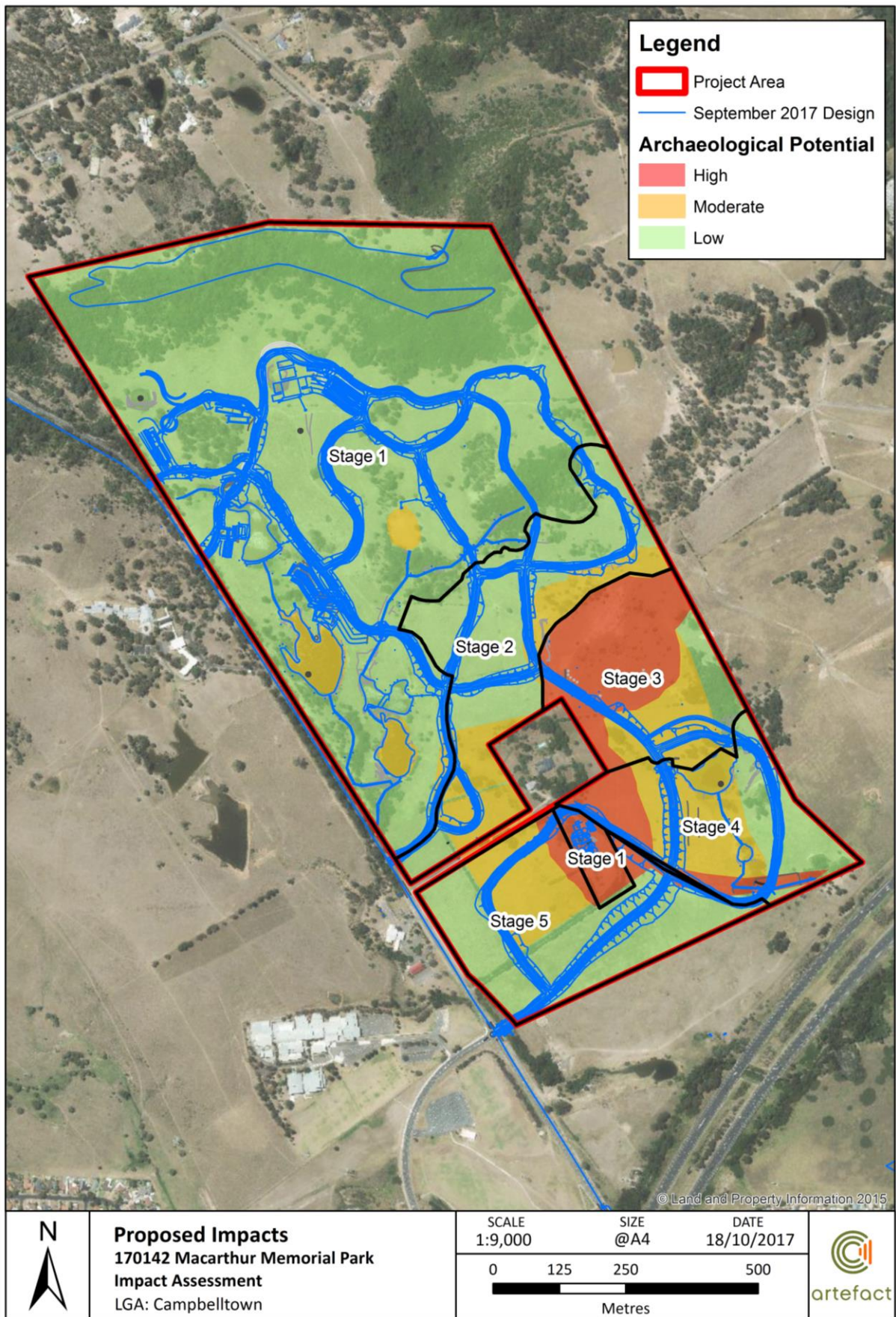
Table 8: Potential impacts to the historical archaeological resource – Stage 4

Stage 4	
Proposed Use	<p>Burial area to include:</p> <p>Paths, roads, memorial plaques, general landscaping</p>
Listings	<p>CLEP 2015 listing (Item No. I105)</p> <p>N. B. In July 2017, the Office of Environment and Heritage (OEH) provided notice of a proposal to extend the SHR curtilage of Varroville House (Draft Plan no. 1798). It is expected that should the expanded curtilage be approved, changes to the proposed design and subsequent proposed mitigation measures and excavation permits may be required.</p>
Archaeological potential	<ul style="list-style-type: none"> • High – Original carriageway • Moderate – Dams 10 & 11, colonial contoured trench landscape • Low – remainder of paddocks
Potential significance	<p>Potential State significance (Criteria A, C, E, F) within areas of high and moderate potential</p>
Mitigation and recommendations	<ul style="list-style-type: none"> • An archaeological testing program and/or archaeological monitoring within the original carriageway and colonial contoured trench landscape would be implemented under an appropriate excavation permit in accordance with an approved ARD. The ARD and permit application would be prepared and approved prior to works commencing. • The archaeological testing program and/or archaeological monitoring would inform future archaeological management and heritage interpretation across the site. • If highly intact State significant archaeological remains were identified during the testing program and or archaeological monitoring, the excavation permit may condition in situ retention. Should impacts to identified State significant archaeology be unavoidable, documentation supporting the excavation permit would need to include thorough justification for impacts and a methodology for comprehensive salvage and recording. An interpretation strategy may also be required. • Post-excavation reporting, artefact analysis and relics conservation would be required if relics are identified. • Unexpected Finds Procedure in areas of low archaeological potential. • Heritage induction for all contractors prior to works commencing.
Conclusions	<ul style="list-style-type: none"> • Archaeological testing and/or archaeological monitoring required in areas of moderate and high potential • Redesign of some elements may be required to avoid impact to significant relics or sites

Table 9: Potential impacts to the historical archaeological resource – Stage 5

Stage 5	
Proposed Use	Burial area to include: Paths, roads, memorial plaques, carriageway interpretation and general landscaping
Listings	<p>CLEP 2015 listing (Item No. I105)</p> <p>N. B. In July 2017, the Office of Environment and Heritage (OEH) provided notice of a proposal to extend the SHR curtilage of Varroville House (Draft Plan no. 1798). It is expected that should the expanded curtilage be approved, changes to the proposed design and subsequent proposed mitigation measures and excavation permits may be required.</p>
Archaeological potential	<ul style="list-style-type: none"> Moderate – Colonial contoured trench landscape Low – remainder of paddocks
Potential significance	Potential State significance (Criteria A, C, E, F) within areas of high and moderate potential
Mitigation and recommendations	<ul style="list-style-type: none"> An archaeological testing program and/or archaeological monitoring within the colonial contoured trench landscape would be implemented under an appropriate excavation permit in accordance with an approved ARD. The ARD and permit application would be prepared and approved prior to works commencing. The archaeological testing program and/or archaeological monitoring would inform future archaeological management and heritage interpretation across the site. If highly intact State significant archaeological remains were identified during the testing program and or archaeological monitoring, the excavation permit may condition in situ retention. Should impacts to identified State significant archaeology be unavoidable, documentation supporting the excavation permit would need to include thorough justification for impacts and a methodology for comprehensive salvage and recording. An interpretation strategy may also be required. Post-excavation reporting, artefact analysis and relics conservation would be required if relics are identified. Unexpected Finds Procedure in areas of low archaeological potential. Heritage induction for all contractors prior to works commencing.
Conclusions	<ul style="list-style-type: none"> Archaeological testing and/or archaeological monitoring required in areas of moderate and high potential Redesign of some elements may be required to avoid impact to significant relics or sites

Figure 33. Proposed impacts to potential archaeological remains. Base map source. SixMaps.



6.3 Archaeological Management Strategy

The study area has potential for archaeological relics of both local and state significance. Depending on their nature and extent, archaeological relics of early to mid-19th century occupation and use of the Varroville estate would be of State significance. Similar archaeological remains dating to the later 19th and early 20th century would be of local significance. Any ground disturbance with potential to impact archaeological relics within this area would require approval from the NSW Heritage Division.

The potential archaeological resource varies across the stages of the proposed development (Figure 21) and the management strategies will be tailored accordingly. 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 and appropriate approval from the NSW Heritage Division;
- Investigate and record archaeological resources in accordance with best practice and NSW Heritage Division guidelines;
- Conservation – State significant archaeological resource should be conserved in situ; and
- Interpretation – results of any archaeological investigations and archaeological remains should be interpreted within the new development.

6.3.1 Archaeological Approvals and Methodologies

Archaeological investigation can include testing, monitoring and recording, and salvage excavation. All archaeological investigations should be guided by an Archaeological Research Design (ARD) and approval from the NSW Heritage Division would be required for activities that disturb or impact archaeological relics, or have the potential to do so.

- Section 139(4) Exception – is required for archaeological test excavation to verify the presence of local or state significant relics without removing or impacting them;
- Section 140 Excavation Permit – is required for archaeological excavation and activities which disturb and impact local or state significant archaeological relics;
- Section 60 Application – is required for archaeological excavations in, or activities which disturb and impact, sites listed on the SHR or affected by an interim heritage order;
- Section 57 Exemption – can be requested for certain activities which would otherwise require approval under the NSW Heritage Act for impacts to sites listed on the SHR. There are two types of exemptions which can apply to a heritage item listed on the SHR:
 - **1. Standard exemption:** can be applied to all items on the SHR. Typical activities that are exempt include excavations in areas considered to have little or no archaeological potential or research potential or will have a minor impact on archaeological relics including the testing of land to verify the existence of relics without destroying or removing them; and
 - **2. Site specific exemption:** can be applied to a particular heritage item that has gazetted site specific exemptions approved by the Minister on the recommendation of the Heritage Council.

6.3.2 Stages 1 – 5

Land within Stages 1 – 5 has low to high potential for archaeological remains associated with early phases of the establishment of Varroville estate, including paddocks, dams, Outbuildings Precinct, former carriageway, former kitchen garden and contoured landscape associated with early viticultural ventures. To manage the potential archaeological resource in this area the following should be undertaken:

- Applications for appropriate archaeological excavation permits, excavation exceptions or exemptions (dependant on the statutory listing of the area at the time the application is made) would be prepared for the NSW Heritage Division for areas where subsurface impacts are proposed. Site wide permits may be required. As excavation permits remain valid for 5 years only, they would need to be updated throughout the 150-year development process;
- An Archaeological Research Design (ARD) would be prepared to accompany all excavation, excavation exception or exemption permit applications. The ARD would detail the archaeological methods to be employed, and research questions to be adopted, during excavation works in development Stages 1-5.
- The ARD would nominate an Excavation Director who meets the NSW Heritage Council requirements for the removal of state significant archaeological remains;
- The ARD would include provisions for archaeobotanical analysis in the subject site, primarily within areas associated early viticulture ventures (contoured terracing) and the kitchen garden. Results of the analysis would feed into future landscaping designs for the proposed reinstatement of vineyards and historical plantings;
- The results of archaeological test excavations, monitoring and/or salvage excavations would inform future designs and Heritage Interpretation Strategies and Plans. Appropriate archaeological management and conservation for the project would then be recommended; and
- If the nominated SHR curtilage extension for Varroville (Draft No. 1798) is approved by the Minister for Heritage, this HAIA would be updated to reflect any subsequent changes to excavation permit requirements or mitigation measures.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

- The subject site is partially located within the Campbelltown LEP (2015) listed Varroville – Varroville Homestead Group (Item ID I105) and presently located outside of the SHR listed curtilage for Varroville (Item ID 00737);
- In July 2017, the Office of Environment and Heritage (OEH) provided notice of a proposal to extend the SHR curtilage of Varroville House (Draft Plan no. 1798). It is expected that should the expanded curtilage be approved, changes to the proposed design and subsequent proposed mitigation measures and excavation permits may be required;
- The subject site was once part of the Varroville estate dating from the early 19th century and contains a complex of outbuildings in the southwest. The estate has been associated with various farming activities, viticulture, orcharding, stock breeding, a horse stud, pasture and dairying.
- Project works may impact archaeological resources assessed as having the potential to contain local or State significance across preliminary development Stages 1 – 5. Excavation works include, but are not limited to: impacts to dams, paddocks, contoured trenches, the Outbuilding's Precinct structures/landscapes and the construction of service/utility trenches, roads, paths and buildings;
- As the subject site has been assessed as having the potential to contain State significant archaeological relics associated with the Varroville Estate, and the proposed works may impact on these remains, a program of archaeological investigation should be undertaken prior to works commencing;
- Archaeological investigation would include test excavation, archaeological monitoring and potential salvage excavation. This program would identify the extent and nature of potential archaeological relics or deposits within the subject site, inform future detailed designs and prioritise the conservation of State significant remains; and
- Findings from test excavations, archaeological monitoring and potential salvage excavations would inform future methodologies for archaeological management and interpretation.

7.2 Recommendations

- Applications for appropriate archaeological excavation permits, excavation exceptions or exemptions (dependant on the statutory listing of the area at the time the application is made) would be prepared for the NSW Heritage Division for areas where subsurface impacts are proposed. Site wide permits may be required. As excavation permits remain valid for 5 years only, they would need to be updated throughout the 150-year development process;
- An Archaeological Research Design (ARD) would be prepared to accompany all excavation, excavation exception or exemption permit applications. The ARD would detail the archaeological methods to be employed, and research questions to be adopted, during excavation works in development Stages 1-5.

- The ARD would nominate an Excavation Director who meets the NSW Heritage Council requirements for the removal of state significant archaeological remains;
- The ARD would include provisions for archaeobotanical analysis in the subject site, primarily within areas associated early viticulture ventures (contoured terracing) and the kitchen garden. Results of the analysis would feed into future landscaping designs for the proposed reinstatement of vineyards and historical plantings;
- The results of archaeological test excavations, monitoring and/or salvage excavations would inform future designs and Heritage Interpretation Strategies and Plans. Appropriate archaeological management and conservation for the project would then be recommended; and
- If the nominated SHR curtilage extension for Varroville (Draft No. 1798) is approved by the Minister for Heritage, this HAIA would be updated to reflect any subsequent changes to excavation permit requirements or mitigation measures.

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