



**Mount Gilead Stage 2  
Historical Archaeological Assessment**

**Report prepared for Lendlease  
October 2021**

**Mount Gilead  
Stage 2**

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## Report Register

The following report register documents the development and issue of the report entitled Mount Gilead Stage 2—Historical Archaeological Assessment, undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job Number	Issue Number	Notes/Description	Issue Date
19-0457C	1	Draft Report	July 2021
19-0547C	2	Final Report	October 2021

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# Introduction

# 1 Introduction

## 1.1 Project Overview

As part of Mount Gilead Stage 2, Lendlease Pty Ltd (Lendlease) is proposing to deliver lots for residential housing, retail, community activities, parks, and conservation. Some of the proposed works will be undertaken abutting two State Heritage Register (SHR) items. The Upper Canal System (Pheasants Nest Weir to Prospect Reservoir—SHR No. 01373); and the Mount Gilead Estate (SHR No. 02020). The study area also incorporates Glen Lorne, a locally listed landscape and archaeological site (Campbelltown Local Environment Plan (LEP), Item No. I55). A further item on the SHR is located to the immediate south of the study area, buffered by a single lot; Beulah (SHR No. 00368). Beulah is associated with the locally listed Humewood Forest (LEP, Item No I53).

GML Heritage (GML) has been engaged by Lendlease to prepare a Historical Archaeological Assessment (HAA). This assessment focuses on historical archaeology and historical landscapes, a separate assessment has been prepared for Aboriginal cultural heritage. The historical assessment is being undertaken to inform precinct planning for the future development. The primary objective for this report is to aid Lendlease during precinct planning by considering historical heritage (both listed and unlisted) as associated with the study area. The aim is to recognise and incorporate key heritage values into the proposed subdivision layout. This assessment considers both tangible and intangible heritage values to reflect the complex non-Aboriginal history of the area.

## 1.2 Site Location

Mount Gilead Stage 2 is located within the Campbelltown local government area (LGA) and Menangle parish, and covers the following Lots/DP:

- Lot 2 / DP249393
- Lot 2 / DP603374
- Lot 2 / DP603674
- Lot 1 / DP603675
- Lot 1 / DP622362
- Lot 1 / DP1218887
- Lot 2 / DP1218887
- Lot 5 / DP1240836

The Mount Gilead Stage 2 site boundary is primarily located on the western side of Appin Road. The site extends westward to be bounded by the Nepean River. Two additional areas adjacent to and on the eastern side of Appin Road are also part of the broader study area, but will be subject to ecological conservation and Strategy Biodiversity Agreements eg no development action will occur. Lot 2 / DP603374 is connected with the Glen Lorne archaeological site.

## 1.3 Proposed Development

Mount Gilead Stage 2 is part of Lendlease's larger Mount Gilead Development. Stage 1, known as Figtree Hill, is located directly to the east. Mt Gilead Stage 2 will culminate in land use rezoning for the purposes of residential development and ecological conservation.

## 1.4 Legislative Requirements

In NSW, archaeological remains (referred to as 'objects' or 'relics') are afforded statutory protection under the following Acts and instruments:

- the *Heritage Act 1977* (NSW) (Heritage Act);
- the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act); and
- Local Environmental Plans (LEPs).

### 1.4.1 Heritage Act

The Heritage Act affords automatic statutory protection to 'relics'. The Act defines 'relic' as any deposit, object or material evidence that:

- a) *Relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and*
- b) *Is of State or local heritage significance*

Sections 139–145 of the Heritage Act prevent the excavation of a relic, except in accordance with an excavation permit (or an exemption from the need for a permit) issued by the Heritage Council of NSW.

Section 139[1] of the Heritage Act states that:

*A person must not disturb or excavate 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.*

An application under Section 140 of the Heritage Act may be required for proposed work that may result in the disturbance or excavation of land that is likely to contain significant archaeological remains.

### 1.4.2 Environmental Planning and Assessment Act 1979 (NSW)

The EP&A Act is administered by the NSW Department of Planning and Environment and provides for the protection of archaeological sites through listings on LEPs, which guide local councils in making planning decisions.

The EP&A Act provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items through inclusion in schedules to planning instruments, such as LEPs or Regional Environmental Plans (REPs). Heritage items in planning instruments are usually historic sites but can include Aboriginal objects and places. The EPA Act requires that appropriate measures be taken for the management of the potential

archaeological resource by means consistent with practices and standards adopted in meeting the requirements of the NPW Act.

Mount Gilead Stage 2 is in the Campbelltown City Council LGA and comes under the *Campbelltown Local Environmental Plan 2015* (Campbelltown LEP 2015). There are three items within the Mount Gilead Stage 2 site boundary currently listed as heritage items (Table 1.1).

**Table 1.1** Heritage Items within the Mount Gilead Stage 2 Site Boundary. (Source: Campbelltown LEP 2015)

LEP	Schedule	Item	Item Number
Campbelltown 2015	Local	Glen Lorne – Landscape and Archaeological site	I55

**Table 1.2** Heritage Items adjacent to the Mount Gilead Stage 2 Site Boundary. (Source: Campbelltown LEP 2015)

LEP	Schedule	Item	Item Number
Campbelltown 2015	State	Upper Canal System (Pheasants Nest Weir to Prospect Reservoir)	01373
Campbelltown 2015	State	Mount Gilead	02020
Campbelltown 2015	State	Beulah	00368
Campbelltown 2015	Local	Humewood Forest	I53
None	Local	Hillsborough (archaeology site)	Not listed

Further locally listed heritage items are positioned near the study area, but do not have a direct connection or interaction with the history of this property.

## 1.5 Purpose of this Report

The aims of this report are to:

- support and summarise available historical research to create a site history;
- prepare an assessment of the potential archaeological resource contained within the site;
- prepare an assessment of the significance of potential historical archaeological resources that have been identified;
- identify recommended measures for the management of any potential historical archaeological resources; and
- prepare a stand-alone report suitable for submission to relevant statutory authorities (including Campbelltown City Council and the Heritage Division, Department of Planning Industry and Environment).



## 1.6 Methodology and Terminology

This report has been prepared in accordance with the following documents and best practice guidelines:

- *NSW Heritage Manual*, 'Archaeological Assessments' (NSW Heritage Office 1996); <sup>1</sup>
- *Assessing Significance for Historical Archaeological Sites and Relics* (NSW Heritage Branch 2009);<sup>2</sup> and
- *The Australian ICOMOS Burra Charter, 2013* (the Burra Charter).<sup>3</sup>

## 1.7 Limitations

This report assesses the potential historical archaeological resources of the Mount Gilead Stage 2 site only. These are considered within the historical landscape of the wider setting. This report does not include an assessment of Aboriginal heritage sites or values. However, we have prepared this report in conjunction with an Aboriginal heritage assessment for the Stage 2 area. Both reports should be considered when undertaking planning for the subdivision layout.

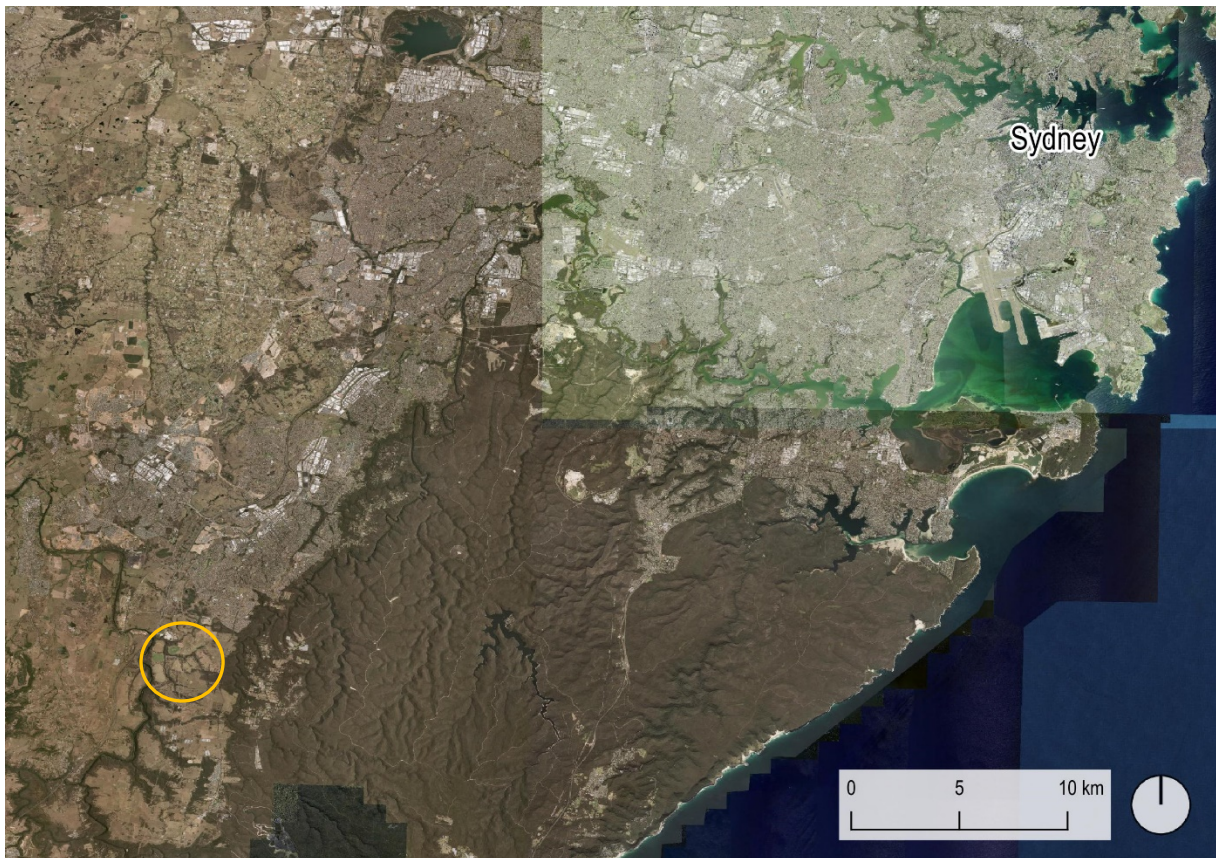
No physical archaeological investigation of the site has been undertaken as part of this study. No geotechnical information has been considered as part of this study.

## 1.8 Author Identification

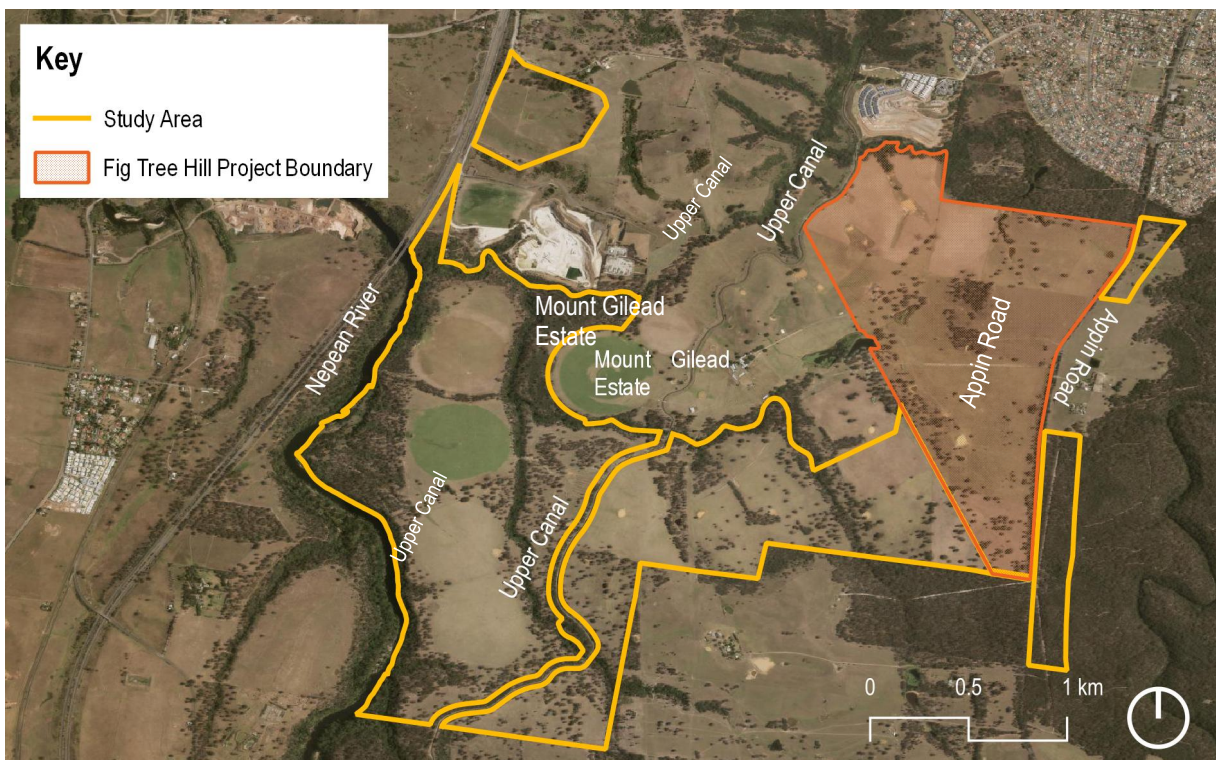
This project has been undertaken by the following people. Each person's role and affiliations are detailed.

**Table 1.3** Investigators and Contributors.

Person	Affiliation	Role
Dr Tim Owen	GML	Project Director and author
Dr Nadia Iacono	GML	Project Manager and reviewer
Hannah Morris	GML	Archaeologist and author
Angela So	GML	Senior Heritage Consultant and author
Ari Anderson	GML	Heritage Special Advisor and author



**Figure 1.1** Wider context of the Mount Gilead Stage 2 site. The area is west of the Nepean River, and east from the Georges River, in southwest Sydney. (Source: Google Maps with GML overlay, 2020)



**Figure 1.2** Local context of the Mount Gilead Stage 2 site. (Source: Nearmaps with GML overlay, 2021)

## 1.9 Endnotes

- <sup>1</sup> Heritage Office and Department of Urban Affairs & Planning 1996, *NSW Heritage Manual*, Department of Urban Affairs and Planning, Sydney.
- <sup>2</sup> Heritage Branch, December 2009, *Assessing Significance for Historical Archaeological Sites and 'Relics'*, Heritage Branch of the Department of Planning, Sydney.
- <sup>3</sup> Australia ICOMOS Inc, *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013*, Australia ICOMOS Inc, Burwood, VIC.

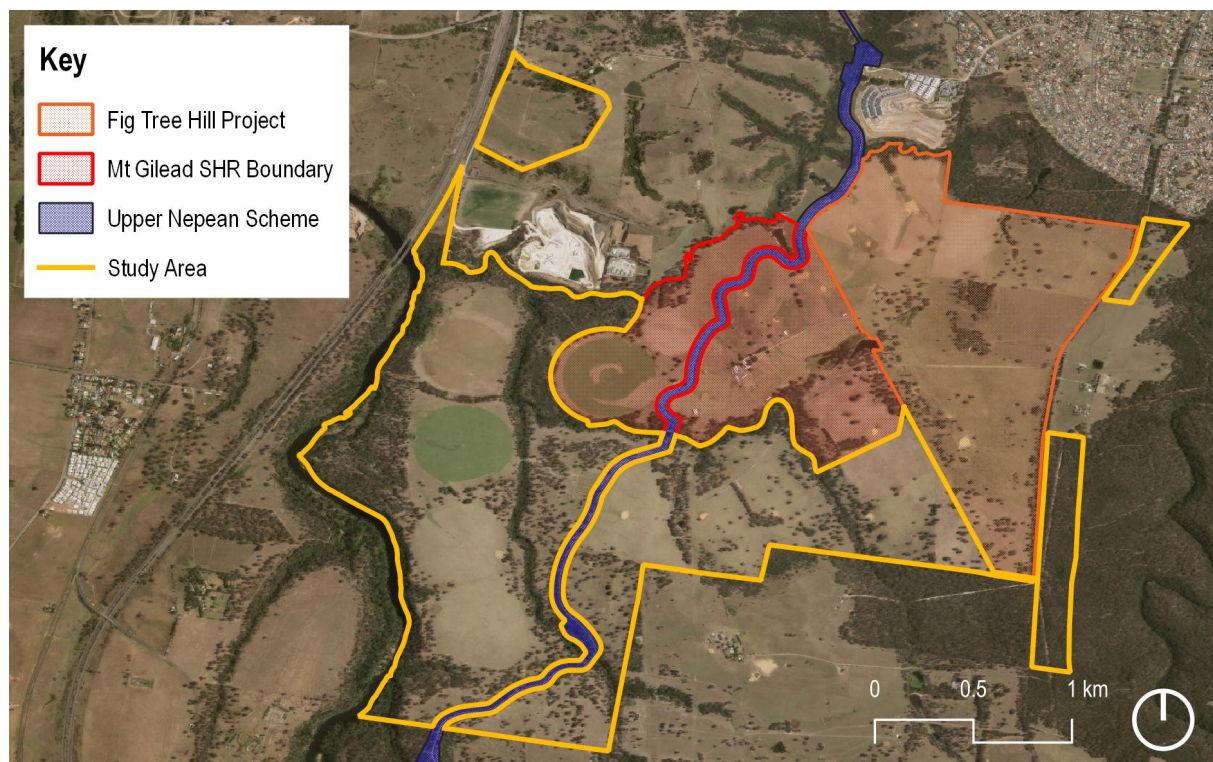
# Background and History



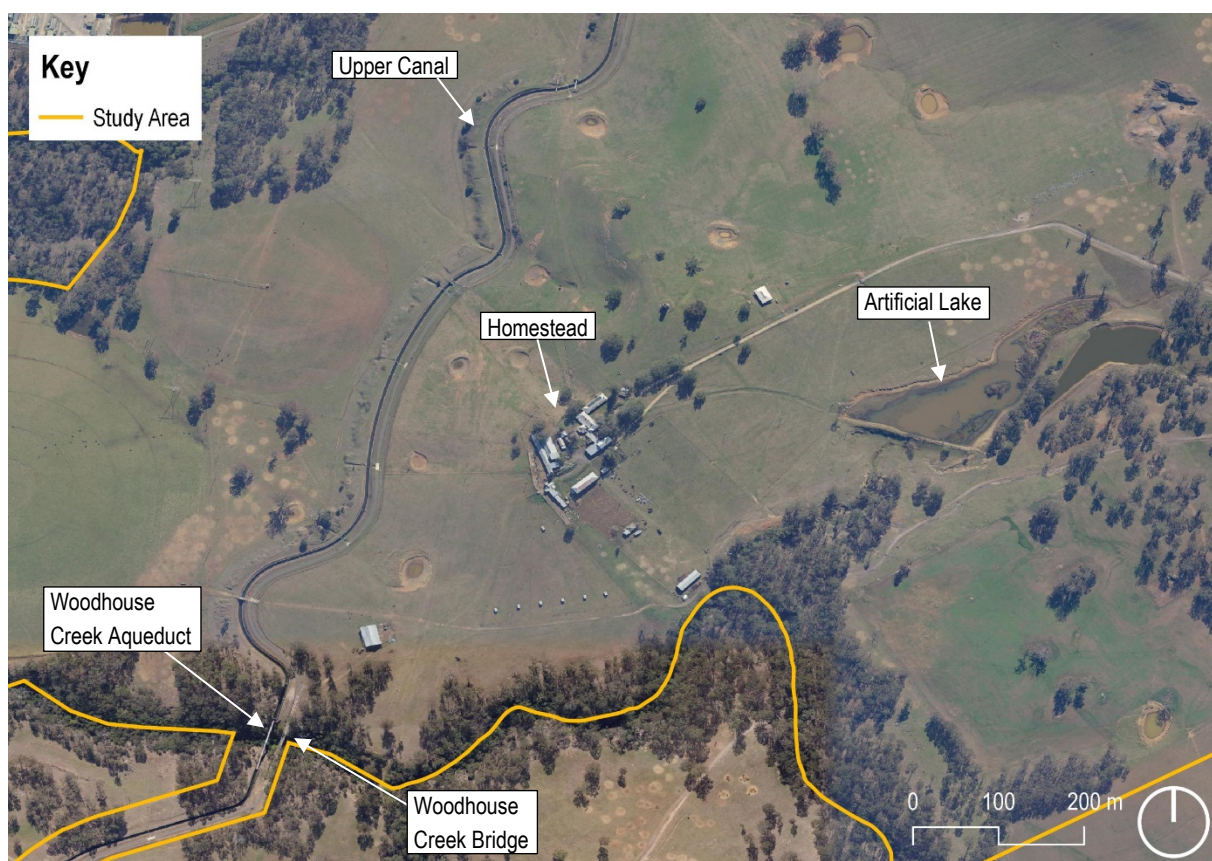
# 2 Background and History

## 2.1 Historical Overview

The following section provides a historical overview for the development of the Mount Gilead Estate and Glen Lorne. It provides a background for the archaeological analysis of the Mount Gilead Stage 2 site. It is based on primary and secondary sources referenced throughout, including the substantial 2017 history of Mount Gilead created by TKD Architects (Appendix A).<sup>1</sup>



Overview of the significant curtilage boundaries abutting the Mount Gilead Stage 2 site (yellow), namely the Upper Nepean Scheme (blue) (also referred to as the Upper Canal) and Mount Gilead Estate (red). The Figtree project boundary is shown in orange. (Source: Neapmap with GML additions, 2021)



**Figure 2.2** Detail of the Mount Gilead Estate. (Source: Neapmap with GML additions, 2021)

### 2.1.1 Mount Gilead Estate

The following timeline provides a succinct overview of the history of the study area.

Date	Event
Deep Time	Aboriginal people occupied the Cumberland Plain, including the Mount Gilead Stage 2 site, for around 40,000 years.
1788	Arrival of First Fleet in 1788 and beginning of European occupation of Australia. Cattle escaped from the Sydney Cove European settlement.
1795	Herd of wild cattle, descendants of the escaped cattle, were discovered by colonists near present day Menangle in 1795. The broader region became known as Cowpastures.
1802	Series of government outposts created in the area, and convict John Warby was appointed to oversee the wild herds of cattle.
1805	Cowpastures Road was surveyed into the Cowpastures area and soon after land grants were made in the area. The first grant was to John Macarthur in 1805. By 1809, 34 settlers had received grants in the newly named Minto district of the northern portion of Campbelltown. The grantees were a mix of merchants, officials, emancipated convicts, and soldiers. The amount of acreage received reflected their status within the colony. <sup>2</sup>
1812	Reuben Uther was granted 400 acres (162 ha) (Portion 65 of the Parish of Menangle) in 1812. Uther named his farm 'Gilead'. Uther arrived in Sydney in 1807 as an indentured servant to Simeon Lord. He served Lord as a clerk until 1811 when he established a hat factory in partnership with Lord and Francis William. In 1815, he established his own hat factory in Hunter Street and in 1817 moved the business to Pitt Street. <sup>3</sup>

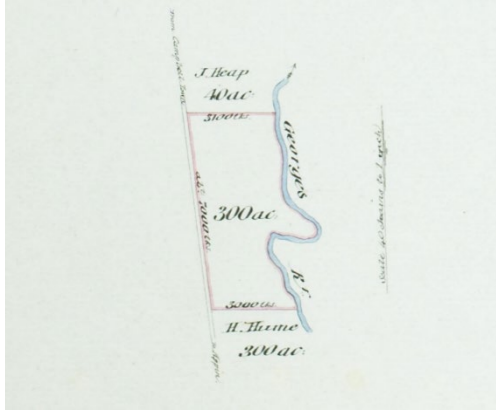


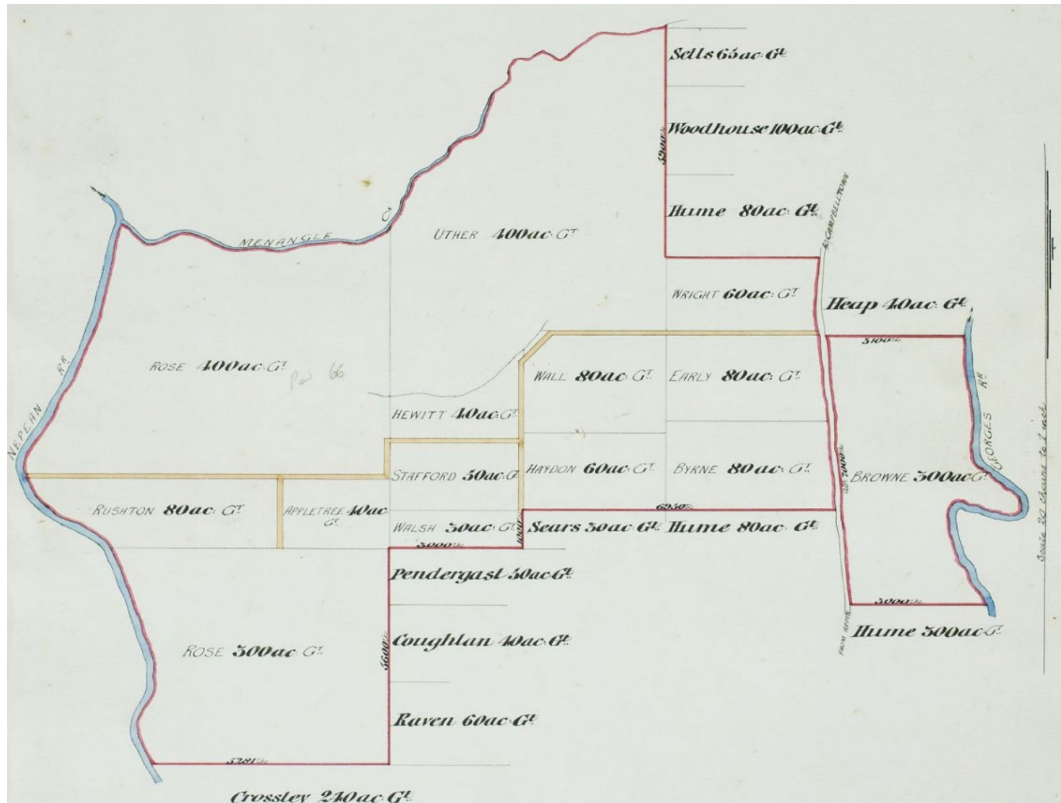
Date	Event
1815	<p>Appin Road was officially surveyed in 1815. The road was in used by European settlers before 1811 and was 'an old Aboriginal pathway' <sup>4</sup>.</p> <p>By 1815, Uther was supplying meat from his farm to the government. Governor Macquarie visited Gilead in 1815 and commented:</p> <p>At 11 a.m. Entered the District of Appin at Mr. Uther's Farm, which is a very good and a very pretty well improved one on the slop[e] of a High Hill, on the Summit of which he has erected his House. — Mr. Uther's Crops look well and promise to be very good and plentiful.</p>
1818	<p>Uther put Gilead up for sale in 1818. The advertisement described the estate as comprising of '400 Acres, 50 of which are cleared, and 50 more fell'. <sup>5</sup> The ground had been cultivated for the past four years. There was a house and barn but no further detail was provided about other buildings on the property.</p> <p>Gilead was purchased by Thomas Rose, who renamed it Mount Gilead. He leased Mount Gilead to others, including his neighbour, George Marriott Woodhouse.</p> <p>Thomas Rose arrived as a convict in NSW in May 1798. He was a baker from Shropshire, England, and re-established himself as one in Sydney. He had two children with his first wife, Elizabeth Bartlett, and they fostered four more.</p> <p>Rose was conditionally pardoned on 4 June 1806 and received an absolute pardon on 1 December 1809. Afterwards, he was given land in Sydney at the corner of King and Castlereagh Streets where he opened a bakery and the Rose and Crown Inn alongside it in 1810. He gradually acquired all the land within the block bounded by King, Elizabeth, Market and Castlereagh streets. Together with another baker, Charles Thompson, Rose rented John Palmer's windmill from June 1813 to June 1814. The following May he sold his bakery.</p>
1820	<p>Governor Macquarie founded and laid out Campbelltown, named after his wife Elizabeth's maiden name, Campbell.</p>
1823	<p>Rose had acquired more land surrounding the farm. By 1823, his total land ownership amounted to over 2000 acres. Rose's landholding was similar to the present Mount Gilead Stage 2 site, although he owned an additional 180 acres in the northeastern corner of Mount Gilead. Rose also did not own any land between Appin Road and the Georges River.</p>
1826	<p>After his wife's death, Rose moved to Mount Gilead.</p> <p>Rose became known in the colony for his experiments in water conservation at Mount Gilead. In 1824, he built the first successful dam to retain water in NSW. The following year he built an embankment of stone and rammed earth across a natural incline on his land, which drained run-off water into an artificial lake. This provided a constant source of water, even during the 1829 drought. In 1829, he built a smaller dam near Appin Road at Mount Gilead to provide water to his neighbour during the drought. <sup>6</sup></p>
1828	<p>Rose married Sarah Pye and they had five children together.</p>
1836	<p>Rose constructed a 60 foot (18m) tall stone and ironbark timber windmill. A stone wall was constructed around the mill to stop animals from touching the rotating sails. At this time, Campbelltown was a significant wheat growing area but the appearance of rust in the region in the mid-1850s caused wheat farmers to turn to dairying and grazing.</p>
1837	<p>Rose died in March 1837, aged 67. He was originally buried on the Mount Gilead Estate but his remains were later transferred to St Peter's Cemetery, Campbelltown. Mount Gilead Estate was left to his five youngest children. They were all under the age of seven at the time, so trustees were appointed to manage the property.</p> <p>The trustees listed the property for sale and it was described as consisting of a large house with several detached domestic outhouses, such as a kitchen and washhouse; multiple farm buildings, including a granary, barn, piggery, stable; and windmill. <sup>7</sup> The estate did not sell and was leased out.</p>
1858	<p>The trustees transferred ownership of Mount Gilead to Charles Henry Jacob Rose, eldest child of Thomas Rose and Sarah Pye. Charles Rose was a less successful farmer than his father and raised several mortgages on the property between 1859 and 1862 to the Sydney Investment Company.</p>







Date	Event
1864	<p>In 1864, Walter Friend purchased all but lots 3–6 of the 1861 subdivision of the Mount Gilead Estate in three stages. Lots 7 and 14 were purchased separately in November, and the remainder was purchased in December.</p> <div> </div> <div> </div> <div> <p><b>Figure 2.4</b> 1864 plan of Lot 7 as purchased by Walter Friend. (Source: CT 8–235, LPI NSW)</p> </div> <div> <p><b>Figure 2.5</b> 1864 plan of Lot 14 as purchased by Walter Friend. (Source: CT 8–234, LPI NSW)</p> </div> <div> </div> <div> <p><b>Figure 2.6</b> 1864 plan showing the rest of Mount Gilead Estate as purchased by Walter Friend. (Source: CT 10–56, LPI NSW)</p> </div>

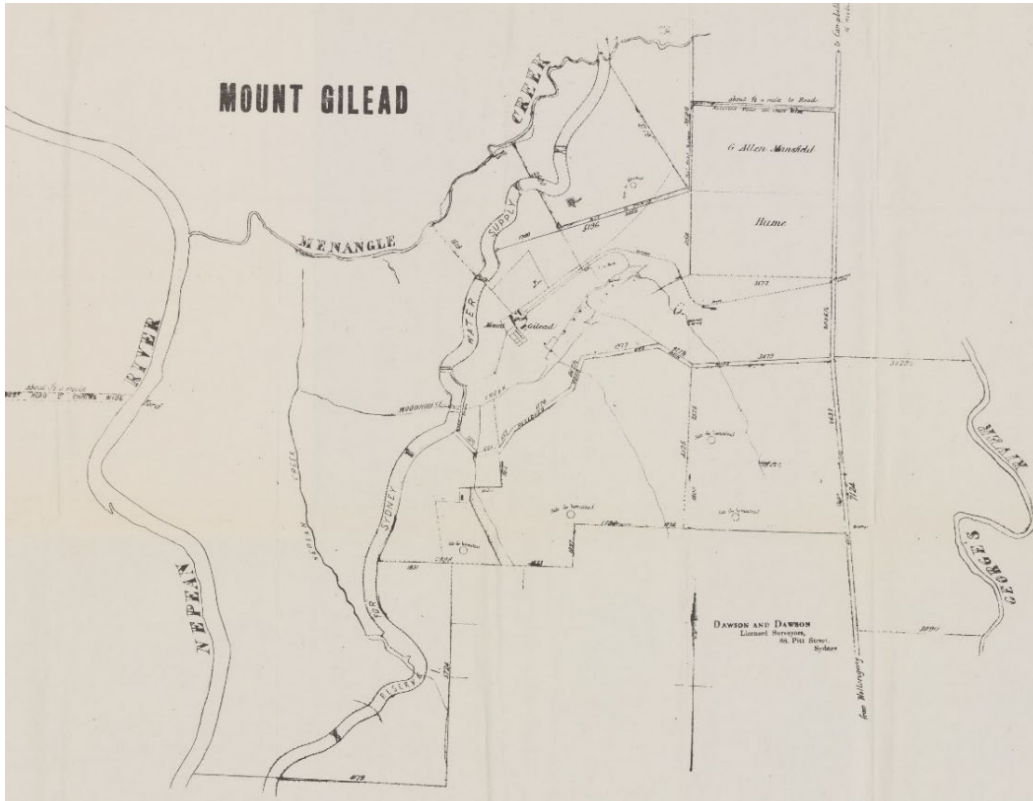


Date	Event
1866	<p>In 1866, Friend also purchased 300 acres between Appin Road and Georges River—Portion 76 of the Menangle Parish, granted to WJ Brown.<sup>13</sup> (Figure 2.7)</p>  <p><b>Figure 2.7</b> 1866 plan of Portion 76, as purchased by Walter Friend. (Source: CT 27–89, LPI NSW)</p>
1887	<p>Edmund H Woodhouse purchased Mount Gilead Estate in 1867 and moved there at the beginning of 1868.<sup>14</sup></p> <p>Edmund H Woodhouse was a local landowner, born on the neighbouring property, Schuldham Farm, later known as Glen Lorne. Edmund H Woodhouse's father, George Marriott Woodhouse, arrived in Sydney in 1809 and was appointed secretary to Ellis Ben. He also worked as a personal secretary to Macquarie. George Woodhouse had previously leased Mount Gilead from Thomas Rose.</p> <p>Edmund H Woodhouse developed Mount Gilead as a dairy and grazing property. He invested in a variety of livestock, including cattle—dairy and beef breeds; sheep for wool and meat; poultry; Berkshire pigs and more exotic animals—deer, alpacas and llamas. During his time at Mount Gilead, the estate was a centre for social activities, including for balls that were attended by vice-royalty.</p>

Date	Event
1887	 <p><b>Figure 2.8</b> 1867 plan showing Edmund H Woodhouse's landholding. (Source: CT 53–197, LPI NSW)</p>
1875	Edmund H Woodhouse died in his early 50s. The estate was administered by several trustees.
1876	The property title was transferred to Edmund H Woodhouse's son, Edmund Bingham Woodhouse.
1879	A writer from the <i>Sydney Mail</i> and <i>New South Wales Advertiser</i> visited Mount Gilead Estate and wrote about the property. He identified three additional zones that had been cleared—around the windmill (outside of the Mount Gilead Stage 2 site boundary ); towards the centre of the property, south of the homestead; and in the southeastern corner, near Appin Road (refer to Figure 3.11). <sup>15</sup>

Date	Event
1880	<p>The government resumed 73 acres (29.5 hectares) of Mount Gilead for the Nepean Water Scheme. Work on the scheme commenced in 1880 and the cutting of the Upper Canal across Mount Gilead was underway by mid-1881. A variety of techniques and materials were used for the construction of the Upper Canal within Mount Gilead. According to Navin Officer, who undertook a cultural heritage assessment of Mount Gilead in 2006:</p> <p><i>Where the ground was soft, the Canal was 'V'-shaped and the sides were pitched with shale or sandstone slabs. In other sections, a 'U'-shape was utilised and the sides were walled with sandstone masonry, or, if cut into solid rock left unlined. Where the canal crossed creeks or large depressions, such as Woodhouse and Nepean's Creeks, the water was carried across in wrought iron inverted syphons resting on stone piers.</i><sup>16</sup></p> <p>The stone used to construct this portion of the canal was obtained from quarries within Mount Gilead.<sup>17</sup> Several quarries created during the 1880s were identified along both sides of Woodhouse Creek and the eastern bank of Nepean Creek. They utilised the exposed bedrock faces of the steep gorge banking the waterways. The stone was also used for the drystone walls across the estate. The drystone walls were constructed along the creeks to protect livestock from falling down the steep cliffs along the edge of the waterways.</p> <p>A major construction workers' camp was established on the estate. The camp was located near a substantial bridge supported by stone piers at Woodhouse Creek. The design of the bridge is credited to Edmund B Woodhouse.<sup>18</sup> Based on an artwork published in 1881, the camp was adjacent to the homestead lot and was comprised of a mix of tents and wooden cottages. (Figure 2.9)</p> <p>Additional smaller camp sites or maintenance housing, comprising semi-temporary buildings with sandstone chimneys, were dotted along the edge of the canal. Others were located near the quarry sites (Figure 2.10).</p>  <p><b>Figure 2.9</b> 'Bringing the Nepean to Sydney'—artwork printed in 1881, showing the bridge across Woodhouse Creek and the construction of the canal. The construction camp can be seen in the background. (Source: <i>The Sydney Mail and New South Wales Advertiser</i>, 22 October 1881, p 696)</p>



Date	Event
1880	 <p><b>Figure 2.10</b> One of four workers' cottages on the Mount Gilead Estate. (Source: <i>Sydney Mail</i>, 22 December 1920, p 24)</p>
1886	Edmund B Woodhouse sold his cattle and focused on sheep farming, an unsuccessful venture.

Date	Event
1888	<p>Edmund B Woodhouse tried to sell Mount Gilead but was unsuccessful. A detailed promotional brochure was prepared for the sale. (Figure 2.–Figure 2.) The brochure included five locations marked 'site for homestead', suggesting potential locations for future buyers.</p>  <p><b>Figure 2.11</b> 1888 Plan of Mount Gilead Estate, included in promotional brochure. (Source: National Library of Australia, MAP LFSP 447, Folder 34)</p> <div>   </div> <p><b>Figure 2.12</b> View of Mount Gilead buildings from the windmill, included in promotional brochure. (Source: National Library of Australia, MAP LFSP 447, Folder 34)</p> <p><b>Figure 2.13</b> View of the windmill, included in promotional brochure. (Source: National Library of Australia, MAP LFSP 447, Folder 34)</p>
1890	Edmund B Woodhouse mortgaged the property to Australian Investment Company in 1890. A year later, the company foreclosed on the mortgage.
1892	Edmund B Woodhouse died in 1892 at the age of 36.

Date	Event
1910	The Australian Investment Company sold Mount Gilead Estate to Dr William Henry Harris in 1910. Prior to this, the farm was leased to Charles Axam, who used the property for dairying.
1920	After being unable to sell the property in 1918, Harris sold Mount Gilead to John Thomas Barnett, a grazier from Hay, in 1920. The sale advertisement described the property as an area of 2063 acres, comprising of a new stone house with 12 rooms including kitchen and laundry, two large underground tanks and several outbuildings such as stables, piggeries and barns. In 1921, Harris wrote a letter published in the <i>Sydney Mail</i> 1921 to correct an earlier newspaper article on Mount Gilead. Harris wrote: <i>Now, the stone for all the buildings was taken from the site of the present dam or lake, and the front of that quarry was walled in to form the present dam... This dam was completed, I think between 1833–1835.</i> <sup>19</sup>
1923	Mount Gilead Estate was advertised for sale. The advertisement described it as ‘comprising 2.063 acres... It is fenced into 12 paddocks, 1000 acres being well improved and good grazing country, of which 500 acres have been cultivated.’ <sup>20</sup> The sale was unsuccessful.
1927	Barnett resided at Mount Gilead Estate until selling the property to Patrick Michael McGirr in 1927.
1932	McGirr sold Mount Gilead Estate to John Douglas Mowatt. The property was leased out and used as a dairy.
1941	Andrew William Macarthur Onslow purchased Mount Gilead Estate. His mother Sylvia Macarthur-Onslow (widow of Francis Arthur Macarthur-Onslow) went to live at Mount Gilead after the government resumed her place of residence, Macquarie Grove, as a hospital for returning soldiers.
1945	A new dairy was started at Mount Gilead.
1948	Andrew Macarthur Onslow was a trainee pilot and killed in a flying accident. The property was passed to Sylvia Macarthur-Onslow.
1954	Sylvia Macarthur-Onslow retained Mount Gilead until her death in 1950. The property was passed to her son Denzil Macarthur-Onslow in 1954. <sup>21</sup>
1958	Dorothy Wolseley Macarthur-Onslow, the second wife of Sir Denzil Macarthur-Onslow, purchased an adjoining 300 acres (Portion 76). This portion was subdivided as lots 1 and 2 DP 603675 in 1979. Lot 2 DP 603675 was sold to the NSW Planning and Environment Commission in 1980. The other lot was retained.
1968	Sir Denzil Macarthur-Onslow (knighted in 1964) purchased an adjoining property, Glen Lorne, initially established by the Woodhouse family. <sup>22</sup> (Further information in Section 0)
1982	Sir Denzil Macarthur-Onslow officially transferred the Mount Gilead Estate into the ownership of his company, Mount Gilead Pty Limited. <sup>23</sup> Sir Denzil Macarthur-Onslow and Lady Dorothy Macarthur-Onslow maintained Mount Gilead as a working farm and undertook improvements to the property, including additions to buildings.
1984	Sir Denzil Macarthur-Onslow died in 1984. Ownership of the Mount Gilead Estate was retained by Lady Dorothy Macarthur-Onslow.
1986	The dairy was closed in 1986 but cattle breeding and grazing has continued to present day.
1990	The Mount Gilead Estate was subdivided into two lots—Lots 1 and 2 DP 807555. Lot 1 DP 807555 contained the homestead buildings. The estate has since been further subdivided.
2013	Lady Dorothy Macarthur-Onslow died in 2013 and ownership was passed to her children, Lee and Katrina, as part of Mount Gilead Pty Ltd.
2020	Mount Gilead Estate was gazetted as a heritage item on the NSW Heritage Register on 28 August 2020. <sup>24</sup>

## 2.1.2 Glen Lorne

A summary history of Glen Lorne is provided below.

Date	Event
1823	George Woodhouse was granted 100 acres (Portion 59 of Menangle Parish) in 1823. He lived there with his wife, Elizabeth, the daughter of Captain James Aitken. Elizabeth's father died when she was 11 years old and she inherited a substantial estate. <sup>25</sup> George and Elizabeth Woodhouse had five children together. <sup>26</sup> The property was known as Schuldham Farm, named after Woodhouse's mother, Elizabeth Schuldham. <sup>27</sup>
1827	George Woodhouse separated from his wife and she retained ownership of Schuldham Farm.
1832	The 1832 NSW Calendar and Directory identified a weatherboard cottage already existing on the property. The cottage was extended in the 1840s and 1865.
1856	The Woodhouse Family sold the property to Michael Carroll.
1864	Carroll sold the property to Elizabeth Davis. She gave the property to her daughter, Mary Lucy Davis, and her daughter's fiancée, Throsby Robertson.
1875	Mary Davis sold the property to Sydney architect George Allen Mansfield. George Allen Mansfield was one of the founders and the first president of the Institute of Architects of NSW.
1879	George Allen Mansfield moved into the property with his wife Lorne in 1879 and stayed there until the late 1880s. The property was renamed 'Glen Lorne' for his wife. Mansfield designed the kitchen, which was built in early 1879.
1896	Lorne Mansfield sold the property to Ada Morton.
1914	Ada Morton sold the property to Alexander McNaughton Bowden.
1919	Bowden held a 'clearing out sale', advertised in the <i>Camden News</i> in December 1919, selling livestock, farming goods and household furniture. <sup>28</sup> The relatively low number of cows, heifers and bulls catalogued in the advertisement suggests a reasonably small farming agrarian enterprise in the early years of the twentieth century.
1919	Grace Farrar Tindale and George Tindale purchased the property.
1965	Sir Denzil Macarthur-Onslow and Lady Dorothy Macarthur-Onslow purchased Glen Lorne. The property was leased to Les Shaw.
1981	Glen Lorne had become dilapidated by the late 1970s. It was destroyed by a fire in July 1981. <sup>29</sup> The present site is overgrown and comprises footings of former buildings, remains of a dam, and early farm fencing.

## 2.2 Relevant Literature

Many previously prepared heritage studies have included Mount Gilead and the Upper Canal. These studies are considered to assist with assessing the potential, significance, rarity, and potential management procedures for the historical archaeological identified within the Mount Gilead Stage 2 site boundary. Unfortunately, historical literature from the personal archives of the Macarthur-Onslow family was not accessible for this assessment. Relevant prior heritage studies include:

- Navin Officer (2006) Mount Gilead Cultural Heritage Assessment (Officer 2006);
- Ecological (2015) Due Diligence and Historical Report (Ecological 2015);
- Higginbotham (2002) Conservation Management Plan for the Upper Canal (Higginbotham 2002);



- Todd (2018) Prospect Reservoir Workers Camp;
- GML (2015) East Leppington (Willowdale) Historical Archaeological Assessment; and
- Higginbotham (2002) Historical and Archaeological Assessment of Proposed Cycleway.

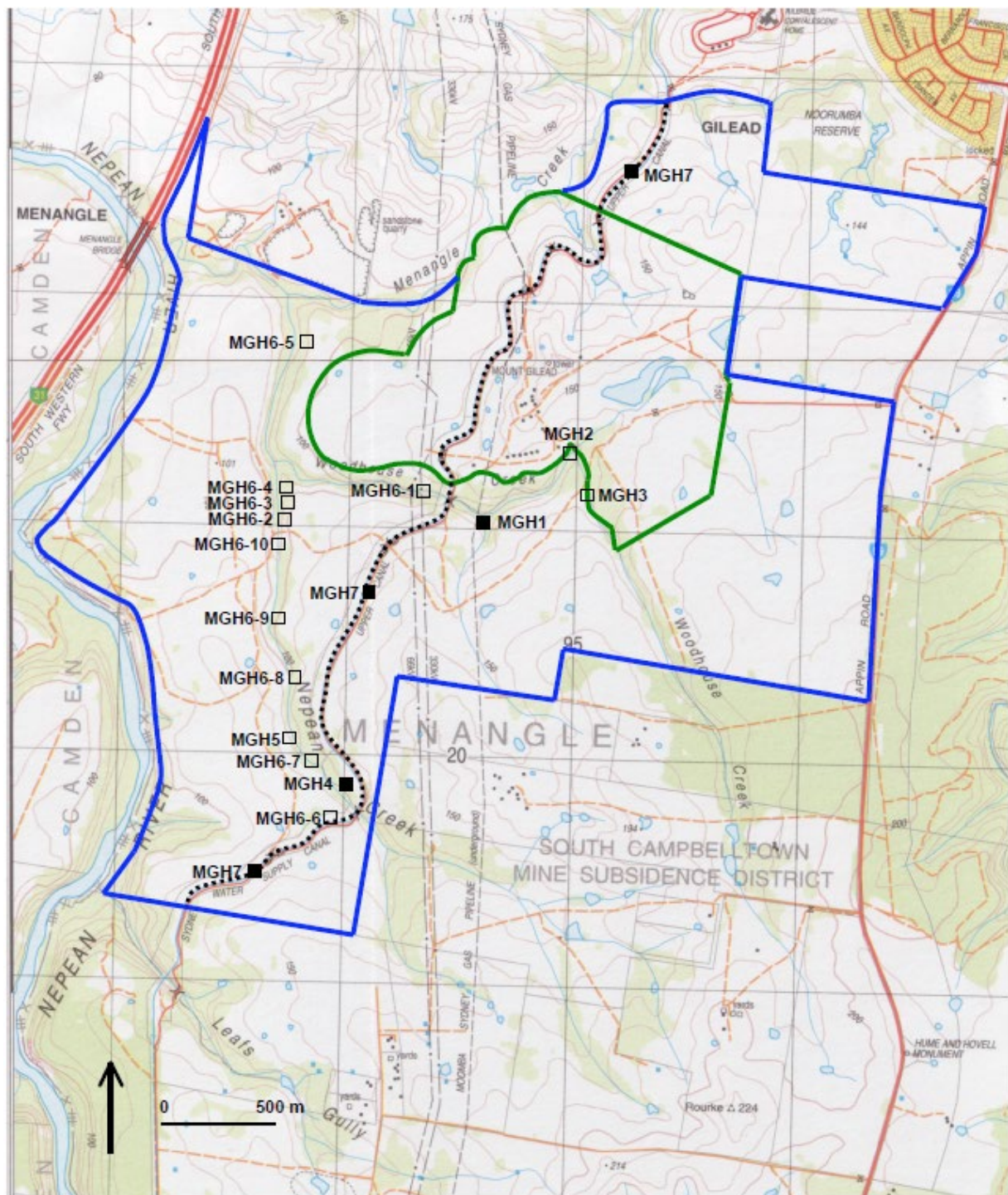
### 2.2.1 Navin Officer (2006) Mount Gilead Cultural Heritage Assessment<sup>30</sup>

In 2006, Navin Officer created an inventory and assessment of Aboriginal and historical archaeological sites at Mount Gilead. Officer identified 16 historic sites within the Mount Gilead Stage 2 site boundary. Most were associated with the Upper Canal. No 'relics', as defined by the NSW Heritage Act (1977), were identified.

The historical sites were recorded with an MGA reference (Table 2.1) and displayed on a map (Figure 2.).<sup>31</sup> Unfortunately, owing to discrepancies with the MGA references and limited reference images, many of the sites were not able to be effectively re-identified by GML during the ground survey. This primarily affected the quarry sites (MGH6-1 to MGH6-9). Certain distinct features, on the other hand, were easily able to be recognized. These included the sandstone hearth and chimney remains (MGH4 and MGH5), timber bridge remains (MGH2), and sandstone weir (MGH1).

**Table 2.1** Inventory of Historical sites identified by Navin Officer in 2006. (Source: Officer 2006, table 8.1)

Site Name	MGA Reference	Recording Type
MGH1	294396.6220689	Sandstone Weir
MGH2	294906.6221129	Timber Bridge Remains
MGH3	294994.6221062	Sandstone Quarry
MGH4	293954.6219642	Sandstone Chimney Remains
	293886.6219685	
	293877.6219696	
	293855.6219725	
MGH5	293666.6219895	Sandstone Hearth and Chimney Remains
MGH6-1	294253.6220984 to 294135.6220984	Sandstone Quarries—Woodhouse Creek Zone
MGH6-2	293862.6221004	
MGH6-3	293689.6221032	
MGH6-4	293570.62211407	
MGH6-5	293815.6221811	Sandstone Quarries—Nepean Creek Zone
MGH6-6	293936.6219605	
MGH6-7	293666.6219956	
MGH6-8	293579.622041	
MGH6-9	293610.6220543 to 293622.6220635	
MGH6-10	293600.6220938	Sydney Water Supply Upper Canal
MGH7	<i>Various</i>	



□ Sites identified during this study    ■ Previously identified sites & identified during this study

**Figure 2.14** Map of the Mount Gilead Stage 2 site showing location of historical sites MGH1 to MGH 7. (Source: Officer 2006, figure 8.1)

The Navin Officer 2006 report determined the value and significance of each of the historical heritage items identified (Table 2.2). The value was graded from 'exceptional' to 'intrusive'. Navin Officer used the term 'regional significance', which is considered more closely aligned to 'local significance' than 'state significance'.

**Table 2.2** Assessment of Significance of Historical sites within the Mount Gilead Stage 2 Site Boundary, as determined by Navin Officer 2006.

Site Name	Significance	Level	Notes
MGH1—Sandstone Weir	Regional	High	The weir was an integral structure to the operation of the original Upper Canal, and largely maintains its integrity. Despite partial collapse, the structure retains a high degree of original fabric and the damage does not detract from its significance. Moreover, the weir should be conserved as an example of the construction techniques and operational requirements for the Upper Canal.
MGH2—Timber Bridge Remains	Nil	Nil	Due to the dilapidated condition and lack of historical records, or a road/track linking it to either the homestead or construction of the Upper Canal, the bridge remains do not meet the threshold for heritage significance.
MGH3—Sandstone Quarry	Nil	Nil	The quarry may have been used to construct the Upper Canal or the Mount Gilead homestead and its outbuildings. There are no records to confirm its function. The site was small and probably had a short life span. As such, it does not meet the threshold for heritage significance.
MGH4—Sandstone Chimney Remains	State	High	The chimney remains of the construction camp meet the NSW Heritage Council criteria (a), (b), (f), and (g). The site also contains a high degree of original fabric. The chimney remains are not within the study area boundary, but within the SHR boundary for the Upper Nepean Scheme.
MGH5—Sandstone Hearth and Chimney Remains	State	High	The chimney and hearth remains of the construction camp meet the NSW Heritage Council criteria (a), (b), (e), (f), and (g). The site also contains a high degree of original fabric. The chimney and hearth remains are located within the Stage 2 study area.
MGH6—Sandstone Quarries	State	Moderate	The quarries utilised to build the Upper Canal meet the NSW Heritage Council criteria (a), (b), (e), and (g). All the quarries have some altered or modified elements of little heritage value. However, as a whole, the quarries contribute to the overall significance of the place and are considered to have moderate heritage significance.
MGH7—The Sydney Water Supply Upper Canal	State	High	The Upper Canal, as part of the Nepean Scheme, is listed on the NSW SHR. It is a unique and excellent example of the ingenuity of late-nineteenth century hydraulic engineering in Australia. It has functioned as a unique part of the main water supply system for Sydney for over 100 years. It represents the major engineering advance from depending on local water sources. Many of the structural elements are unique to the Upper Nepean Scheme. These are amongst other technological and engineering features. The site is considered to have high heritage significance.

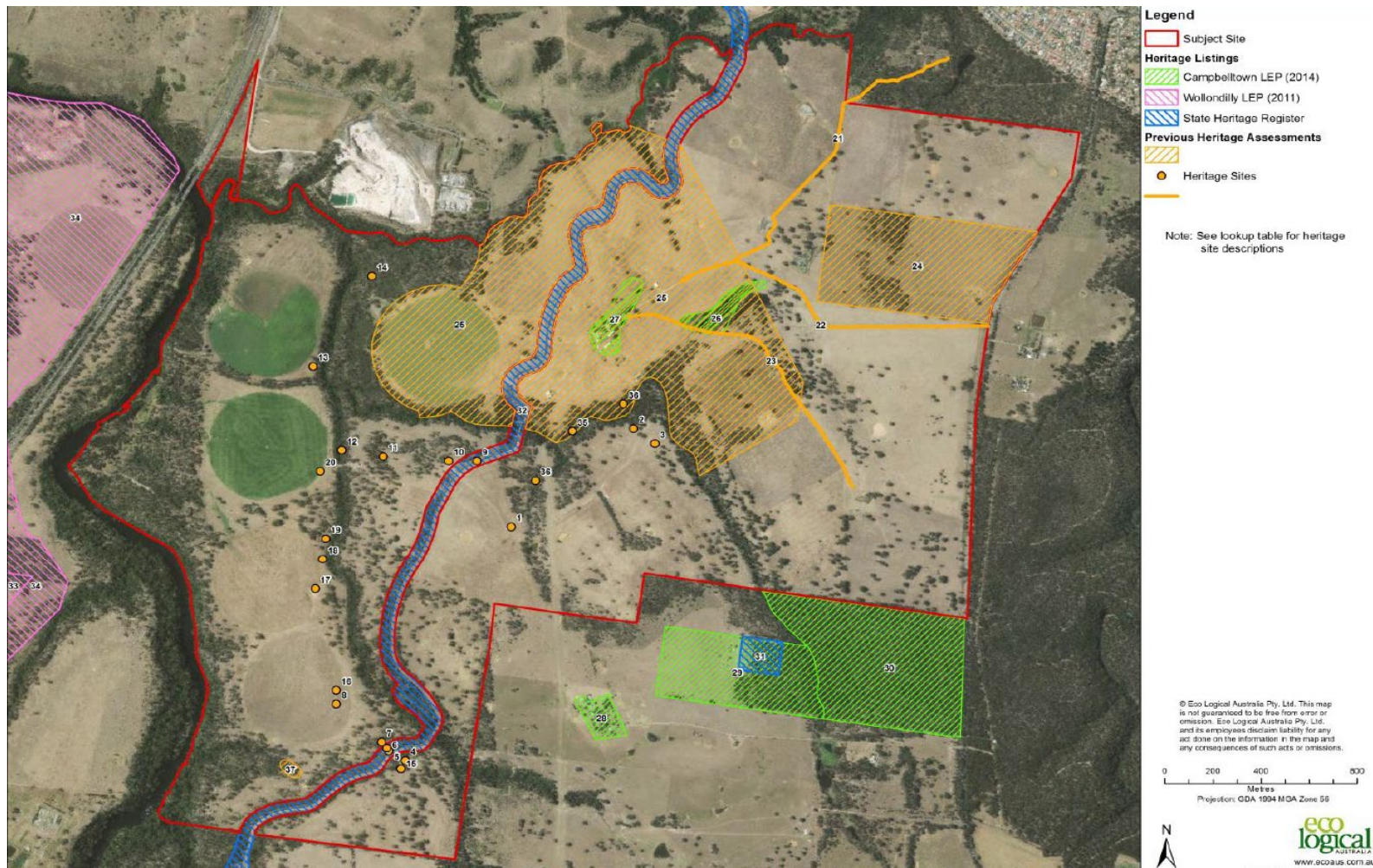
### 2.2.2 Ecological (2006) Due Diligence and Historical Report <sup>32</sup>

In 2006, Ecological conducted a survey at Mount Gilead. The survey recovered three additional sites. The first comprised a small bottle dump dating from the 1860s to 1990s (Ecological Site 35). The deposit also included oyster shells, which Ecological suggested 'may be consistent with Aboriginal habitation as part of midden material.' <sup>33</sup> The second was a drystone wall, 'constructed within the creek bed and larger dressed stones placed on top', which formed a crossing for Woodhouse Creek (Ecological Site 36). <sup>34</sup> The last was described as a collection of sandstone blocks and columns (Ecological Site 38). The location of this site is unclear. Ecological noted personal communication with

Lee Macarthur-Onslow which reveal that 'it is possible the columns and other stone come from demolished buildings in the Sydney CBD as parts of the homestead have apparently been rebuilt from stone salvaged from such demolitions.' 35

GML was unable to identify the bottle dump or drystone wall specifically identified in relation to Woodhouse Creek. The collection of sandstone blocks and columns were potentially located north of Woodhouse Creek, within the Mount Gilead Development boundary but outside the Mount Gilead Stage 2 site boundary. GML recorded this site as Site 39 (Section 6).





**Figure 2.15** Historical heritage overview map of sites referenced by Ecological. Note Site 38 is not identified on the map. (Source: Ecological 2015, figure 9)

### 2.2.3 Higginbotham (2002) Conservation Management Plan for the Upper Canal<sup>36</sup>

In 2002, a conservation management plan was created for the Pheasant's Near to Prospect Reservoir section of the Upper Canal. The Upper Canal is part of the Upper Nepean Scheme, which is listed as state heritage significant—even though the Upper Canal itself is not on the SHR. The report included a history, survey and inventory of all significant items along the route of the Upper Canal, and assessment of significance for archaeological features and sites identified.

The Upper Nepean Scheme has functioned as part of the main water supply system for Sydney for more than a century. The route of the Upper Canal is associated with a large number of early colonial estates, including Mount Gilead, Leppington, and Glenlee. As the report states, 'apart from this associative connection between these estates and the Upper Nepean Scheme, the physical context of this relationship lies in the predominantly rural landscape character—as either pastureland or remnant woodland—of the setting for both the estates and the canal corridor'.<sup>37</sup> The Mount Gilead Stage 2 area is associated with Section 3 of the Upper Canal (Figure 2.17).<sup>38</sup> All the items identified fall within the SHR curtilage and not within the Mount Gilead Stage 2 site boundary.

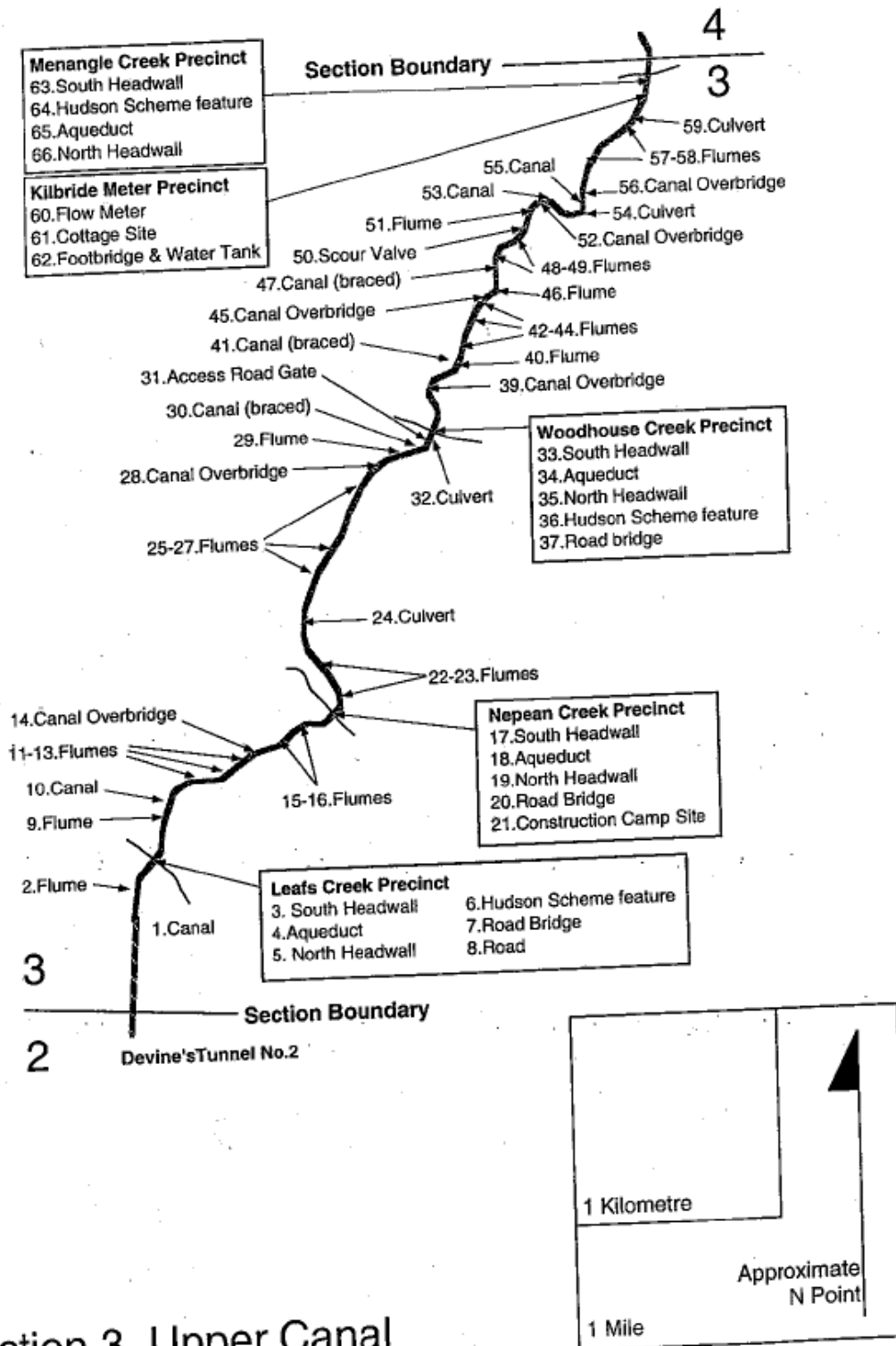
Five sandstone chimneys in the vicinity of the canal (Officer 2006—MGH4-5) were an indication of workers' residences. These are identified on the Higginbotham diagram as Site 21—Construction Camp site (Figure 2.16). Regarding remains of the construction camps, the Higginbotham report notes that 'it is possible that additional evidence of these structures may exist below ground. It is also probable that other associated archaeological features such as rubbish pits or dumps exist in the vicinity of the construction camp site.'<sup>39</sup> The camps were considered of archaeological significance as further recording and investigation may reveal details of the living and working conditions of the construction teams.<sup>40</sup>

An additional camp site was identified by GML in an 1881 drawing of the Mount Gilead site (Figure 2.16), although no physical evidence of this site has been identified. Similar archaeological remains identified by Higginbotham may be present at the larger camp site.





**Figure 2.16** Image of a construction workers' camp within the Mount Gilead Estate. The bridge in the foreground crosses Woodhouse Creek. (Source: Sydney Mail and New South Wales Advertiser, 22 October 1881)



## Section 3, Upper Canal

**Figure 2.17** Section 3 of the Upper Canal, from Pheasants Nest to Prospect Reservoir. (Source: Higginbotham 2002, p. 73)



## 2.2.4 Todd (2018) Prospect Reservoir Workers' Camp<sup>41</sup>

Prospect Reservoir is located 35km northeast of Mount Gilead. It is part of the Upper Nepean Canal system. The dam was constructed between 1880 and 1888/89. A quarry had existed on the southern side of Prospect Hill from around 1870. The quarry was known as Walding and Warrin's. By 1879, the quarry had been abandoned. It was re-opened to become the main source of stone for the reservoir dam wall.

Although much larger and well-established, the Prospect Reservoir Workers' Camp site is comparable to sites that may be encountered within the Mount Gilead Stage 2 site boundary. At the reservoir, a workers' camp was established during the construction of the dam. In 1884, the camp had about 1200 residents. The camp was comprised of 8 by 10 foot wooden tents with canvas coverings (Figure ). Each tent housed two men. The huts faced all directions and were not erected on a defined town plan. Some more substantial buildings, made of corrugated iron or bark, were also standing at the time.<sup>42</sup>

The camp came to be known as a place of violence, shame, and disease. The *Evening News*<sup>43</sup> described the camp as slovenly, noting that the tents and bedclothes 'do not even meet the wants of common decency, the occupant being in many cases visible to the passer-by.' Piggeries and their 'terrible aroma' were also cause for concern. Moreover, 'several women of easy virtue in Sydney, having discovered that a large amount of money is paid away in the camp every fortnight, resolved to visit the place.'

Over time, the camp developed. A police station, a rudimentary hospital, public school, and public hall were established. From the mid 1880s, the camp also included a butcher, baker, blacksmith, dressmakers, tent makers, tinkers, boarding houses and a pub, amongst other facilities.<sup>44</sup> The site continued to grow and become very well established.



**Figure 2.18** 1878 photo showing workmen on the site of the Prospect Reservoir. (Source: p. 3)



**Figure 2.19** c1881 photo showing the Prospect Reservoir Workers' Camp after much of the forest had been cleared. (Source: p. 9)

## 2.2.5 GML (2015) East Leppington (Willowdale) Historical Archaeological Assessment<sup>45</sup>

The site of East Leppington is located on the bank of the Upper Canal. The site underwent similar historical phases to the Mount Gilead landholdings.<sup>46</sup>

- 1788–1866: the first land grants and clearing in the local area was undertaken. The Cordeaux family established the East Leppington Estate.
- 1866–1875: East Leppington Estate was leased out, and the Upper Canal system was beginning to be constructed.
- 1875–1905: the East Leppington Estate was sold, and the Upper Canal system was completed.
- 1905–1970: the East Leppington Estate was sold again. It was then leased in 1924 and a dairy was run on the property. In c1950, Leppington House was destroyed by a fire.
- 1970–2015: East Leppington Estate changed hands a number of times and remains predominantly as a property for cattle grazing. The East Leppington site has now been re-zoned for development.

Owing to the rural rather than urban nature of East Leppington, few historical relics or works are known to exist within the area. Rather, the East Leppington study area forms part of a wider cultural landscape related to the early European settlement and manipulation of the natural landscape in the southwest Cumberland Plain. This cultural landscape can be understood as a reflection of the ideals of the early colonial settlers to establish pseudo-aristocratic country estates in the English tradition. These estates were required to be working agricultural and pastoral businesses but were also intended to function as a means of establishing and demonstrating the occupier's social status within the fledgling British colony.

The physical evidence associated with this cultural landscape includes the design and layout of cleared spaces framed by fences and stands of trees, including mature eucalypts and introduced exotic species. Further physical archaeological remains at the site may include: <sup>47</sup>

- Fence lines: The fabric of the fences observed made evident their regular replacement and repair. No early fencing materials were identified. There was a low potential for sub-surface archaeological evidence fence lines.
- Farming activity: There was a low potential for archaeological features such as burnt tree boles, plough marks, field drains and soils containing fossil pollens associated with early land clearance and colonial farming practices to survive within the East Leppington study area. Artefacts relating to domestic life and agricultural work may be scattered throughout the landscape as isolated items which may have been disposed of or accidentally lost during fieldwork. Such artefacts (if present) could have the potential to provide limited information about farming practices and, possibly, the people who worked the land. However, there is a low potential for such artefacts to be present.
- Dams: Several small dams were identified. The potential for archaeological relics associated with them are nil to low.
- Historical carriageway: A small section of the Denham Court Road was assessed as having the potential to contain archaeological remains associated with the former Cordeaux Estate carriageway. During monitoring works, no evidence of the carriageway was identified.
- Upper Canal: The Upper Canal provides extensive evidence of the evolution of hydraulic engineering practices over time. There is archaeological potential for evidence of the

construction, operation, and maintenance of the Upper Canal to be found outside the SHR curtilage. There is a moderate potential for remnants of construction camps. There is low potential for activities associated with the construction camps—in the form of articles of domestic and industrial refuse—to be preserved in the area directly surrounding the Upper Canal. However, should it exist, such evidence would have the potential to reveal insights into the living and working conditions of nineteenth-century construction workers. There is little potential for other isolated artefacts associated with the construction, operation, and maintenance of the Upper Canal outside the SHR curtilage.

Potential archaeological remains related to temporary construction camps established along the Upper Canal's route would be considered rare and could provide information that no other site could.<sup>48</sup> Archaeological evidence associated with construction camps along the length of the canal could enrich our knowledge of the everyday lives of the workmen. Details surrounding the lives and working conditions of manual labourers are rarely recorded in documentary sources. Depending on the nature and extent of archaeological remains, this site type could be of state significance for its ability to contribute knowledge about the lives and working conditions of nineteenth-century construction workers, and specifically workers on the canal.

To mitigate impacts to historical archaeology, GML recommended a program of investigations involving both monitoring and open area excavations.<sup>49</sup>

### **2.2.6 Higginbotham (2002) Historical and Archaeological Assessment of Proposed Cycleway<sup>50</sup>**

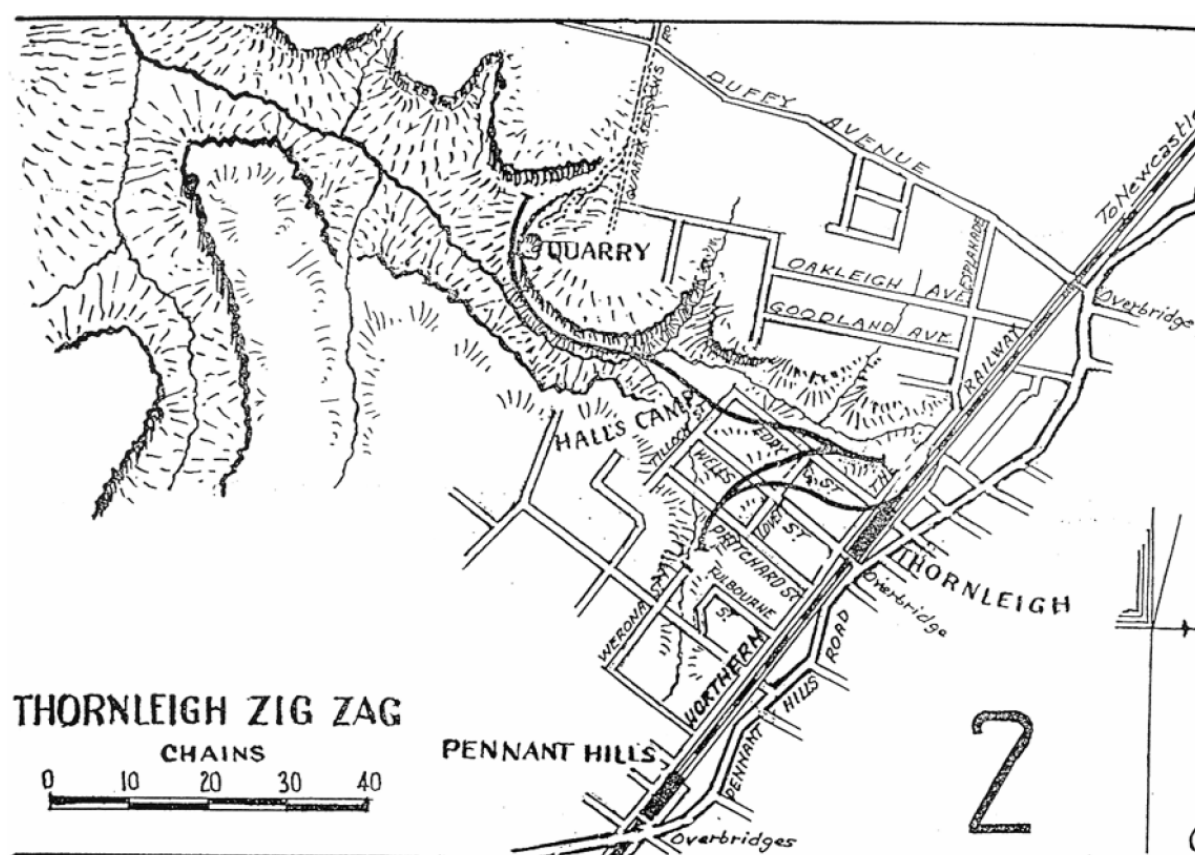
In 2002, Hornsby Shire Council commissioned a report to assess the significance of historical archaeology along a proposed cycleway between Bellamy Street, Pennant Hills, and Tombarra Road in Westleigh (Figure 2.). The report also made recommendations for the management and conservation of identified sites. The cycleway was located within the Berowra Valley Bushland Park. It passed close to a heritage item known as the Thornleigh Quarry, with an associated zig-zag railway siding to Thornleigh Station.<sup>51</sup> The quarry supplied ballast for the bed of the railway track constructed between Strathfield to Newcastle in the early 1880s.

The quarry was surrounded on three sides by sandstone rock faces (Figure 2.20). The lower part of the quarry face sloped inwards to its floor, rather than being stepped like the quarries identified at Mount Gilead. Logs were arranged in a semi-circle to form seating.<sup>52</sup> Some of the same techniques for extracting the sandstone were identified at the Thornleigh Quarry as the Mount Gilead quarries. For example, drill holes filled with explosives to blast off freestones were identified in the quarry itself as well as on the access road to the quarry (Figure 2.20). Similar accessways were also created at Thornleigh Quarry to the Mount Gilead quarries. Bedrock was cut away to create paths leading to the quarry (Figure 2.20).

Thornleigh Quarry and the Zig-Zag Siding were listed in the 1994 Hornsby LEP and the State Heritage Inventory, but not the SHR. Higginbotham's report concluded that the quarry was of local significance. Thornleigh Quarry was an ancillary item associated with the construction of the Strathfield to Newcastle railway and therefore does not share the state significance of the railway route.<sup>53</sup> However, the quarry nevertheless makes some contribution toward that significance. In addition, Thornleigh Quarry had little potential to yield information concerning quarrying technology that is not already available from other sources. However, Higginbotham noted that its survival and condition has the potential to demonstrate quarry workings in general.

A workers' camp was also established at Hall's Creek, Thornleigh. The camp was used for the construction of the railway in the 1880s. However, it was also described in 1888 as similar to a 'reservoir camp', such as those used for the construction of the Upper Canal.<sup>54</sup> The camp site held the potential to reveal archaeological evidence of the working and living conditions associated with construction camps. For this reason, the camp was considered potentially of state significance.<sup>55</sup>

Conservation management recommendations for Thornleigh Quarry included developing a curtilage 10m back from the top edge of the cliff face. The curtilage included the bush setting, access roads, and the site of Hall's Camp.<sup>56</sup> The report further recommended installing interpretive signage.



**Figure 2.20** 1965 map of the Thornleigh Quarry and Zig-Zag Railway. Map drawn by CC Singleton. (Source: Higginbotham 2002, figure 2.1)





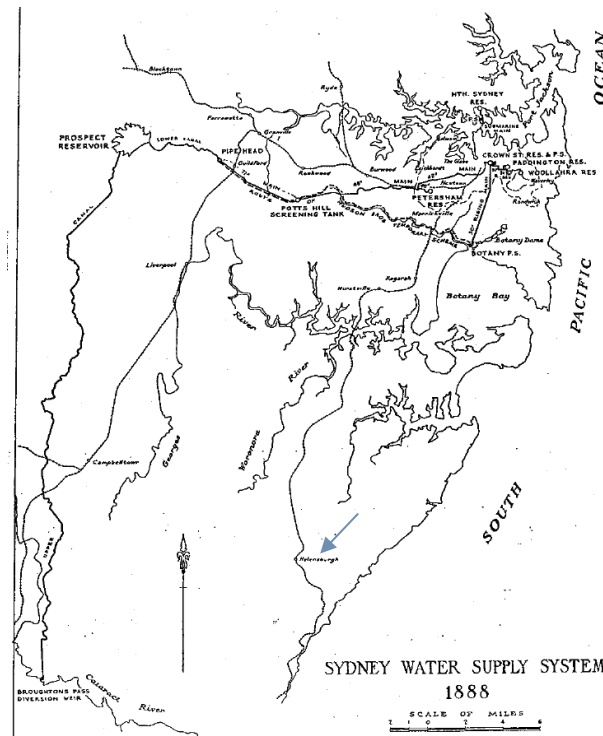
**Figure 2.21** General view of Thornleigh Quarry, showing the wooden benches in the foreground. (Source: Higginbotham 2002, plate 3.8)



**Figure 2.22** Rock cutting on the upper access road to the Thornleigh Quarry. Holes drilled and filled with explosives. (Source: Higginbotham 2002, plate 3.6)



**Figure 2.23** Upper bench on the north side of Thornleigh Quarry, connecting with the upper access road. (Source: Higginbotham 2002, plate 3.7)





**Figure 2.24** Location of the Upper Canal, from Pheasants Nest to Prospect Reservoir. The map does not show the Nepean Tunnel from Pheasants Nest to Broughton Pass. The approximate location of Mount Gilead is identified by the arrow. (Source: W V Arid. The Water Supply, Sewerage and Drainage of Sydney. MWS&DB, Sydney, p.6 / Higginbotham 2002, figure 1.1, with GML additions 2021)

## 2.3 Comparative Homestead Sites



A number of similar homestead sites and complexes from the early nineteenth century surround the Mount Gilead Estate. Many also run along the route of the Upper Canal. These sites provide comparative cultural landscapes that can be referenced in regard to the historical development of the site and landscape, examples of farming practices and planting of trees, and layout of estates and associated infrastructure. Previous heritage assessments have also sometimes taken into consideration archaeological potential and significance.



**Table 2.3** Heritage Items Listed on Campbelltown LEP 2015 within the Mount Gilead Stage 2 Site Boundary and Immediate Surrounds.



Site	Est Date	Listing	Description	Image
Glenlee; outbuildings, garden, and gate lodge	1823	SHR 0009	The Glenlee homestead group is a rare and significant complex of buildings and plantings, approached by a formal drive and sited with commanding views over the countryside to the west and southwest. The landscape of the area of the estate is of exceptional aesthetic value as a rare reminder of the former pastoral industry which once characterised the area.	
		Campbelltown LGA Item 000009	The area close to the house has high archaeological potential associated with its occupation and use by the Dharawal Aboriginal people prior to and immediately after European settlement, and for its association with the former pastoral uses of the estate, its outbuildings and former outbuildings. <sup>57</sup>	
Sugarloaf Farm (Mt Huon)	1840s–1940s	SHR 01389	Sugarloaf Farm is a largely intact farm complex demonstrating a range of uses throughout its life. The main homestead represents the first phase of use of the site for cereal cropping and the associated outbuildings represent various changes of use to dairying (1890s), horse and cattle studding (1940s) and as a riding school (1980s).	

Site	Est Date	Listing	Description	Image
		Campbelltown LEP 2015, Item 01389	A number of cultural plantings have survived, providing a connection to the early development of the farm and the Camden area generally. These include the pepper trees and African boxthorn hedges. <sup>58</sup>	
Beulah	1835	SHR 00368 Campbelltown LEP 2015, Item I00368	The Beulah Homestead is located along the Upper Canal route. The site underwent similar historical phases to the Mount Gilead Estate and provides an optimal archaeological comparison. The homestead was constructed in c1836. It was owned by the pioneering Hume family between 1847 and 1936—the Hume's were responsible for building and landscape improvements in the late-nineteenth century.	

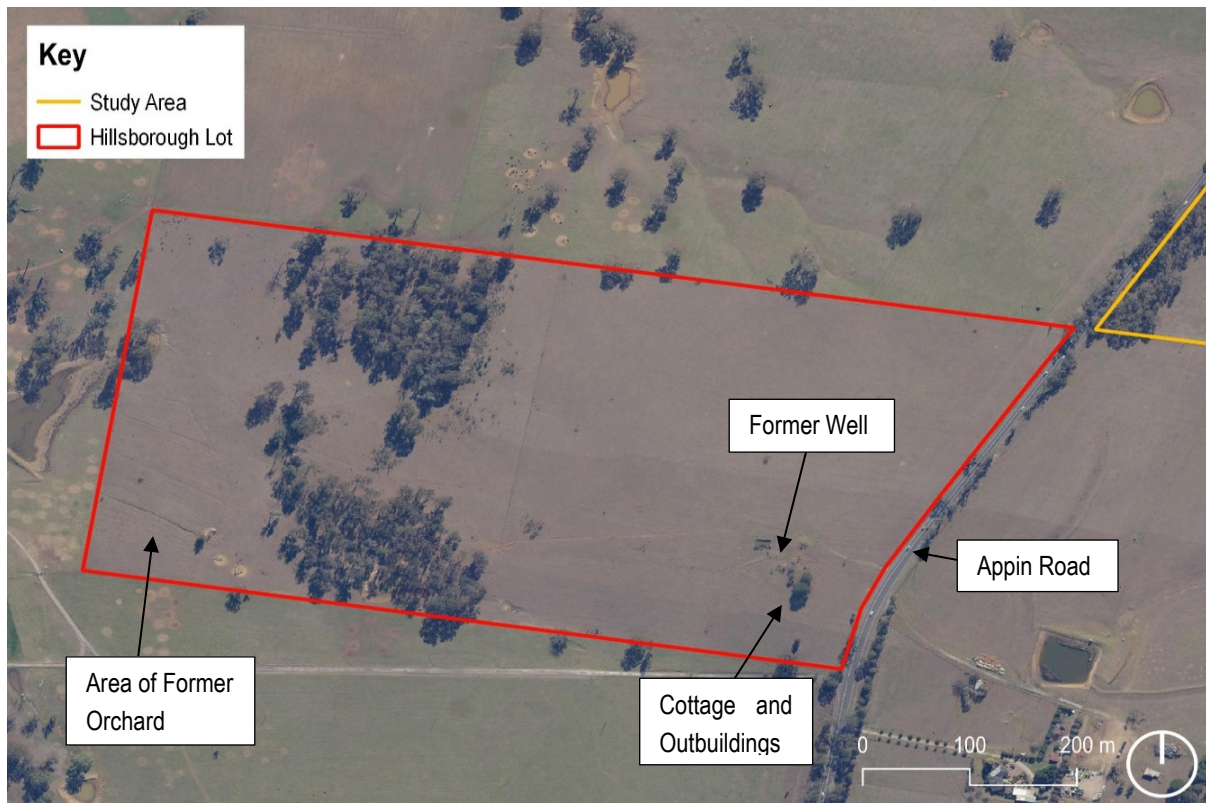


Site	Est Date	Listing	Description	Image
		National Trust of Australia (NSW) register, Item R714	<p>The site is of state historical significance as an entire cultural landscape containing:</p> <ul style="list-style-type: none"> <li>• early colonial structures—homestead group and stone bridge;</li> <li>• the remnant nineteenth-century farm and garden layout;</li> <li>• an octagonal pavilion or summer house as a major focal element; and</li> <li>• a remnant spotted gum (<i>Corymbia maculata</i>) forest as a result of early conservation planning.</li> </ul> <p>The land was part of land grants promised in 1821 and appear to have been occupied by a building by 1822. The property includes an 1830s timber bridge across Woodhouse Creek (linking to the associated item: Humewood Forest). The bridge is listed in the National Trust of Australia register. The property has historical association with the family of Francis Rawdon Hume and his descendants.<sup>59</sup></p> <p>The 2016 Casey &amp; Lowe report<sup>60</sup> concluded that the site had a high potential for substantially intact archaeological features and deposits to survive in the main house and immediate surroundings, which were known to include remains of former outbuildings and gardens. The high integrity of the remains further contribute to its rarity and significance.<sup>61</sup> The remaining study area at Beulah was of low archaeological potential.</p>	
Camden Park Estate and Belgenny Farm	1819	SHR 01697 Campbelltown LGA Item 01697	<p>The Camden Park orchard site and cottages area contains the remnants of an early commercial and scientific horticultural collection established by William Macarthur that made a contribution to commercial horticulture in NSW and other colonies such as South Australia. The cottages are an integral part of the orchard complex, which continued to function commercially for 150 years, and are important nineteenth-century elements of the landscape.</p>	
Macquarie Field House	1810	SHR 00424		

Site	Est Date	Listing	Description	Image
		Campbelltown LGA Item 00341	<p>The complex has regional aesthetic significance—it is a landmark on a prominent hilltop along an undulating ridge of high land, is surrounded by mature trees, and commands expansive views to the south and west.</p> <p>This siting demonstrates the Australian nineteenth-century fashion for picturesque country estate development and a corresponding attention to the cultivation of a 'prospect', which followed the eighteenth-century English landscape tradition. It also demonstrates the distinctive lifestyle of the early nineteenth century County of Cumberland settler, including their deliberate moulding of the landscape's appearance.</p> <p>The house is a fine sandstone Regency dwelling built c1838–1840 by Samuel Terry and represents the final flowering of the Australian colonial country house style, symmetrical in plan, bold in mass and outline, and possessing qualities of simplicity, unity and repose tempered by refined detail and careful control of the various elements in the design.</p> <p>The surrounding early arcadian style garden has been mainly eroded, but some mature plantings of Araucarias, pepper trees, African olives, and oleanders, remain.<sup>62</sup></p>	
Kilbride	1869	Campbelltown LEP 2015, Item 59	<p>The local water authority purchased land in 1832 as the site for a home to accommodate the engineer who was to be in charge of designing a water supply to bring water to Campbelltown. The homestead, now part of the old wing of the nursing home, was built in 1869 as the home of the engineer.</p> <p>He called the home 'Kilbride' meaning running water, a quite appropriate name, considering his duties as an engineer. Set on a hill the property enjoys extensive rural views across the Campbelltown countryside. Some Bunya pines remain as remnants of an early garden.<sup>63</sup></p>	

Site	Est Date	Listing	Description	Image
"Morning Glory" House	1880s	Campbelltown LEP 2015, Item 103	<p>Morning Glory was originally the house of Gracius Joseph Broinowski (1887–1913), who had fled his native Poland to avoid conscription. He arrived in Victoria in 1857. He taught painting in private schools and was commissioned to draw Australian birds and animals for classroom displays.</p> <p>Here Broinowski completed 300 illustrations of Australian birds. The building as it stands has a series of three pitched roofs (resembling a saw-tooth roof). The centre roof has a run of highlight windows that allow light into the centre of the building. The building is an unusual design.</p> <p>It appears that most of the original external fabric has been replaced in recent years.<sup>64</sup></p>	
Hillsborough	1810s		<p>The former Hillsborough site is located to the east of the Mount Gilead Estate. The site (Lot 61, DP 752042) is bounded Appin Road on the east, and the Mount Gilead property to the north, west, and south (Figure 2.).</p> <p>The small site had a total area of 34.5 hectares. The house, known as Hillsborough, once stood at the small area of trees closest to Appin Road.</p> <p>It was occupied by the Hume family. The site was assessed as having local significance as an archaeological site because of its association with the Hume family.<sup>65</sup></p>	





**Figure 2.25** Location of the Hillsborough lot and property in relation to Appin Road. (Source: Nearmap with GML additions, 2021)



**Figure 2.26** Location of comparative homestead sites around the Mount Gilead Estate. Macquarie Park House is located north of the map area. (Source: Nearmap with GML additions 2021)

## 2.4 Endnotes

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- <sup>2</sup> GML Heritage, Mount Gilead Estate Curtilage Study, report prepared for Woolf Associates on behalf of Katrina Hobhouse, February 2015, pp 5-6.
- <sup>3</sup> TKD Architects, Mount Gilead 901 Appin Road, Gilead Preliminary Heritage Assessment, report prepared for Lendlease Communities (Mt Gilead) Pty Ltd and Mt Gilead Pty Ltd, April 2017, p 4.
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- <sup>11</sup> 'Advertising', 1861, *The Sydney Morning Herald*, 6 November 1861, p 7.
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- <sup>13</sup> CT 27–89, LPI NSW.
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- <sup>17</sup> Mills & Pile 1888, *Mount Gilead : the property of Edmund B. Woodhouse, Esq. sale day Thursday 12th April 1888 11.30 a.m. / Mills & Pile, auctioneers, 130 Pitt Street, Sydney, New South Wales, Thornthwaite & Co., 155 York St., p 7.*
- <sup>18</sup> 'Bringing the Nepean Water to Sydney', 1881, *The Sydney Mail and New South Wales Advertiser*, 22 October 1881, p 696.
- <sup>19</sup> 'OLD MT. GILEAD.', 1921, *Sydney Mail*, 5 January 1921, p 41.
- <sup>20</sup> 'MT. GILEAD CAMPBELLTOWN', 1923, *Camden News*, 15 November 1923, p 2.
- <sup>21</sup> TKD Architects, Mount Gilead 901 Appin Road, Gilead Preliminary Heritage Assessment, report prepared for Lendlease Communities (Mt Gilead) Pty Ltd and Mt Gilead Pty Ltd, April 2017, pp 8-19.
- <sup>22</sup> GML Heritage, Mount Gilead Estate Curtilage Study, report prepared for Woolf Associates on behalf of Katrina Hobhouse, February 2015, p 11.
- <sup>23</sup> TKD Architects, Mount Gilead 901 Appin Road, Gilead Preliminary Heritage Assessment, report prepared for Lendlease Communities (Mt Gilead) Pty Ltd and Mt Gilead Pty Ltd, April 2017, p 19.
- <sup>24</sup> Heritage NSW, 'Mount Gilead Estate', State Heritage Register, Listing Number 02020\*, viewed 17 February 2021 <<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?id=5052615>>.
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# Landscape Analysis

## 3 Landscape Analysis

The Mount Gilead Stage 2 lands are intricately connected with the SHR listed Mount Gilead estate. Many of the heritage items within Stage 2 hold this direct association and therefore this section presents a holistic approach to the local historical cultural landscape. The section examines both Mount Gilead and Glen Lorne estates and presents:

- a historical overview of the landscape composition of and changes to the Mount Gilead Estate from the time of the first land grant in 1812;
- analysis of the historical relationship between the Mount Gilead homestead and the surrounding estate landscape, whilst considering legibility and loss of character of the cultural landscape;
- assessment of the degree of integrity of the property's existing cultural landscape, notably its ability to demonstrate the historical form and functions of the Mount Gilead Estate during the nineteenth and twentieth centuries;
- the cataloguing of 'designed' and 'organically evolved' areas and elements in the working pastoral landscape; and
- consideration of the property in the context of the colonial landscape of the Cumberland Plain.

Field work for this assessment was carried out by Ari Anderson on 1 September and 8 September 2020. The entirety of the Mount Gilead homestead was not accessible. However, site analysis included partial access onto the homestead lot with the approval of Katrina Hobbhouse. Historical research was carried out using various online databases, including Trove, State Records NSW, NSW Land Registry Services, the Sydney Water and WaterNSW Historical Research and Archives Facility, Campbelltown City Council local studies library, and the Campbelltown and Airds Historical Society. At the time of completion of this analysis, historical material requested from the Macarthur-Onslow family had not been made available.

### 3.1 Mount Gilead

#### 3.1.1 Landscape Composition

In their listing of the property, NSW Heritage describes the Mount Gilead homestead as 'superbly sited on a long spur of land running parallel to the Appin Road'.<sup>1</sup> This spur is framed to its north by Menangle Creek and to its south by Woodhouse Creek. More broadly, the entire estate covers a vast tract of undulating land between Appin Road and the Nepean River (Figure 3.1). Appin Road skirts the property essentially sidelong, from which broad open views are available through the eastern sector of the Mount Gilead Stage 2 site.

The predominantly cleared and largely gently sloping ridge-top land around Figtree Hill (Mount Gilead Stage 1) belies the nature of the topography of much of the Mount Gilead Stage 2 site and homestead lot (Figure 3.2). The steepness of contour of the landform through the western and southwestern portion of the property is not identifiable from its Appin Road frontage. Neither are the heavily incised creek lines which corrugate the landform (Figure 3.3).

The Mount Gilead Stage 2 site lies on the northern slopes of another spur, to the south of the homestead spur. This ridge broadly extends through the southern boundary of the site and is divided by a series of

natural gullies and creek lines. These depressions and creeks, and their uncleared endemic vegetation, essentially divide the Mount Gilead Stage 2 site into four ‘fingers’ of land that are oriented north to south. The resultant large open paddocks, some of which contain scattered copses of eucalypts, are pockmarked by a series of pastoral dams. These utilitarian features are also etched into the northern slopes of the homestead lot.

The grazing and cropping lands of the Mount Gilead Estate are bifurcated by the Sydney Water Upper Canal, which meanders through the centre of the Mount Gilead Stage 2 site and along the base of the homestead spur. The canal is a prominent feature of the landscape in aerial photography. However, the undulating topography of the place, combined with the carrying capacity of this expansive setting, renders the canal’s linear snaking form relatively inconspicuous (Figure 3.4 and Figure 3.5).

Remnant historical cultural plantings on the property are restricted to the surrounds of the homestead (Figure 3.6 and Figure 3.7). The exception is a sole *Ficus* specimen on Figtree Hill, identified by Aboriginal representatives as a significant cultural and spiritual marker.<sup>2</sup> Several relict exotic trees and shrubs (including mature *Pinus radiata*) remain extant in the former homeyard of the Hillsborough site, abutting Appin Road, as reputedly do two *Malus* (Apple) specimens in the western reaches of that property, toward the historical lake of Mount Gilead.





**Figure 3.2** View looking west through the former Hillsborough site to the Mount Gilead homestead. Note the benign topography near the Appin Road. (Source: Anderson, 2020)



**Figure 3.3** A deeply incised creek abutting Woodhouse Creek, to the south of the homestead. Remnants of a relict timber bridge (Site 28) can be seen in this image. (Source: Anderson, 2020)



**Figure 3.4** View looking south toward the Mount Gilead homestead from the retirement complex (formerly Kilbride). The Upper Canal nestles into the foot-slopes of the homestead spur. (Source: Anderson, 2020)



**Figure 3.5** The Upper Canal from one of the vehicular and stock crossings within the Mount Gilead Stage 2 site boundary. (Source: Anderson, 2020)



**Figure 3.6** View looking west to the homestead and its mature cultural plantings from the central curve of the Mount Gilead entry road. (Source: Anderson, 2020)



**Figure 3.7** Predominantly *Ficus* species skirt the eastern and northeastern side of the Mount Gilead homestead. (Source: Anderson, 2020)





**Figure 3.8** Overview of existing trees within and abutting the Mount Gilead homestead. (Source: Anderson, 2021)

### 3.1.2 Historical Cultural Landscape History

The history of land use planning at Mount Gilead Estate has been determined, since its inception as a pastoral estate, by the topographical, geological, and endemic arboricultural particulars of the property. These natural qualities were fundamental in the place's development as a landmark homestead and as a resource for the estate's utilitarian workings. Whilst underpinning the distribution of agricultural activity, these attributes also determined patterns of historical subdivision, for example the development and proposal of intra-estate roadways. These attributes also determined the engineering development of the landscape, including the construction of bridges, causeways, the historic lake, dams, and the Upper Canal.

In cultural landscape terms, the totality of the Mount Gilead Estate could be considered both a 'clearly defined' landscape (places which have been designed intentionally) and an 'organically evolved' one (places where activities and occupancy gradually shape a landscape). It has been the subject of two centuries of homestead and agrarian master-planning, whilst the overall pastoral setting has been continuously adapted and improved to suit phases of agricultural use.

#### Nineteenth-Century Agriculture and Arboriculture

Early owners of the Mount Gilead Estate clearly understood the desirability of the land as an aesthetic and agricultural asset. Collectively, Reuben Uther, the Rose family and the Woodhouse family were responsible for the first phase of property design at this site. Their design focused on the establishment of an English park-like setting for the Appin Road frontage to the homestead, and on continuing works needed to facilitate the operations and expansions of a working farm.

*The Sydney Gazette and NSW Advertiser* from 23 May 1818 chronicles the then Gilead Farm estate of Reuben Uther (Figure 3.9). It comprised 400 acres, 100 of which were cleared of their endemic canopy. The commanding view of the Cowpastures areas was recorded. The ground was described as being 'unexceptional', having been under cultivation for the prior four years. However, despite this, the crops were noted as 'wonderful'.<sup>3</sup>

It is not clear if Charles Rose made any meaningful additions or changes at Mount Gilead Estate during the 1840s and 1850s. In 1856, however, the first rust was picked up in the wheat crop at Mount Gilead and the crops in the district finally failed c1877.<sup>4</sup> This resulted in significant land use changes on the property, away from cropping and into dairying.

At the time of the proposed 1861 sale of the Mount Gilead Estate by Charles HJ Rose (Lot 1), the homestead lot had 300 of its 400 acres cleared, most of this area divided into paddocks and under cultivation (Figure 3.9). The land between the homestead lot and the Nepean River (Lot 2) was described as 'well-timbered, fine forest land'. A portion of the estate at that time (Lot 3), lay to the north of Menangle Creek and measured 100 acres. Seventy acres of that farm were under cultivation.

When Walter Friend purchased Mount Gilead Estate in 1864, this aforementioned parcel north of Menangle Creek was not included in the estate. As a result, three lots in the northeast corner of the estate remained largely timbered at the time. Lots 7, 8 and 9 of the 1861 subdivision were also described at that time as being 'well timbered, good land'. Lot 10 of the 1861 subdivision was described as very good land, also well-timbered with ironbarks and thornbush. Lots 11–14 were all similarly described as being well-timbered, good land'. Lot 15 of the proposed 1861 subdivision, in the southwestern corner of the estate bordering the Nepean River, was described as being 'rich ironbark forest land'. Lot 16, on the eastern flank of Nepean Creek, was described as 'good ironbark forest land'. Lot 17, between Nepean Creek and the Nepean River, was described as being approximately half cleared. This had possibly been undertaken by the original grantee, Charles Rushton. The Richardson and Wrench sale advertisement described the valuable timber on uncleared portions of the estate being worth 5 to 10 pounds per acre.<sup>5</sup>

An article from *The Goulburn Herald* on 16 May 1877 (originally published in the *Australian Town and Country Journal*) described recent improvements to the Mount Gilead Estate.<sup>6</sup> This included the clearing of the 'outside' paddock abutting the entry road. The paddock was described in the article as having a 'park-like appearance'. The author wrote that the clearance work had resulted in a 'mighty transformation' at considerable trouble and expense. This work was evidenced in photographs from the 1880s (Figure 3.12–Figure 3.16).

The clear felling of the homestead ridgeline in the 1870s, for the purposes of residential development and cropping, likely preceded the installation of the first cultural plantings around the house and its outbuildings by some years. Owing to Thomas Rose's landscape planning and beautification works on the property during the 1820s and 1830s, it seems likely that it was under his oversight that the first tranche of cultural plantings on Mount Gilead lands would have been made. The size of the planted specimens in 1880s photograph and etching confirms this dating (Figure 3.17–Figure 3.18).

These records suggest that the majority of the initial cultural plantings made around the homestead were Pines. Their stately columnar form seen in the images of the homestead spur at that time (Figure 3.17–Figure 3.18). At least a dozen semi-mature pines are identifiable around the homestead in photographs from 1886, the majority of these scattered between the house and the outbuildings to its

west (Figure 3.19–Figure 3.23). Pines had also been planted along the eastern boundary of a fenced kitchen garden (or area with similar use) to the south of the former coach house building.

The majority of the existing Moreton Bay fig trees around the homestead and along the carriage drive were either very immature or had not been planted by this time. Indeed, there appears no evidence to conclude that the original carriage drive to the homestead ever supported a continuous avenue of landmark cultural plantings from Appin Road. In addition, the site's sole bunya pine also appears not to have been planted by the 1880s. Irregularly placed pines abutted the roadway, downslope from the mill, in late-nineteenth century images. The first cultural plantings made around the historic mill (and between it and the homestead) were also largely pines. A couple of young figs were also evident. These plantings, mostly within the 'windmill paddock', were housed in quite formal and large timber tree guards which were presumably installed for livestock.

An article from *The Sydney Mail and New South Wales Advertiser* of 5 January 1878 reported that the 'old place' had an area of about 2,200 acres.<sup>7</sup> It identified that the foundation for the property's herd was laid in 1872 by Edmund Hume Woodhouse, with the purchase of a champion shorthorn bull and the importation of several pure-bred cows. The article described that:

*The farm, as it is at present, bears the mark of skilful management on nearly every yard of its soil. Its pasture paddocks have been judiciously cleared, with a due regard to shade and shelter. The fences are substantial, and the gates models in their way. Drainage, where required, has received attention; plantations have been formed and other good works are in progress. On a rich flat on the Camden side of the Mount nine acres may be seen under green crops, which have regular rotation, and from this patch rich food enough for forty head of stock can be obtained the year through. Planter's Friend, barley, oats and vetches grow luxuriantly in a soil which is well manured and deeply cultivated. Then, on the other side, about a mile away, across a deep creek, there is the farm proper, where 55 acres last year yielded 100 tons of excellent oaten hay, the greater part of which is at present in stock. By the side of this, there are 80 acres under English grasses. Hornsby's double furrow plough and a Hornsby mower have done service here, with harrows and rollers of the most approved patterns. But to bring the produce of the farm to head-quarters is not an easy work, for the deep creek before mentioned has to be crossed by taking a great sweep, and to obviate this, and to supply a direct road, a fine bridge, which may be termed a most unusual undertaking for private hands, is in course of erection ...*<sup>8</sup>

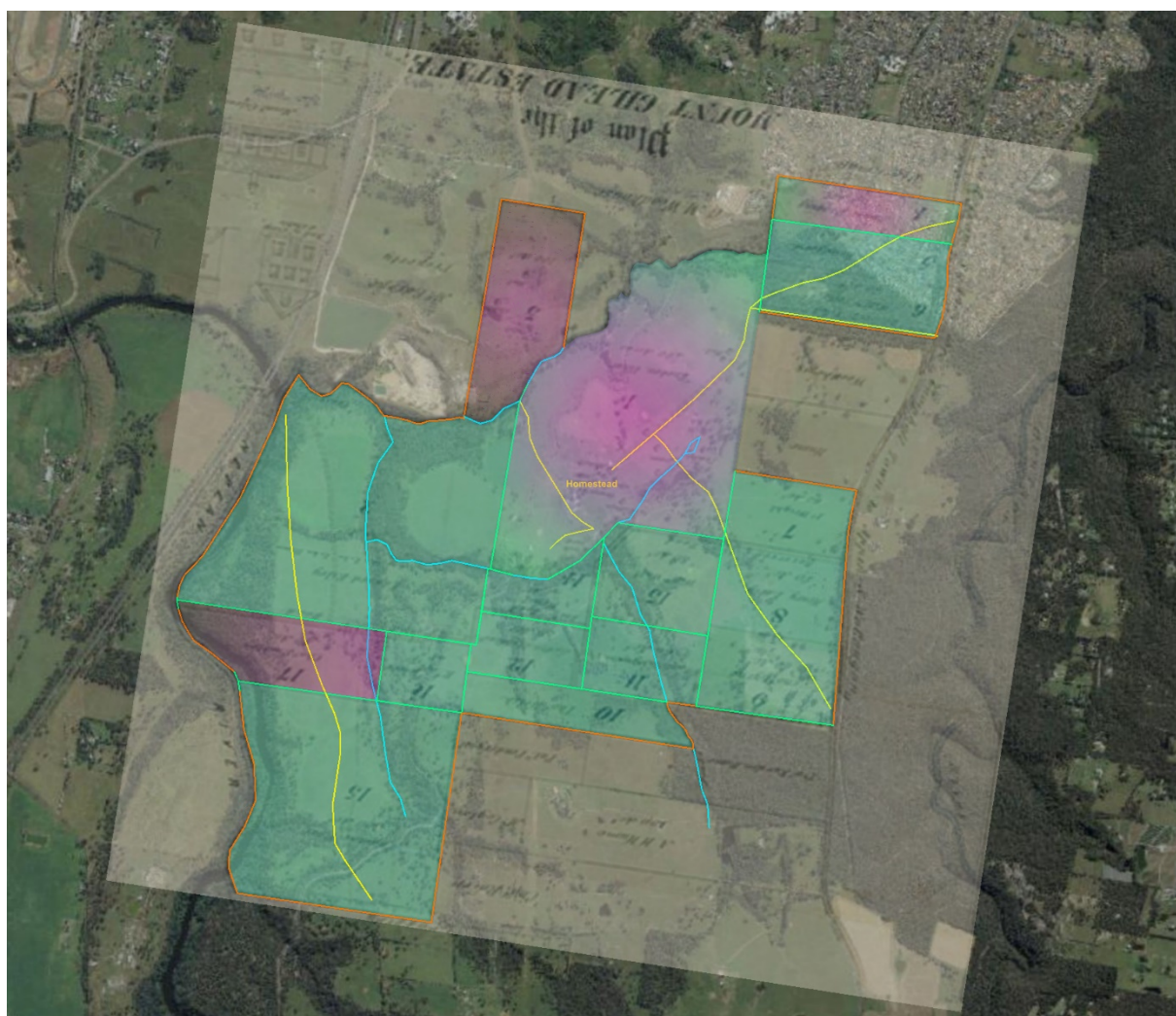
An article from *The Goulburn Herald and Chronicle* of 26 April 1879 described two paddocks on the property.<sup>9</sup> The 'Windmill Paddock' supported a grand heifer. The 'road paddock' contained grass 'luxurious enough for anything' and supported a pure stud herd of Devon cattle.<sup>10</sup> These zones have been identified in orange, north of the homestead and north of the lake (Figure 3.11). In addition to the cow paddocks, new piggeries were described as being recently completed at a cost of 200 pounds. The piggeries were planned on a 'perfectly new principle' that managed cleanliness, ventilation, and comfort.<sup>11</sup> All stocks were reported to be in good order; the ornamental deer looked contented in their 'park' with a Brahmin bull, cow and calf.

An article from the *Sydney Mail and New South Wales Advertiser* on 10 March 1883 contained an article concerning the sale of livestock at Mount Gilead Estate.<sup>12</sup> Eighty Devon breed females were available as well as 'sires of the best known strains'. The entire stud is described as being 'reliable' and all 'on grass'. A selection of Romney Marsh sheep were on offer, reported as being 'very neat specimens of the breed'.

The property was proposed to be sold in 1888 with an auction by Mills and Pile (on behalf of Edmund B Woodhouse). The sale did not proceed. Neither did the subdivision of the property into farms from



**Figure 3.9** Section of Primary Application 16740, showing part of the Gilead Estate, with a section of Woodhouse Creek plotted. The creek appears to have been known as 'Uther Creek'. Note the 'marked tree' notation at the junction of Uther's grant, Riley's grant (at far left) and the creekline. (Source: NSW Land Registry Services)



**Figure 3.10** 1861 proposed subdivision plan, showing indicatively (in graded pink) the original parcels within the then Mount Gilead Estate which had been cleared or partially cleared of endemic woodland by that time. This included the homestead lot, an allotment to the north of Menangle Creek, a lot in the northeast corner of the original estate, and a lot facing the Nepean River. It would appear that the other allotments which made up the estate remained unaltered woodland from the time of the original land grants (shown in green). The yellow lines mark early accessways through the area. (Source: GML, 2020)





**Figure 3.11** Late 1870s landscape of the Mount Gilead Estate. Lands which had been partially cleared by 1861 are shown in graded pink, with additional cleared lands (by 1878) shown notionally by the three orange rectangles. The majority of lands through the western and southern portions of the estate remained unaltered woodland at this time. The yellow lines mark early accessways through the area. (Source: GML, 2020)



**Figure 3.12** Late 1800s photograph of Mount Gilead Estate viewed from Kilbride. The Mount Gilead Estate windmill is visible in the centre left, middle distance. The image also demonstrates the barrenness of the northern slopes of the homestead surrounds by that time. (Source: Sydney Water/Water NSW Historical Research Archive)



**Figure 3.13** 1883 etching showing the view toward the Mount Gilead homestead from the east. (Source: Sydney Morning Herald, 10 March 1883)





**Figure 3.14** 1886 photograph showing the Mount Gilead homestead spur from the paddocks to the southeast. (Source: Campbelltown City Library, Local Studies Collection)



**Figure 3.15** Detail of 1886 photograph showing the Mount Gilead homestead spur from the paddocks to the southeast. (Source: Campbelltown City Library, Local Studies Collection)





**Figure 3.16** View looking toward Appin Road from the historic mill, showing the large areas of cleared land to the south and east of the homestead's artificial lake. (Source: Campbelltown City Library, Local Studies Collection)



**Figure 3.17** c1886 photograph showing an example of a protective tree guards around mid-nineteenth century plantings. The specimen in this image may be the silky oak (*Grevillea robusta*) which remains to the southwest of the historic mill. (Source: Campbelltown City Library, Local Studies Collection)



**Figure 3.18** 1912 photograph showing the view of the southwestern side of the former mill. Captured in this image are what look to be a pepper tree (*Schinus molle*) in the foreground and an older pine tree—likely from the mid-to-late-1800s—to the northwest (left) of the mill. (Source: Trove, HH Fishwick)





**Figure 3.19** The short corridor of mostly Moreton Bay figs leading to the Mount Gilead homestead. (Source: Anderson, 2020)



**Figure 3.20** Likely the oldest of the site's Moreton Bay figs at left and the mature bunya pine at right. (Source: Anderson, 2020)



**Figure 3.21** Looking northeast along the late-nineteenth century/early twentieth century driveway fig plantings. (Source: Anderson, 2020)



**Figure 3.22** An old silky oak to the southwest of the historic mill. (Source: Anderson, 2020)



**Figure 3.23** Oblique aerial showing the major trees in and around the Mount Gilead homeyard. (Source: GD Facebook, 2018)

### 1888 Attempted Property Sale

The sale proposal was described in an article in *The Bulletin* of 7 April 1888.<sup>13</sup> The advertising highlighted both the general value of the estate and the degree to which it had been ‘highly improved’:

*About 1600 acres have been cleared of dead wood and unsightly trees, leaving only valuable living timber, giving the Estate a Park-like appearance, resembling an English Country Seat... Magnificent artificial lake ... boathouse and bathing house ... Gardens, Orchards ... Views Grand in the Extreme extending to the Blue Mountains.*

The 1888 Mills and Pile sales brochure stated that the Mount Gilead Estate had been under systematic improvement since the 1860s.<sup>14</sup> This had been primarily undertaken through clearing, and the laying down of artificial pastures such as clover, rye grass, Kentucky blue grass, buffalo grass, cocksfoot and rib grass. The reported result was that much of the estate’s pasture was composed entirely of these grasses. Moreover, the ‘carrying capacity’ of the property being quadrupled.

The brochure also indicated an attempt to install principles of the picturesque at the property. Such measures included planting hundreds of ‘the Choicest Trees’ on the hills and slopes of the estate. They were planted in single trees and clumps. The visual effect of the varied foliage across the property was a very striking contrast against the backdrop of a largely ironbark endemic tree community. While photographic evidence does show numerous cultural plantings around the homestead in the late-nineteenth century, these images do not show hundreds of trees, as described (Figure 3.15). It is possible that this description included some poetic licence, both in terms of the quantum and visual effect of planted trees across the estate. It also remains unclear whether the reference to this great palette of specimens related to orchard trees on the property or to trees planted for aesthetic design purposes.

Site investigation for this assessment has not found evidence of remnants of a cultural planting scheme through the Figtree Hill (Mount Gillard Stage 1) and Mount Gillard Stage 2 proposed development sites. A couple of fig trees exist in the gully below the historic lake and in the paddock to its south, but these specimens are most likely self-seeded. Moreover, there is no photographic evidence of this kind of scale of ornamental planting design having been undertaken in the mid-to-late-nineteenth century. However, bushfire evidently had an impact on the estate in the early decades of the twentieth. An article from the *Camden News* of 12 November 1936 describes a large bushfire on the Mount Gilead Estate.<sup>15</sup> It is possible that this and other bushfires in earlier decades destroyed a portion of the exotic tree plantings on the estate.

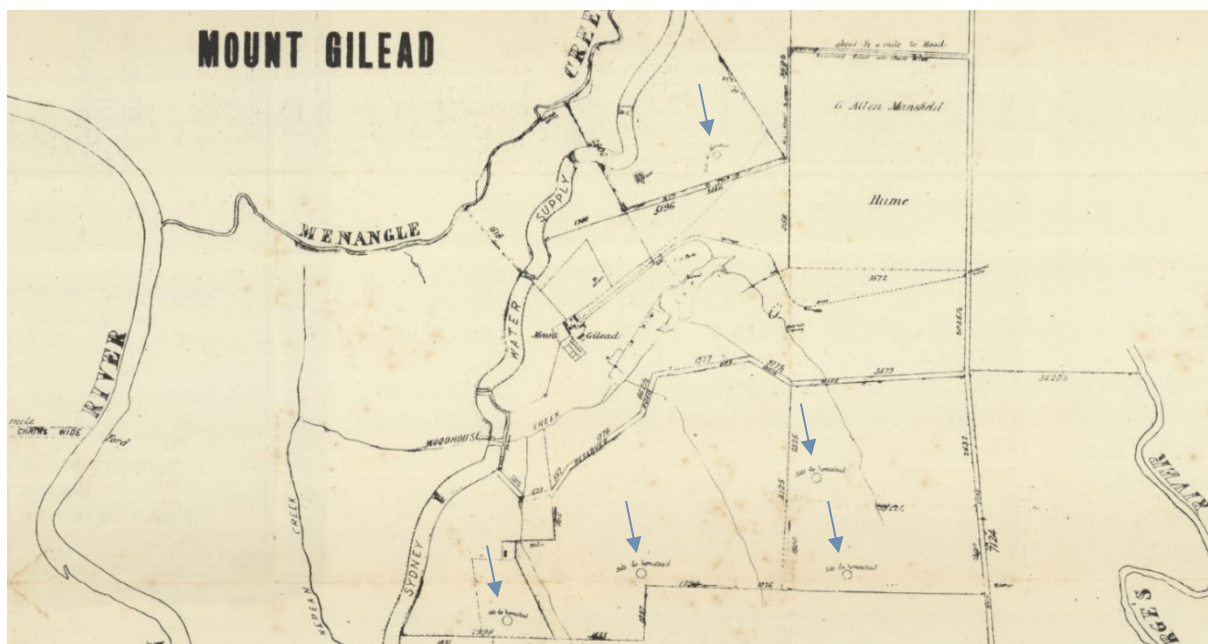
Finally, the sales brochure catalogued various landscape aspects of the estate. This included a spring on Menangle Creek, the gravitational irrigation opportunities afforded to the property from the Sydney Water Supply Canal, and the virgin soils throughout nearly all the property. The brochure stated that former residents of the property confirmed that a considerable volume of wheat to the acre had been produced on the hills near the homestead. Two tonnes of oaten hay were said to be grown per acre. Moreover, a vast assortment of other crops was shown to provide a financial return in past years. These crops included lucerne, maize, rye, peas, beans, swede turnips, potatoes and carrots. The soils were said to have been adapted for fruit tree cultivation as well. Apricots, nectarines, almonds, olives, grapes, oranges, citrons, lemons and plums were noted on the property at that time.

The 1888 Dawson and Dawson survey of the property (**Figure 3.25**) was presumably commissioned for the Mills and Pile proposed sale or subdivision. The plan recorded various aspects of the property, including the recently completed Sydney Water Supply Canal, existing paddock boundaries, roads,



and the sites of homesteads (Figure 3.25). It is unclear whether these 'homestead sites' were ever constructed. They were, more likely, proposed locations should subdivision of the property occur. These locations, highpoints on the property, were clearly formulated to both maximise potential views to the west and for proximity to Appin Road. At this time, the majority of the lands between Nepean Creek and the Nepean River remained uncleared.

Neither sale nor subdivision apparently occurred until 1911, when William Henry Harris of Darling Point bought the estate.



**Figure 3.24** Detail of the 1888 Dawson and Dawson survey of the Mount Gilead Estate at the time of the Mills and Pile proposed sale. Sites for proposed homesteads are identified by arrows. (Source: National Library of Australia, call number MAP LFSP 447, Folder 34)



**Figure 3.25** 1888 Dawson and Dawson survey of the Mount Gilead Estate, identifying the location of the five proposed homestead sites, which may have been constructed if the subdivision had gone ahead. (Source: Dawson and Dawson 1888, with GML additions 2020)

### Twentieth-Century Agriculture and Arboriculture

There is no evidence to suggest that any fundamental layout changes or major developments occurred on the Mount Gilead Estate during the early decades of the twentieth century. The 1904 Parish of Menangle map (Figure 3.35) suggested the same overall configuration of built assets on the estate as had existed during the latter part of the nineteenth century.

The place was worked as a dairy in 1904. An article in the *Sunday Times* of 26 April 1908 described the Mount Gilead property as having 'ceased to be a model gentleman's residence, having fallen into partial decay'.<sup>16</sup> The land however was recorded at that time as still being lush and fertile. An article from the *Sydney Mail* of 22 December 1920, like many others before it, waxed lyrical about the qualities of the estate.<sup>17</sup> It described the principal estate buildings being in the 'last stages of ruin and decay'.<sup>18</sup> Unfortunately, none of these articles catalogued the state of the property's outer paddocks, forested areas, and constructed assets.

The *Camden News* of 15 November 1923 discussed the proposed sale of the property.<sup>19</sup> The Mount Gilead Estate was described as fenced into 12 paddocks, 1000 acres being well improved and good grazing country, or which 500 acres had been cultivated. Permanent water was listed as being available in all paddocks. The historic lake is described in a *Daily Telegraph* article of 30 June 1931 under the title of 'May the Wilderness Blossom'.<sup>20</sup> The feature was said to be 252 yards long on one side, 214 on the second and 80 yards across at its widest point.

Almost all of the Mount Gilead Estate lands between the Nepean Creek and the Nepean River remained in their original canopied form until the later decades of the twentieth century. The 1947 aerial of the site (Figure 3.26) shows that much of the southern central portion of the estate lands facing the Beulah homestead and property remained uncleared at that time. The 1956 aerial (Figure 3.27) indicate that they remained uncleared during the following decade.

The 1947 aerial also potentially captured the original alignment and composition of the homestead entry drive abutting the Mount Gilead homestead. Remnant ridge and furrows lines from former crop land on either side of the homestead spur are visible in this aerial. The same indentations were visible in the land cleared during the 1870s to the southwest of the Woodhouse bridge (Site 47).

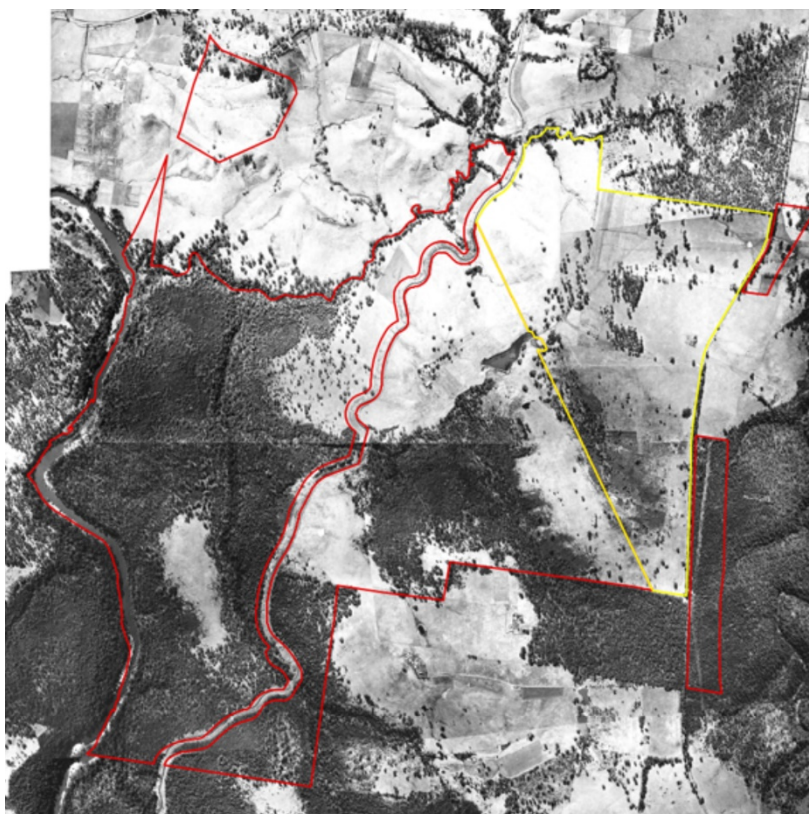
Redesign of the homestead gardens appears to have been undertaken by the Macarthur-Onslow family in the late 1960s.<sup>21</sup> An article from the *Sydney Morning Herald* describes the multiple Moreton Bay figs around the homeyard. It also listed Chinese elms and, of note, more than one bunya pine. A Belgian grapevine seems to have been planted along the principal verandah during this period.

By the mid-1980s, the southern portion of land addressing the Beulah Homestead property had been mostly cleared for use as grazing land. In addition to this, a larger portion of the lands between the Nepean Creek and the Nepean River were also cleared for the same reason. The felling of this latter area was gradually expanded over the last several decades.



**Figure 3.26** Aerial of the Mount Gilead homestead and surroundings. (Source: 1947, Department of Finance)





**Figure 3.27** 1956 aerial of the Mount Gilead homestead and surroundings. The yellow outlines is the Stage 1 area, the red line is the Stage 2 area. (Source: Lendlease)

### Infrastructure—Accessways

At the time of the proposed 1861 subdivision, the existing entry road to the homestead (passing the remnants of the former Hillsborough site and sweeping around the historic lake onto the homestead spur) had not been laid out. The original carriage drive (Figure 3.28–Figure 3.29) appears to have remained in situ at that time. The primary drive ‘gun-barrelled’ to the northeast of the homestead, on the alignment of the existing vehicular corridor below the historic mill. It then swept around the junction with an abutting land holding before bifurcating toward Appin Road through what is now the Noorumba Reserve. A secondary drive, also from the first half of the nineteenth century, extended from near the southeastern corner of the estate, on Appin Road, and joined the aforementioned drive near the historic lake. These alignments are indicatively recorded in Figure 3.31. They are not located within the Mount Gilead Stage 2 site.

It is interesting to note that the original northern carriage drive did not surmount the landmark Figtree Hill, rather skirting along its southern slopes. It would have projected through the relict shale quarry north of the historic lake. The original southern carriage drive, which projected through the southern apex of the Figtree Hill land, has been overlaid in Figure 3.30. This is because it is not entirely clear if that non-extant road alignment lay to the east or west of the historic lake.

During the first half of the nineteenth century, there were no formal carriage ways that connected the Mount Gilead homestead to the Nepean River. This is despite the fact that, by 1861, the estate’s frontage to the river was extensive.

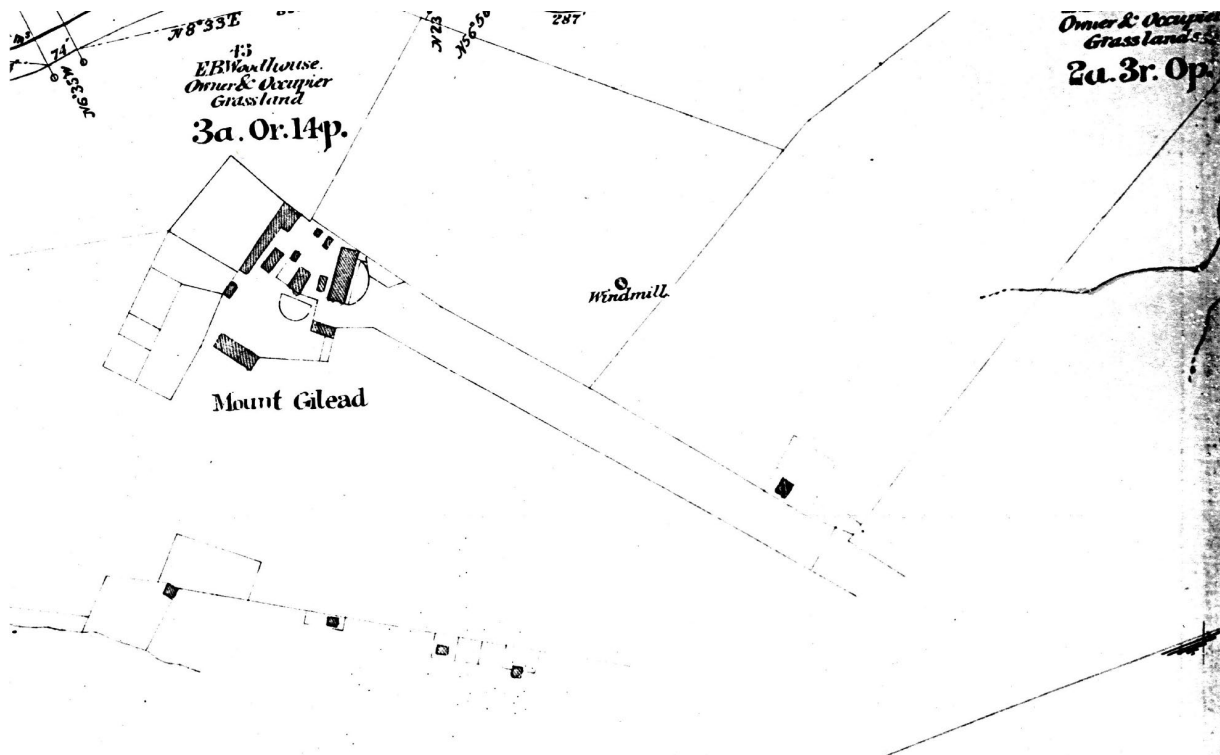
During the later nineteenth century, various private and public roads were laid out through the Mount Gilead Estate (Figure 3.30–Figure 3.34). These were in addition to the Appin Road entry drives. The road corridors, both proposed and/or realised, seem to have met at three key locations—Appin Road, the site of a timber bridge on a feeder creek into Woodhouse Creek (Site 28), and the relict weir to the southeast of the sandstone bridge built by Woodhouse (Site 30).

Most of the accessways planned and developed through the property during the nineteenth century initially extended through largely uncleared forested land. Wholesale felling of the eastern and southeastern portions of the Mount Gilead Estate was largely only undertaken from the 1870s—much of the endemic forest land in the outer sectors of the consolidated estate remained intact until the latter decades of the nineteenth century. The principal planted changes to the landscape of the place occurred around the homestead spur.

The primary intra-estate accessways comprised:

- A serpentine accessway connecting the 1870s Appin Road entranceway to the Mount Gilead homestead, before extending westward toward the rail viaduct at Menangle (burgundy in Figure 3.33–Figure 3.34). The road appeared on the 1917 Great Britain War Office map of the area. It is not known if this road was private and only used by owners of the Mount Gilead Estate, or if it was available for public use.
- An access road crossing the Upper Canal linked the southern side of the Mount Gilead Estate to Appin Road (yellow in Figure 3.33–Figure 3.34). The sandstone bridge, identified as constructed by Woodhouse (Figure 3.3), was associated with it. The roadway was plotted on the 1888 Dawson and Dawson survey. However, it was not recorded on the 1917 Great Britain War Office map of the area. This suggested it may have fallen out of use by the early twentieth century.
- A subdivision service road provided access to the original grant allotments (green in Figure 3.33–Figure 3.34). The road appeared on the land title documents until 1890. However, it is unclear whether this road was ever built.
- A public thoroughfare extending through the far western portion of the estate (orange in Figure 3.33–Figure 3.34). The accessway connected Appin Road to the early nineteenth century weir on the Nepean River (Site 31). Prior to a bridge being built at Menangle, the weir was the only means of access across the watercourse. The track then extended west to the neighbouring estates of Beulah and Meadowvale. The road appeared to be utilised until 1910, around the time William Henry Harris purchased Mount Gilead Estate and stopped public access.
- The main contemporary vehicular corridor is the relict roadway used for a sand mining operation on the Nepean River in the 1980s.
- An assortment of makeshift tracks existed throughout the Mount Gilead Estate lands since its inception as farming property. The nineteenth-century estate photographs and maps, and aerial photos clearly show these features.





**Figure 3.28** Part of 1892 survey showing the resumed lands for the Upper Canal at Mount Gilead Estate. The original carriage drive alignment (since partially removed) is located straight to the eastern façade of the dwelling and the former large working garden area at the southwestern corner of the homestead group. Note that elements within this map are located inside the Mount Gilead SHR boundary. (Source: Sydney Water / WaterNSW Historical Research Archive, INDEX22/2371 Sh14)

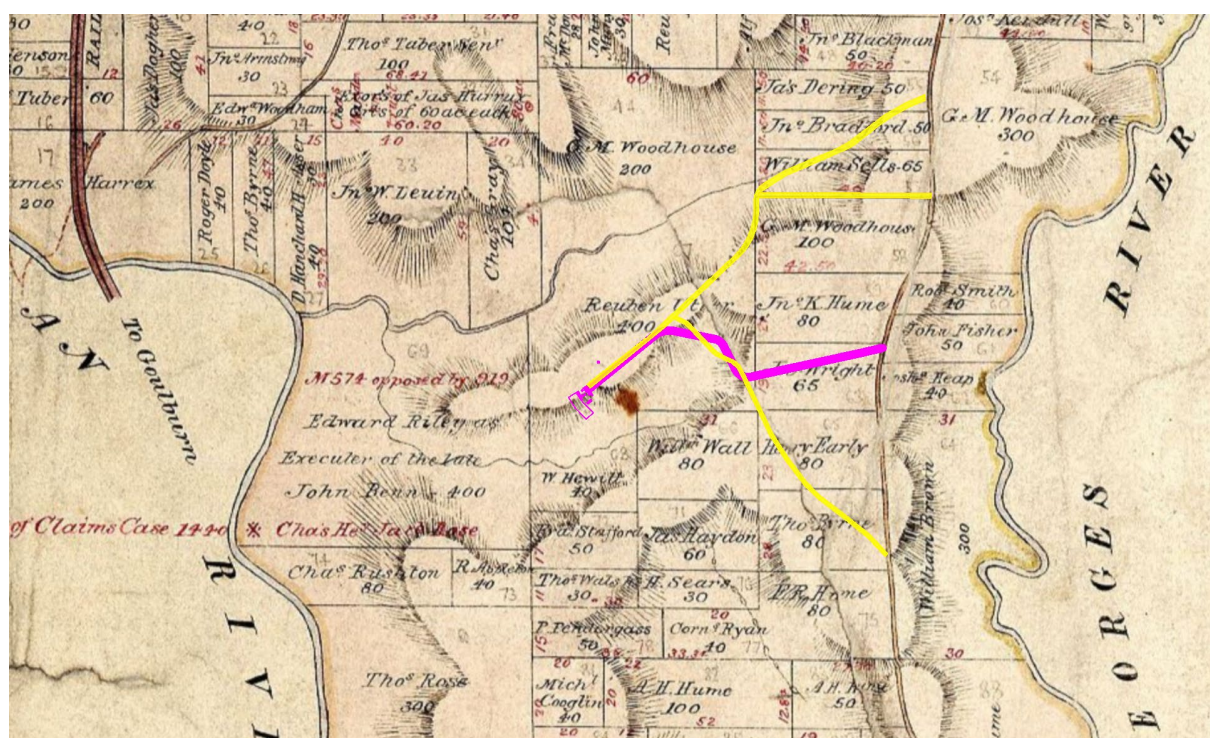


**Figure 3.29** 1908 photograph of the homeyard's eastern garden with 'teardrop' carriageloop. The image was taken prior to the mid-twentieth century realignment of this section of the carriage drive. Note what appear to be a few of the earliest conifer plantings on the site (at centre left)—now removed—and possibly a maturing Moreton Bay Fig (near the left side of the image). (Source: *Sunday Times*, 26 April 1908)

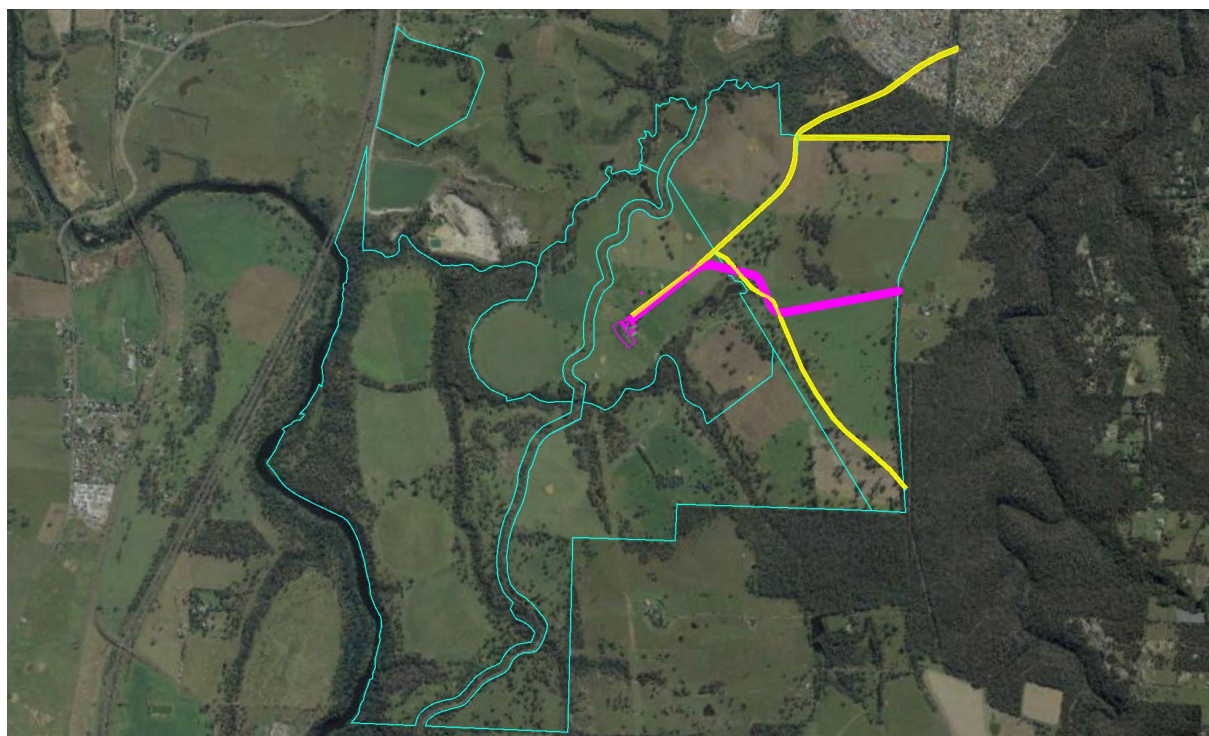


**Figure 3.30** Indicative representation of the alignment of the original primary northern carriage drive to the homestead (in yellow), with the 1870s-built existing driveway alignment shown in pink. The blue overlay line marks the alignment of a drive to the lake visible in photographs from the 1880s. (Source: GD Facebook, with GML additions 2020)



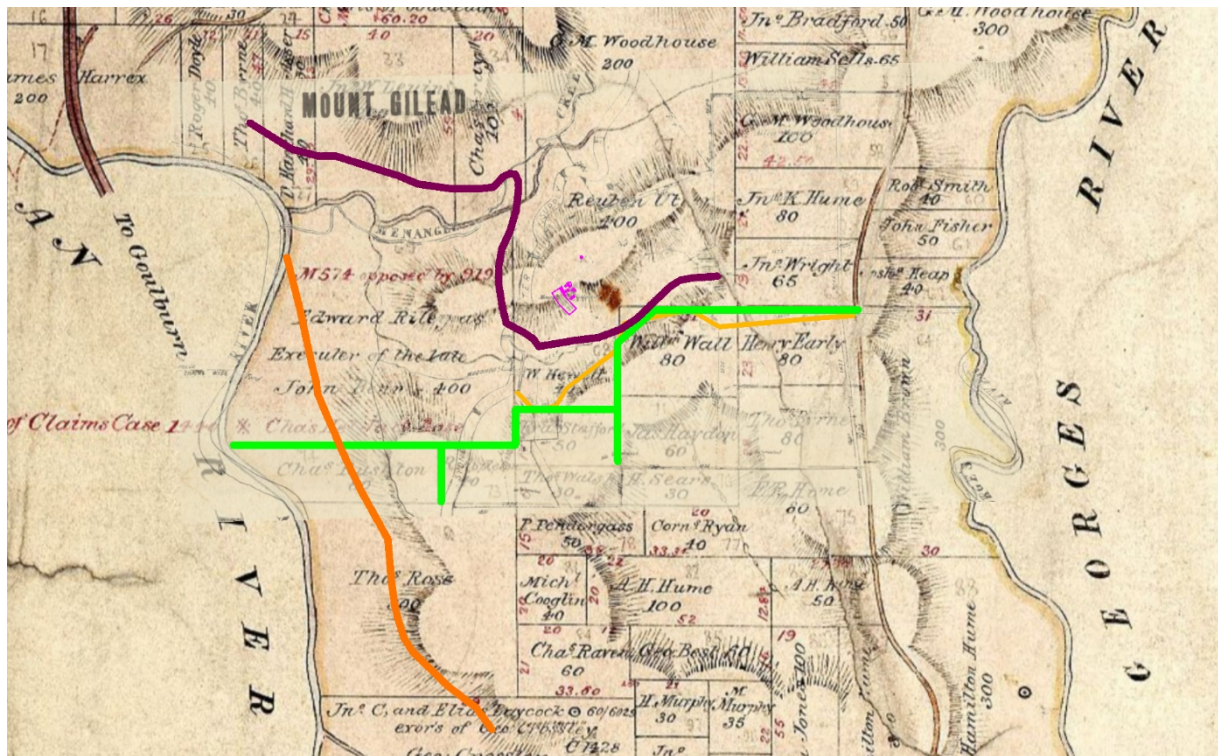


**Figure 3.31** Section of undated Parish of Menangle map showing, approximately, the location of the homestead and the earliest carriage drives into the property (in yellow). The 1870s-built existing driveway alignment in shown in pink. (Source: NSW Land Registry Services, with GML additions 2020)

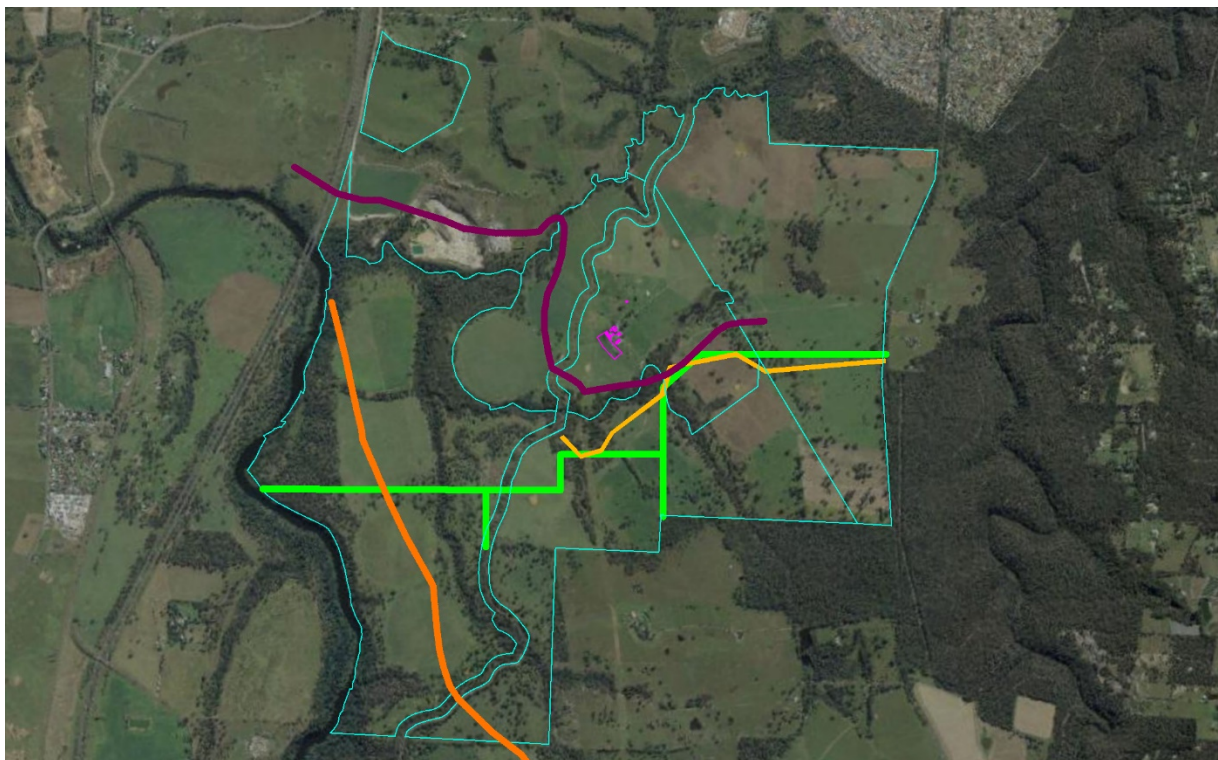


**Figure 3.32** Aerial image over Mount Gilead Estate showing, approximately, the location of the homestead and the earliest carriage drives into the property shown in yellow. The 1870s-built existing driveway alignment in shown in pink. An indicative plot of the Mount Gilead Stage 2 site boundaries has also been transposed onto this image to help locate the alignments of the original drives. (Source: SIX Maps, with GML additions 2020)





**Figure 3.33** Overlay of the early intra-estate planned and realised accessways. (Source: NSW Land Registry Services, with GML additions 2020)



**Figure 3.34** Overlay of the early intra-estate planned and realised accessways. (Source: SIX Maps, with GML additions 2020)

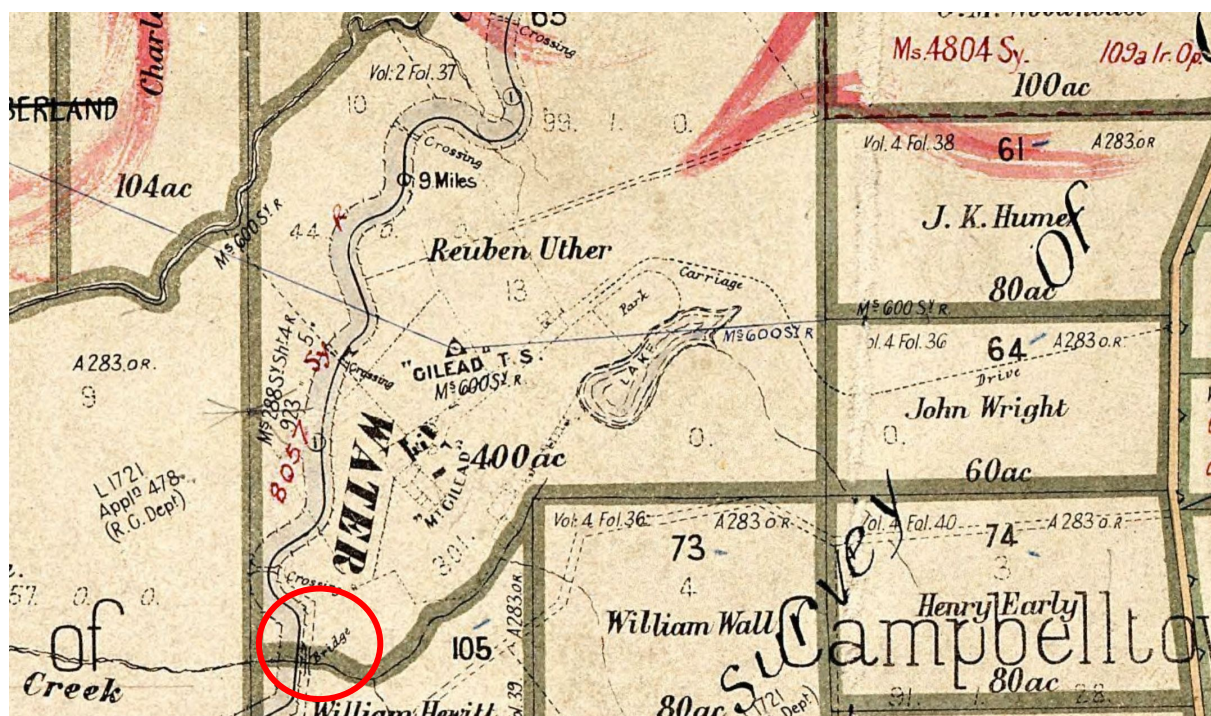


## Infrastructure—Bridges

The construction of a sandstone Woodhouse Creek bridge, build by Edward Hume Woodhouse, in the late 1870s was a key piece of transit infrastructure on the property. The bridge created ease of access into the southern reaches of the, by then, expansive land holding from the western utilitarian buildings of the homestead. Moreover, it did so without having to circumnavigate Woodhouse Creek.

The bridge would have directly serviced the 55 acres of land under cultivation referred to in the article from 5 January 1878 (the lower left orange zone shown in Figure 3.11). This sector of the property was likely cleared under the ownership of Woodhouse. Ridge and furrow remain evident through this zone in a 1947 aerial photograph (Figure 3.36). The bulk of the land facing Appin Road was also likely cleared during the ownership of Woodhouse.

An article from *The Sydney Mail and New South Wales Advertiser* of 22 October 1881, catalogued the specifics of the Woodhouse bridge.<sup>22</sup> This included its composition of 10,000 cubic feet of stone, 11,000 feet of sawn timber, and the floor being 103 feet in length. The bridge was characterised as having been developed ‘specially with the view of facilitating work on the farm’.<sup>23</sup>



**Figure 3.35** Detail of 1904 Parish of Menangle map, showing the water canal (left) spanning Woodhouse Creek next to the sandstone bridge constructed by Woodhouse. (Source: NSW Land Registry Services, with GML additions 2020)



**Figure 3.36** 1947 aerial of Mount Gilead showing cleared land with evidence of ridge and furrow agricultural activities. (Source: Nearmaps 2021)

### Landscape Aesthetic

Various articles from the late 1800s waxed lyrical about the qualities of the bucolic landscape in this part of the Cowpastures district and of the Mount Gilead Estate specifically. *The Sydney Mail* and *New South Wales Advertiser* of 10 March 1883 included valuable depictions of the property at that time. The article described Mount Gilead homestead as being ‘in the centre of a tract which may well be hailed as the most beautiful on the Southern line’.<sup>24</sup>

Photographs and engravings from the 1880s capture the core of the Mount Gilead Estate lands, leading toward the eastern side of the homestead spur (Figure 3.13–Figure 3.14). These images confirm the descriptions in newspapers of the period. The Appin Road approach lands were quite thoroughly cleared so that they might be re-fashioned as pasture lands and, aesthetically, to form a manicured and visually agreeable frontispiece to the estate.

The visual grandeur of the property lay to the west over the Nepean middle-ground. However, it was the utilitarian rear quarters of the house, rather than the formal frontage, which faced these expansive views. The front of the house was oriented to welcome visitors arriving from Appin Road and turned its back on the grand setting. The orientation and layout of the house and its outbuildings identifies the extent to which the Appin Road ‘address’ was fundamental in Uther and Rose’s property planning.



### 3.1.3 Views and Vistas

The homestead spur, the historic mill and the homeyard's bunya pine are partially visible in the background of views from various sectors of the Mount Gilead Estate—both on the Figtree Hill and Mount Gilead Stage 2 site (Figure 3.36–Figure 3.37). However, their prominence in views from the Mount Gilead Stage 2 site is restricted as a result of the density of endemic vegetation along the Nepean Creek, Woodhouse Creek and the latter's tributaries.

The elevation of the homestead spur enables sweeping vistas through and across the Figtree Hill and the Mount Gilead Stage 2 site from the surrounds of the homeyard, mill and entry drive (Figure 3.38–Figure 3.39). Of note, however, is that the density and scale of endemic forest communities along the site's creeklines (and copses within some paddocks) results in many of those outer paddocks within the Mount Gilead Stage 2 site not being visible from the homestead. This is both the case for the southern paddocks, facing Beulah and Meadowvale, and for the expansive cleared sectors west of the Nepean Creek.

Due to the low degree of visual connectivity between the homestead core and much of the Mount Gilead Stage 2 site, these outer paddocks do not have a strong sense of place in terms of their interpretability as part of the Mount Gilead Estate. This is augmented by the limited cultural heritage fabric in these pastures and cropping areas. Residential development through the Mount Gilead Stage 2 site would likely further diminish the accessibility of the present glimpse views of the homestead group from the subject outer paddocks.

Due to Mount Gilead Estate's underlying topography and its retained endemic canopy, views from much of Figtree Hill (Mount Gilead Stage 1) are largely restricted to that sector of the site. The exception to this is from the northwestern corner of the Mount Gilead Stage 1 site, which straddles the northern extent and high-point of the homestead spur. From there, expansive 360-degree open vistas are available across the estate and the broader Menangle landscape.



**Figure 3.37** Looking north toward the Mount Gilead Estate core from the southern boundary of the property, near the abutting Meadowvale property. (Source: A Anderson, 2020)



**Figure 3.38** Glimpse views to the homestead spur from the Stage 2 area, west of the Nepean Creek. (Source: A Anderson, 2020)



**Figure 3.39** Looking south over the historic lake from the homestead spur, showing the density of endemic canopy through the southern portions of the Mount Gilead Stage 2 site. (Source: A Anderson, 2020)



**Figure 3.40** View from the footslopes of the historic mill, looking west, past the homestead, to the Woodhouse and Nepean creeks in the middle distance. (Source: A Anderson, 2020)



**Figure 3.41** Looking north from the Mount Gilead homeyard surrounds, showing the dramatic scarring on the landscape of the former Kilbride site, created by the deeply incised aged care facility cut into that hillside. (Source: A Anderson, 2020)



**Figure 3.42** The broad vista west from the fig tree hill. (Source: A Anderson, 2020)



**Figure 3.43** Intra-site views through the southern corner of the Mount Gilead Stage 1 site. (Source: A. Anderson, 2020)



**Figure 3.44** Looking east across the centre of the Mount Gilead Stage 1 site from the sole fig tree at the homestead spur's highpoint. (Source: A. Anderson, 2020)



## 3.2 Glen Lorne

An article from *The Australian Town and Country Journal* from 12 November 1892 described Glen Lorne as ‘a most enjoyable and easily accessible’ property.<sup>25</sup> The earliest historical photograph of Glen Lorne (1881) indicates that the property originally supported a highly manicured front (western) garden, facing Appin Road, with floral display beds (Figure 3.44). Remnants of the manicured display gardens from the mid-to-late nineteenth century are clearly visible. The 1881 photograph also shows men in cricket attire, suggesting that there was enough tended lawn in the grounds of the property to enable the game to be played (Figure 3.44). This was likely an outdoor garden ‘room’ of the homeyard.

By the 1880s, the property contained a range of mature cultural plantings which defined the homeyard and the southern and northern wings of the house. It is not clear if the existing bunya pines and mature figs had been planted by the time of the 1881 photograph (Figure 3.44). Photographic aerials (Figure 3.45–Figure 3.56) show a mature windbreak row planting in the paddock to the south of the house, some plantings of which remain today. The images suggest that there were no expansive working gardens or orchards in the core of the property.

A photograph of the northern wing of Glen Lorne taken c1920 (Figure 3.45) confirms that a driveway formerly led to that northern façade from the entry carriage drive. This was possibly the owner’s entry, while visitors were ushered onto the carriage/pedestrian loop in front of the residence. The front garden contained a circular walk and/or drive offset from the dwelling’s western façade. It is not clear if the entry carriage drive from Appin Road fed into this feature or if it was primarily for pedestrian use. Aerial photographic analysis from the 1950s and 1960s (Figure 3.45–Figure 3.56) confirms that an arcing entry drive from Appin Road (presumably the original driveway alignment) led to the northern wing of the house. By that time, the front garden ‘carriage’ loop had been removed.

By the late 1970s, the property was in a considerable state of disrepair. Photographs from that time (Figure 3.46) confirm that much of the nineteenth-century detail of the gardens had been lost to the ravages of time. This was either through purposeful removal of features to simplify the grounds during the first half of the twentieth century, or from general neglect. Other than a few shrubs flanking the dwelling at the end of the 1970s (Figure 3.47), the existing bunya pines appear to have been the only landscape features of note in the vicinity of the house at that time. Very little change has occurred to the grounds of the property since the 1981 fire, which resulted in the removal of the home and its outbuildings (Figure 3.55–Figure 3.56).



**Figure 3.45** 1881 photograph of the tended lawn in the grounds of Glen Lorne. (Source: Campbelltown City Library, File 004/004023)



**Figure 3.46** c1920 photograph of the north wing of Glen Lorne. (Source: XXXX)



**Figure 3.47** 1979 photograph of Glen Lorne, showing the house falling into disrepair. (Source: Campbelltown City Library File 001/001696)



**Figure 3.48** 1977 photograph of the Glen Lorne gardens. (Source: Campbelltown City Library File 001/001705)



**Figure 3.49** 1975–1979 photograph of Glen Lorne. (Source: Campbelltown City Library File 001/001707)





**Figure 3.50** 1981 photograph of the Glen Lorne.  
(Source: Campbelltown City Library File 001/001715)



**Figure 3.51** 1981 photograph of the Glen Lorne.  
(Source: campbelltown-library.blogspot.com (Turner Collection))



**Figure 3.52** 1956 aerial photograph of Glen Lorne.  
(Source: NSW Government Historical Imagery)



**Figure 3.53** 1965 aerial photograph of Glen Lorne.  
(Source: NSW Government Historical Imagery)



**Figure 3.54** 1970 aerial photograph of Glen Lorne.  
(Source: NSW Government Historical Imagery)



**Figure 3.55** 1984 aerial photograph of Glen Lorne.  
(Source: NSW Government Historical Imagery)



**Figure 3.56** 1994 aerial photograph of Glen Lorne. (Source: NSW Government Historical Imagery)



**Figure 3.57** 2009 aerial photograph of Glen Lorne. (Source: NSW Government Historical Imagery)

### 3.3 Comparative Analysis

Evident in the nineteenth century and early twentieth century cultural landscape history of the Mount Gilead Estate are state and local themes common to colonial and post-colonial agricultural properties in the Campbelltown district, historic Cowpastures region and throughout NSW. The property could be considered an archetype of many of these themes. Locally relevant ones, as catalogued by the NSW Office of Environment and Heritage in database listings for Mount Gilead and abutting properties, include ‘changing the environment’, ‘clearing land’, ‘pastoralism’, ‘orcharding’, ‘significant trees providing rural amenity and character’, ‘subdivision of large estates’, ‘expressing lines of early grant allotments’ and ‘fencing boundaries’.

#### 3.3.1 Properties in the Vicinity of the Mount Gilead Estate

Whilst the scale of the Mount Gilead Estate (post its consolidation c1860) dwarfs the proportions of abutting historic homesteads, historical properties in its vicinity have a shared pastoral history of land use planning, landscape management and property development. The sites of Beulah, Meadowvale, Glen Lorne and Kilbride all supported (and in some cases continue to support) rural patterns and fabric evident on the Mount Gilead Estate.

The Mount Gilead homestead development, including its mill and prominent agrarian outbuildings—whilst of considerably larger overall footprint and of greater historical prominence than the above-listed abutting colonial properties—is representative of a typology of rural complex laid out across these adjoining land parcels in the early decades of the nineteenth century. Following the characteristic despoiling of large portions of these estate lands to establish farms, subject homeyards were furnished—often with accretions throughout the nineteenth century—with landscape elements of a quite uniform palette. This included the use of specific landmark trees and beautification elements and plantings, for example bunya pines (and other *Araucaria* species), figs and pepper trees seen at Mount Gilead, Kilbride and Glen Lorne, and carriage loops on entry drives (a popular feature which provided a sense of arrival grandeur to colonial homes and farms). Also evident on these properties are relic features like old dams and bridges, established to harness and navigate the natural topography and attributes of the lands on which they were established—in the vein of similar utilitarian fixtures developed at the Mount Gilead Estate.



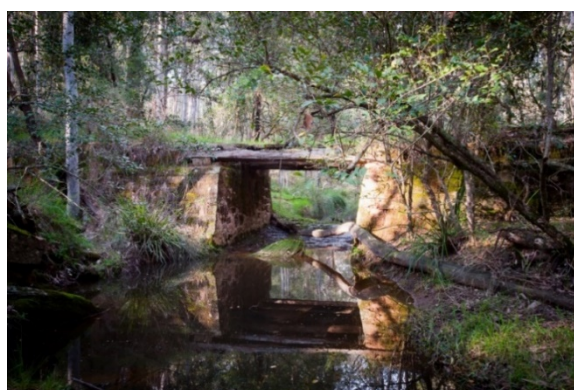
Photographs taken during the course of construction of the Upper Canal scheme (Figure 3.59–Figure 3.61), show landscapes which had been generally denuded by the late-nineteenth century. Low ridgelines and spurs of land seen in these images appear almost entirely clear-felled—in the manner of and for comparable agricultural purposes to the majority of the original 400-acre homestead lot at the Mount Gilead Estate. The footslopes of the abutting Kilbride property to the north of Mount Gilead appear, from photographic evidence, to have also been largely cleared by the late 1800s.<sup>26</sup>

An article from *The Australasian* of 27 June 1874 describes an event by the Sydney Hunt Club held to the south of Campbelltown. It recounts ‘a capital line of country’ around Appin Road with grass paddocks. Near Mount Gilead Estate, the party was said to have rode down a steep hill with a three-rail fence at the bottom and into a piece of cultivation.

The recounting of post-and-three-rail fences in this region tallies with the majority of paddock and boundary fences seen in images near Mount Gilead Estate from the late- nineteenth century (some boundaries supported post-and-four-rail fencing). Photographs from that time indicate that at least parts of the Mount Gilead Estate homestead—its carriage drive and paddocks near the homestead and mill—were framed by this fencing model by the 1880s. A certain amount of the aforementioned post-and-four-rail fencing is evident along the yards of the former huts near the historic lake.



**Figure 3.58** Glen Lorne, photographed c1981, showing two of its mature bunya pines. (Source: Campbelltown City Council local studies library, Turner Collection)



**Figure 3.59** Historic bridge over Woodhouse Creek accessing Beulah. (Source: Sydney Living Museums, Photo © Paolo Busato)



**Figure 3.60** Outlet of Sugarloaf Tunnel, Kenny Hill, late 1800s, showing a significantly cleared landscape. (Source: Sydney Water/WaterNSW Historical Research Archive, A508-1171)



**Figure 3.61** Intersection of overflow weir and flood gate at drop in canal near Sugarloaf Tunnel, northwest of the Kilbride site, c1886. A totally felled farming hillside can be seen at right framed by assorted post-and-three-rail fences. (Source: Sydney Water/WaterNSW Historical Research Archive, A1187-1087)



**Figure 3.62** The Upper Canal in the late 1880s near Menangle Creek. It is bordered by a largely denuded paddock landscape. (Source: Sydney Water/WaterNSW Historical Research Archive, X841025-1)

### 3.3.2 The Colonial Landscapes of the Cumberland Plain (and other nineteenth century estates)

The post-settlement Mount Gilead Estate cultural landscape (the compendium of human-made changes to the natural environment of the place since the early 1810s) also needs to be understood, broadly, in the context of standards in colonial and post-colonial property development in NSW. This concerns colonial grants and consolidation of lands, exemplars of agrarian property development, responses to underlying natural conditions, and agricultural and horticultural endeavours.

The above consideration of colonial landscapes, specific to the Cumberland Plain, was examined in detail by Colleen Morris and Geoffrey Britton, in their 2000 study for the National Trust of Australia (NSW).<sup>27</sup> That study analysed a raft of individual properties from Richmond to Picton, providing historical overviews and outlines of significance for places that were both listed and unlisted (at local

or state level) and properties considered to be at imminent risk from development or loss through dilapidation and neglect. In their 2017 Preliminary Heritage Assessment of Mount Gilead, TKD Architects included comparative case studies mentioned in the Morris and Britton study, concentrating on homesteads located within the Campbelltown LGA or which had associations to the Macarthur family. The following landscape-specific commentary should be read in conjunction with the analysis and conclusions in the TKD report.

With the discovery of favourable agricultural soils across the Cumberland Plain in the late eighteenth century, including between the Nepean and the Georges rivers into the Cowpastures district, came the granting of lands for agricultural pursuits. Morris and Britton describe that most of the grants in this district were ‘for large areas and given to persons with the means to establish themselves as graziers’. Various paintings and sketches from the early to mid-nineteenth century attest to a Cowpastures landscape which had been the subject of widespread clearance to maximise agrarian benefit. Historical records indicate that such broad razing certainly transpired very early in the nineteenth century across the original Gilead Farm allotment.

Comparable colonial estates to Mount Gilead underwent the equivalent sequencing of land clearance. As at the Mount Gilead Estate, similar large land holdings were often treated ‘segmentally’, concerning their defoliation and resultant pastoral use. Mid-nineteenth century sale plans often recorded the nature of the landscape, specifically in regards to cultivated paddocks having been established or forested lands remaining. Whilst brutal ‘scorched earth’ clearance often prevailed in terms of forested land in nineteenth-century private estate and government farm establishment, certain underlying natural conditions of the landscape can remain.

Agrarian property development of Gilead Farm (pre-1818) and the Mount Gilead Estate (post 1818) was comparable with the sequence of pastoral land use seen commonly in contemporaries of the Mount Gilead. Large swathes of Mount Gilead Estate’s 400-acre original lot were thoroughly felled, stumps ‘grubbed up’ and timber burned so that the land could be put under cultivation—a rather ‘routine’ colonial footprint onto the landscape. Wheat and allied grain crops were commonly sown, often large-scale orchards established and pasture grasses laid. Fences, often the timber post-and-three-rail type, were inserted to divide arable land from livestock pastures.

Regional colonial properties were very productive by the 1820s. By 1822, the Varroville property had 20 acres under wheat, 5 acres under barley and a 6-acre orchard garden. At the same time, the Macquarie Fields House landscape contained 150 acres of wheat and forty of maize, as well as many hundreds of sheep, pigs, and cattle. Whilst the Mount Gilead Estate seems to not have supported the volume of livestock as some of its contemporaries in the early to mid-1800s, by the 1870s it contained a significant head of cattle.

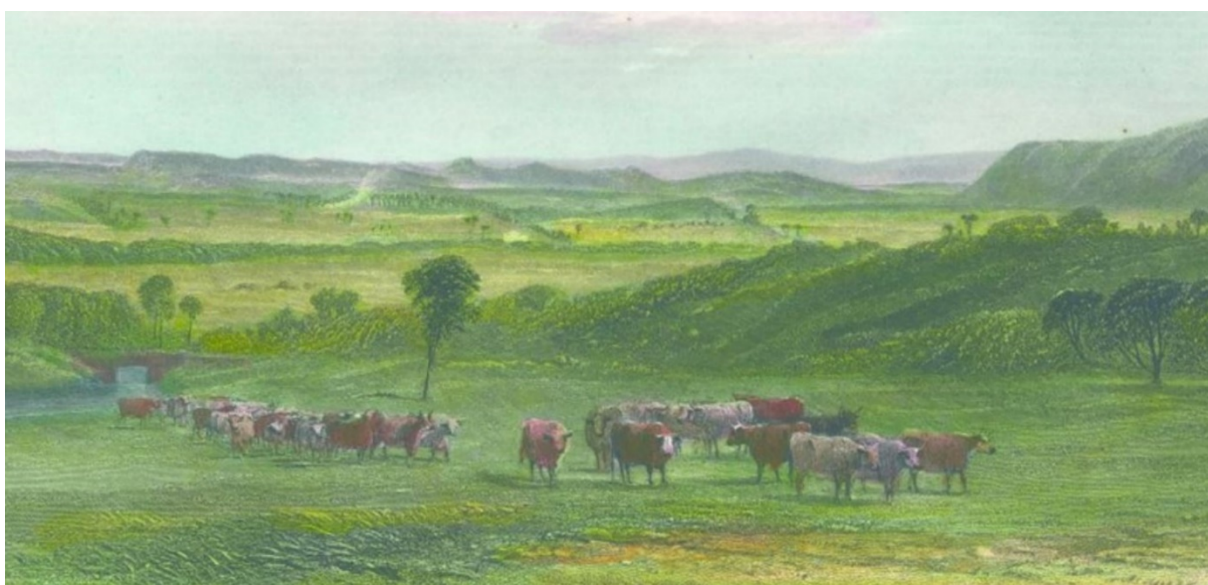
The Mount Gilead homestead and surrounding outbuilding cluster (including the property’s historic mill) were sited on the key ‘upturn’ in the original 400-acre grant—in accordance with prevailing Arcadian objectives of English landscape estate design planning in the eighteenth century. Such siting sought, amongst other things, to maximise scenic value and landmark potential by using principles referred to commonly as the Summit Model or Loudon Model. Under the Summit Model, a homestead was placed at the very highpoint of an estate’s topography. Under the Loudon<sup>28</sup> Model, a homestead’s principal structures were often sited on the side of a ridge or spur, with plantings upslope for visual and environmental effect. The Mount Gilead homestead group might be considered to have aspects of both



of the above models—attitudes reflected in many of other early colonial homesteads, including Macquarie Fields House, Bungarabee, Brownlow Hill, Glenfield Farm and Bella Vista.



**Figure 3.63** View in the Cowpastures district, c1840. Creator: RM Westmacott. (Source: Trove, PIC Volume 162 #T686 NK762/15)



**Figure 3.64** The Cow Pastures. Creator: Arthur Willmore, 1874–1876. (Source: NLA)



**Figure 3.65** 1847 sale plan of the Cowpastures Estates, the property of MD Hunter, with notations concerning the state of the landscape in each of the proposed sale parcels and the prevailing condition of water resources. (Source: Trove, Map LFSP 448, Folder 34)



**Figure 3.66** Castle Hill government farm, c1806—the site's landscape having been completely cleared. (Source: SLNSW, small picture file)





**Figure 3.67** Macquarie Fields House, 1924 by EG Shaw. (Source: SLNSW, File no. 490808)



**Figure 3.68** Macquarie Fields. Creator: F Terry, undated. (Source: SLNSW, FL3192780)



**Figure 3.69** Brownlow Hill, 1836, by Conrad Martens. (Source: SLNSW, File no 1848574)

### 3.3.3 Carriage Drives

Allied to the overall sittings of homesteads and homeyards in nineteenth century NSW rural settings was the matter of carriage drive locations to service both the principal dwelling (and its outbuildings) and the location of the outbuildings in relation to the dwelling. There is a substantial variety of types of approach to the principal dwelling of nineteenth-century homesteads, even within the Cumberland Plain region—as there is also in relation to the original configuration and sitting of subsidiary structures. Morris and Britton recount that a ‘universal agreement’ in the colony during the early to mid-1800s, which was at odds with estate planning in England at the time, concerned the placement



of outbuildings abutting or within sight of entry avenues. Examples of this were found at Veteran Hill, Prospect, and in the original alignments of entry roads at Harrington Park, Camden Park and Varroville.

At odds with the above examples, the Mount Gilead Estate had its outbuildings in 'subordinate' positions, either downslope or behind the dwelling. It should be noted that the above configuration of dwelling-frontage to address the carriage drive meant that the dwelling turned its back on the expansive view shed available to the west and south of the homestead. The outbuildings of the Mount Gilead Estate, some of course quite grand in their own right, blocked some of the principal prospect from the homeyard—a quirk in the early nineteenth century fashioning of the site.

The original carriage drive to the homestead took a straight route through the northeastern portion of the original Gilead Farm lot, before turning to link with Appin Road. This alignment was likely decided upon largely for reasons of ease of establishment and navigation, based on minimising the degree to which ridge slopes needed to be both ascended and descended. The new alignment established in the later decades of the nineteenth century (and which remains today) provided what might be considered a more 'subtle' or 'romantic' approach to the estate—as the new roadway swept around one end of the property's feature lake and climbed onto the homestead spur, rather than being confined to the ridge (as per the initial alignment) on which the homestead was established.

Topographical constraints and opportunities were, of course, as relevant to estate access planning as aesthetic considerations concerning homestead prominence and creating a grand sense of arrival. Numerous examples exist across the Sydney region of colonial (and later realigned) carriage drives both of 'gun barrel' and more curvilinear form. A good example of a gun barrel drives can be seen at Oran Park. Many obliquely approaching drives were developed, both straight and curving, as a method of maximising the potential for display of a property's natural and designed attributes—and to build a sense of expectation for the visitor by providing framed serial viewing points along a drive, the concept of the 'gradual reveal'. Examples of this could be found or can still be seen at the following Sydney estates—Vaucluse House, Elizabeth Bay House, Harrington Park, Orielton, Denbigh, Camden Park, Raby, Glenfield Farm and Glenlee.

It is important to note that many nineteenth-century colonial estates, including Mount Gilead, were retrofitted with quite alternate alignments of carriage drives in decades after the establishment of an estate. This may have been to do with changes in the proportions of the property (through consolidation or subdivision), the availability of new nearby public roads or changes in aesthetic preoccupation. For example, at William Lawson's Veteran Hall property in Prospect, efforts appear to have been made in the 1840s or 1850s to formalise the homeyard, providing a main entry drive from an alternate side of the dwelling to the original carriage drive, which dissected the property's outbuildings. On that site, this change was seemingly planned to create a more aesthetically pleasing final approach to the residence, where the house was given a more deliberate frontispiece.



**Figure 3.70** The western skirt of outbuildings (foreground)—some original to the early nineteenth century complex—which lie between the Mount Gilead homestead and the expansive western view cone. (Source: GD Facebook)



**Figure 3.71** Looking northeast up the homestead spur from Woodhouse Creek, showing the degree to which the Mount Gilead homestead and homeyard are concealed by the ring of outbuildings at the far western end of the ridgeline. (Source: A. Anderson, 2020)





**Figure 3.72** Camden Park by Conrad Martens in 1843, showing the snaking entry drive. (Source: State Library of NSW, DG 473)





**Figure 3.73** 1940 aerial of Camden Park showing the entry drive at lower left approaching the house obliquely through and past entry and landmark plantings. Photographer: EW Searle. (Source: Trove (PIC P838/351))



**Figure 3.74** Raby, 1825—indicating a quite direct approach to the front of the residence. (Source: State Library of Victoria, image 30328102131561/8)

### 3.3.4 Consolidation and Subdivision of Landholdings

The type of early nineteenth century consolidation of rural holdings around the original 400-acre Gilead Farm was not unique in the property histories of contemporary sites. Estates including

Hobartville (Richmond), Clydesdale, and Bella Vista grew from their initial geometry into amalgamations of the core and abutting original land grants (these composites often created by owners who were one or two land title transfers removed from the original grantees). An allied matter to early nineteenth century consolidation of estates was the issue of absentee owners from the 1820s. This is discussed by Morris and Britton in relation to many estates in the region, including Glenfield and Macquarie Fields House. Whilst this also occurred at Mount Gilead Estate (under Thomas Rose's ownership), the property (seemingly somewhat unusually) still had considerable monies expended on it during this period of tenancy—in the form of both utilitarian and aesthetic development (with the construction of the artificial lake and mill). Whilst these large-scale works were carried out at Mount Gilead Estate during the 1820s and 1830s, it is likely that it was only with Rose moving to Mount Gilead around 1826 that planting and beautification works around the homestead began to be undertaken. Until that time, Uther and Rose likely oversaw a property where concentration was on overall siting of key structures and principal farm elements, like access drives and fences.

The concerted subdivision sale attempts of Mount Gilead Estate during the 1830s and 1860s appear to predate the most serious attempts at subdivision in the area, which occurred at other Cowpastures properties from the 1880s—the timing of those land speculation endeavours in concert with the late 1880s Woodhouse proposal at Mount Gilead Estate. Of historical note at Mount Gilead was the intent to subdivide—throughout the nineteenth century—in accordance (at least broadly) with the grant allotment boundaries from which the consolidated property was composed. The relevant owners clearly saw financial benefit and expediency in landscape planning from this methodology.

Nearby historical properties on the Appin Road ridgeline, were also subject to periods of nineteenth-century land speculation through subdivision. The Ousedale and Malton Estate, south of Mount Gilead Estate, was proposed for subdivision sale in the 1850s by Richardson and Wrench. Sixteen allotments were planned and accessed by a network of reserved roads. The homestead, its outbuildings, an old stockyard, paddock fences and old access tracks were all to be subsumed by the proposal.



**Figure 3.75** Johnston's Estate, Annandale, 1877, showing paddock subdivision across the 'inner' farm of the property. Painting by Samuel Elyard. (Source: SLNSW, File no. 3259951)

### 3.3.5 Landmark Plantings

Mount Gilead Estate's key surviving landmark plantings are characteristic of and common to numerous colonial estates in NSW. *Araucaria bidwillii* (bunya pine), *Ficus macrophylla* (Moreton Bay fig), *Brachychiton populneus* (kurrajong), *Schinus molle* (pepper tree) and elms of various types, planted on many estates in the middle to later decades of the nineteenth century, are amongst a palette of trees and shrubs customary to the designed landscapes of these types of sites. The earliest plantings around the Mount Gilead homestead appear, however, to have been either *pinus* or



cupressus species—used en-masse. Late-nineteenth century images of the Mount Gilead Estate suggest that the conifers would have been planted in the 1830s or 1840s. Those images and plans of the estate homeyard during the nineteenth century also suggest that there was quite small and understated frontispiece garden to the dwelling in the 1800s and not an elaborate 'plantsmans' pleasure garden—formerly found in some homeyards of the other prominent Cowpastures properties.

Regarding the key landmark plantings on the homestead lot, there are many examples of bunya pines and other *Araucarias* from the mid-to-late nineteenth century which also abut other colonial estate residences or which line their entry driveways and demarcate homeyard fences. Examples of this are at Bellavista, Orielson, Rouse Hill House, Camden Park, Bungarabee and for something slightly further afield, Brickendon at Longford in Tasmania. The historical use of Moreton Bay Figs to abut homeyard and garden boundaries can be seen, for example, at Varroville.

Unfortunately, the areas used—since the early 1800s—as the Mount Gilead kitchen, gardens and orchards contain few relics that might suggest the scale and density of fruit tree production pursuits on the farm. Some self-seeded *opuntia* species, in the paddock to the south of the Woodhouse bridge, suggest that prickly pear may have been used on the property as a de facto fence against livestock, either in the homeyard or outer paddocks. There appear to be no other utilitarian or 'aesthetic' plantings, like the historical windbreak rows abutting early fence lines, across the whole site.

There also appears no evidence to suggest that the nineteenth-century Mount Gilead Estate landscape was furnished with exotic or native planted feature trees along its Nepean River frontage or along its creeklines, an approach common to colonial properties like Elizabeth Farm and Vaucluse House. This could have been to do with the density of endemic forest in the site's heavily incised creeklines and because the majority of the western flank of the site is elevated high above the Nepean River.



**Figure 3.76** Elizabeth Farm, 1825 by Joseph Lycett. Note how the residence was sited on a prominent knoll but below the ridgeline which provided the backdrop to the residence. Feature trees appear to have been planted along the site's water-frontages to 'beautify' the property's pictorial condition. (Source: Trove, PIC Volume 1103)





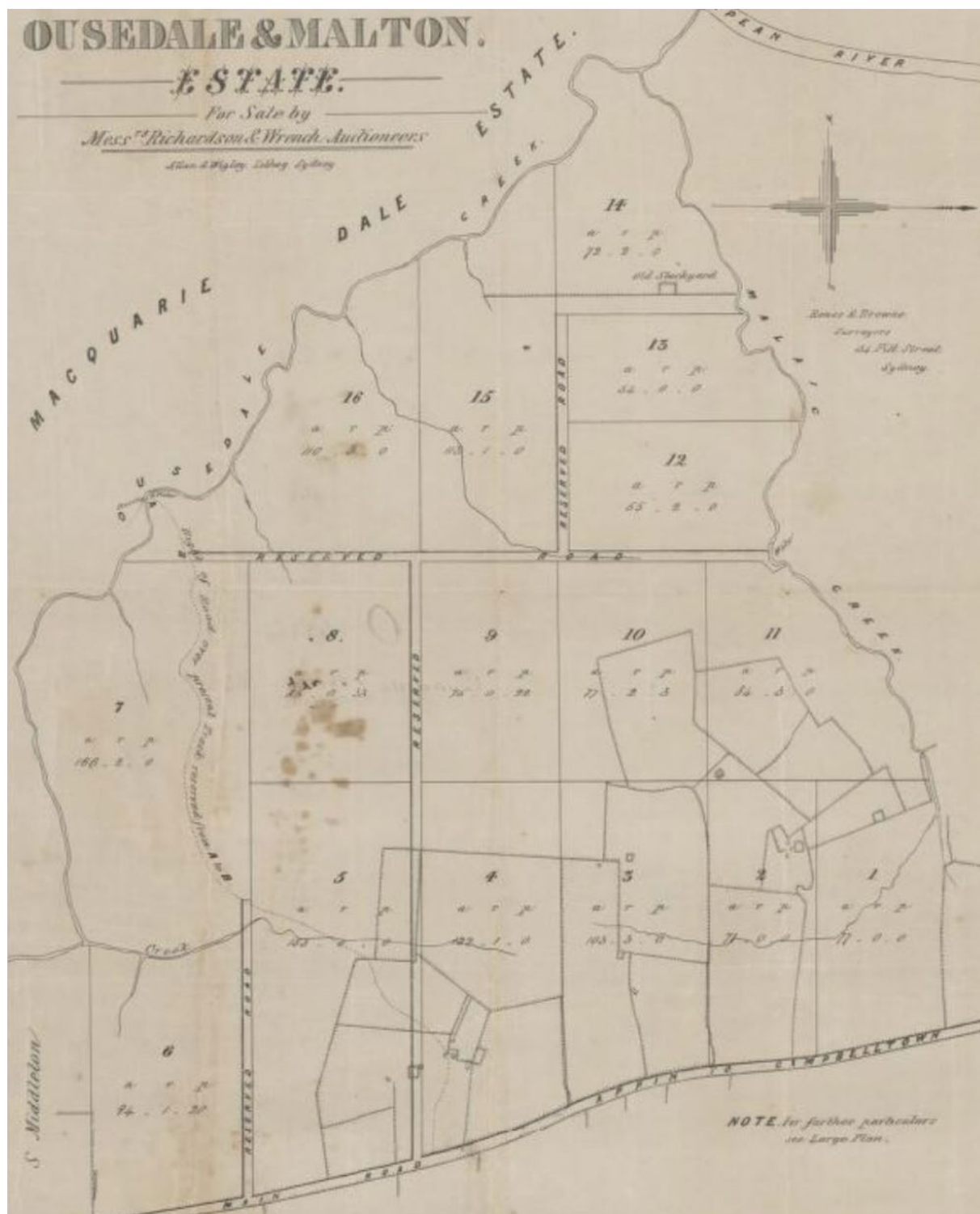
**Figure 3.77** Part of the Denham Court landscape in 1924, showing spaced homeyard feature trees, some dating from the mid-nineteenth century. (Source: SLNSW, File no 490806)



**Figure 3.78** Elizabeth Farm, Parramatta, 1935. Photograph by EW Searle, showing the very mature *Araucaria* pines surrounding the homeyard. (Source: Trove PIC P838/889 LOC Album 1124/10)



**Figure 3.79** Painting from 1845 of the Tarmons property in Wolloomooloo, showing strappy-leaved plantings in the foreground—commonly seen as statement sculptural plantings to demarcate the edge of manicured homeyards in colonial properties. Cactus species, like *aloes* and *opuntia* were also used as defacto hedges against livestock. (Source: State Library of NSW)



**Figure 3.80** c1850s Ousedale & Malton *Estate* proposed subdivision. (Source: NLA, Map F445)





**Figure 3.81** Denham Court Estate subdivision plan of 1884. (Source: Trove, LFSP 1368, Folder 93)



Figure 3.82 Brownlow Hill proposed subdivision plan of 1887. (Source: NLA, Map LFSP443, Folder 33)

## 3.4 Summary—Cultural Landscape Assessment Findings

### 3.4.1 Mount Gilead

- The Mount Gilead Estate is a cultural landscape: a natural environment overlaid with the designs, accretions and impacts of human activity.
- The homestead and nearby extant and relict functional elements of the estate are a cultural resource—highly significant as a collective—for the potential to demonstrate the evolution of the pastoral estate and yield new information regarding the place's nineteenth- and twentieth-century occupation.
- The estate is an exemplar of colonial settlement in the Cowpastures area during the 1810s and of pastoral development in the region throughout the nineteenth and twentieth centuries, including changes in agricultural activity in the area. The property, chiefly its homestead spur, is an important component in the compilation of the homesteads and colonial landscapes throughout the Cowpastures region.
- The Mount Gilead Estate lands, in toto, are historically relevant since they preserve the intact scale of the early nineteenth century amalgamated property and allow its appreciation. However, with regard to pastoral and agricultural land use and landscape design planning over

two centuries, there is a hierarchy of significance of the site sectors. These are identified in this assessment.

- As the Mount Gilead estate remains agricultural land, the form and function of this rural landscape and colonial estate can be readily appreciated. Whilst some of the detail of the nineteenth-century arcadian composition of the place has been lost, remnant cultural plantings on the homestead spur, utilitarian features abutting it and the open rural setting of certain sectors of the estate's larger landscape add considerably to the significance of the place.
- Due to the topographical particulars of the estate and the scale of the endemic vegetation along its creeklines limiting views across the estate, the extent of the Mount Gilead Estate landscape is most easily understood through aerial photographic analysis of the place.
- The fact that the Mount Gilead Estate remain discernible (as per its consolidated mid-nineteenth century form) is fortunate, considering the various subdivision proposals during the nineteenth century. Whilst those subdivisions did not eventuate, it is interesting that those plans subdivided the land into parcels more or less in accordance with original grant allotment proportions.
- The lands of the estate have undergone marked change from their natural condition since the early nineteenth century. Much endemic forest has been cleared for pastoral/agricultural activity in this landscape, an impact which greatly increased from the mid-twentieth century. This resulted in a major change of setting for the original Gilead Farm allotment and the property's consolidated form.
- The nineteenth-century estate works by the owners Uther, the Rose family and the Woodhouse family established the overall site configuration, principal elements and landscape function that remain today. The pictorial advantages of siting the main dwelling and its outbuildings on the homestead spur (in accordance with principles of the picturesque in eighteenth-century English landscape design) were clearly known to the property's early owners. However, somewhat oddly, the main residence was not sited to face the expansive western view cone, rather facing east to the property's entry drive. This would have been to accentuate the 'sense of arrival'. Despite this, the locating of the homestead group (including the historical mill) within the place's dramatic landform is a fine representative example of colonial landscape planning.
- Several built items along Woodhouse Creek of exceptional significance to the nineteenth-century workings of the property, lie within the Stage 2 area. These elements include the Woodhouse bridge, the weir upslope of that bridge and the relict timber bridge over the eastern dog-leg of Woodhouse Creek, should be further researched and (where possible) conserved. It is possible that the weir was built principally to form a dam to service the first tract of estate land cleared to the south of Woodhouse Creek—doubling as a bridge along an early transit route from the Nepean Creek to Appin Road.
- The Stage 2 supported at least one public transit route—between Appin and Menangle—for around a century, until the 1910s. A second early public route along the southern side of Woodhouse Creek, connecting some of the relict built transport fabric, also appears to have existed through at least the nineteenth century. This second alignment may have connected into the alignment of a reserved road across the estate seen on nineteenth-century land title documents.



- The construction of the Upper Canal channel in the 1880s led to the 'subdivision' of the earliest cultivated lands on the estate. This was both on the foot slopes of the homestead spur and on lands to the south of Woodhouse Creek. The construction of the Upper Canal divided the Mount Gilead Estate. However, the location of the canal was an engineering solution to constraints posed by the landscape.
- Quite a small percentage of the Mount Gilead Stage 2 area was actually functional agrarian area in the nineteenth-century estate.
- The western sector of the Mount Gilead Estate, between the Nepean Creek and the Nepean River, only began to be extensively deforested and cleared for farming purposes from the middle of the twentieth century. The Nepean Creek marked the western extent of cultivated lands during the nineteenth century.
- Relatively little landscape heritage fabric remains in the expansive pastoral setting, which could demonstrate the evolution, changing taste and property use over the past two centuries.
- Some of the numerous former 'spot' quarries are difficult to discern in the landscape. No conclusive evidence has been found in this assessment to resolve when those quarries were in use and where their quarried stone was used. It seems most likely the stone from these quarries was used for the construction of the Upper Canal rather than for estate works. This matter has been investigated through consequent archaeological survey.
- The estate has a long history of pasture improvement and dam building, most recently by the Macarthur-Onslows.
- An opuntia patch growing in the paddock to the south of the homestead suggests that this species was used on the site as de facto fencing around early paddocks and cultivated areas.
- Whilst outside the Stage 2 area, we note that the former Hillsborough site contains no items of cultural landscape significance. Landscape remnants in the homeyard and former orchard are of no heritage value. The allotment boundary is of a moderate degree of heritage significance in terms of its ability to interpret original land grant parcels adjoining Appin Road.
- Serial viewing points of the homestead spur are available from Appin Road and Menangle Road.

## 3.5 Endnotes

- <sup>1</sup> Office of Environment and Heritage, NSW, 2010, 'Mount Gilead', Heritage Places and Items, 1291064\*, viewed 16/03/2020  
<<https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=1291064>>.
- <sup>2</sup> GML, Mount Gilead Stage 1 Aboriginal Archaeology Salvage Report, forthcoming.
- <sup>3</sup> 'Classified Advertising', *The Sydney Gazette and New South Wales Advertiser*, 16 May 1818, p 2. viewed 16 February 2021 <<http://nla.gov.au/nla.news-article2177950>>
- <sup>4</sup> RAHS, Journal and Proceedings, vol. 27 part 5, 1941.

- <sup>5</sup> 'Advertising'. *The Sydney Morning Herald*, 6 November 1861, p 7, viewed 24 February 2021 <<http://nla.gov.au/nla.news-article13060469>>
- <sup>6</sup> 'Unknown'. *The Goulburn Herald*, 16 May 1877.
- <sup>7</sup> "OUR ILLUSTRATIONS." *The Sydney Mail and New South Wales Advertiser*, 5 January 1878, p 6, viewed 24 February 2021, <<http://nla.gov.au/nla.news-article162693467>>.
- <sup>8</sup> "OUR ILLUSTRATIONS." *The Sydney Mail and New South Wales Advertiser*, 5 January 1878, p 6, viewed 24 February 2021, <<http://nla.gov.au/nla.news-article162693467>>.
- <sup>9</sup> "OUR ILLUSTRATIONS." *The Sydney Mail and New South Wales Advertiser*, 5 January 1878, p 6, viewed 24 February 2021, <<http://nla.gov.au/nla.news-article162693467>>.
- <sup>10</sup> "OUR ILLUSTRATIONS." *The Sydney Mail and New South Wales Advertiser*, 5 January 1878, p 6, viewed 24 February 2021, <<http://nla.gov.au/nla.news-article162693467>>.
- <sup>11</sup> "OUR ILLUSTRATIONS." *The Sydney Mail and New South Wales Advertiser*, 5 January 1878, p 6, viewed 24 February 2021, <<http://nla.gov.au/nla.news-article162693467>>.
- <sup>12</sup> 'Unknown'. *Sydney Mail and New South Wales Advertiser*, 10 March 1883.
- <sup>13</sup> 'Unknown'. *The Bulletin*, 7 April 1888.
- <sup>14</sup> 1888 Mills and Pile, Thorntwhait and Co Ltd. National Library of Australia 230122510-1.
- <sup>15</sup> 'Unknown'. *Camden News*, 12 November 1936.
- <sup>16</sup> 'Unknown'. *Sunday Times*, 26 April 1908.
- <sup>17</sup> 'Unknown'. *Sydney Mail*, 22 December 1920.
- <sup>18</sup> 'MT. GILEAD CAMPBELLTOWN.' *Camden News*, 15 November 1923, p 2, viewed 24 February 2021 <<http://nla.gov.au/nla.news-article133284355>>.
- <sup>19</sup> 'Unknown'. *The Camden News*, 15 November 1923.
- <sup>20</sup> 'Unknown'. *Daily Telegraph*, 30 June 1931.
- <sup>21</sup> 'Unknown'. *Sydney Morning Herald*, 29 October 1967.
- <sup>22</sup> 'Unknown'. *The Sydney Mail and New South Wales Advertiser*, 22 October 1881.
- <sup>23</sup> 'Unknown'. *The Sydney Mail and New South Wales Advertiser*, 22 October 1881.
- <sup>24</sup> 'Unknown'. *The Sydney Mail and New South Wales Advertiser*, 10 March 1883.
- <sup>25</sup> 'Unknown'. *The Australian Town and Country Journal*, 12 November 1892.
- <sup>26</sup> Campbelltown City Council local studies library File no. 002\002403
- <sup>27</sup> Collen Morris and Geoffrey Britton, *Colonial Landscapes of the Cumberland Plain and Camden, NSW*, August 2000
- <sup>28</sup> J. C. Loudon, *Encyclopedia of Landscape Gardening*, 1822

# Mount Gilead Stage 2



# 4 Mount Gilead Stage 2—Method of Archaeological Analysis

## 4.1 Mount Gilead Estate

The review of landscape character identified a number of historical heritage (archaeology and landscape) items. Throughout the course of this assessment we have visited the Stage 2 area on multiple occasions (for both historical archaeology and Aboriginal heritage purposes). These visits resulted in the identification and recording of many items of historical archaeology, and allowed us to become familiar with the Stage 2 area, its landscape and functional agricultural setting. Formal historical archaeology survey was undertaken in October 2020, and again in March 2021. These surveys focused on different landscape zones inside the Stage 2 area, and allowed an observation of changing site conditions, including temperature and water levels (drought to flood).

As part of the October 2020 survey process, we reinspected previously recorded archaeological sites. Distinctive archaeological sites such as the sandstone hearth and chimney remains (MGH4 and MGH5), timber bridge remains (MGH2), and sandstone weir (MGH1) were able to be identified and re-recorded. Other sites such as the quarry sites (MGH6-1 to MGH6-9) were not well defined, and we took to re-record all features within these landscape zones. We note that the number and extent of quarries along Woodhouse Creek and Nepean Creek was far more extensive than initially recorded. Moreover, associated drystone walls not previously recorded were also identified as following along the majority of the eastern bank of Nepean Creek.

Following the October 2020 survey, lidar and aerial imagery was used to assess and identify further anomalies. Our survey results were used to inform this analysis, and provided direction for the March 2021 survey. This inspection also culminated in survey of locations associated with a number of further potential features which had been identified on historical maps and plans, most notably the 1888 Dawson & Dawson subdivision map. This primarily included the cottage (Site 27), fords (Site 31 and Site 32), 'site for homestead' locations (Site 33 and Site 34), and roadways (Site 42 and Site 43). Most of these zones did not present any visible above-ground archaeological evidence. The potential archaeological signatures and heritage significance are considered in this report.

The culmination of all historical archaeology recording illustrated a focus of features around the periphery of the agricultural fields covering the estate. Most of the archaeological sites were recorded within the vicinity of Woodhouse Creek and Nepean Creek. A total of 18 distinct quarry sites (Site 1 to Site 18) were identified. Many of these were connected by crude drystone walling (all listed as 'Site' 19); made from blocks of sandstone derived from the adjacent quarries.

Sites of workers' camps associated with the construction of the Upper Canal were identified. A series of bridges made from timber (Site 28) and sandstone (Site 29), as well as a weir (Site 30) were also recorded. The identified historical archaeological sites have been catalogued in Section 5.

## 4.2 Glen Lorne

A site inspection was undertaken by GML in October 2020 to observe current site conditions and note any evidence of former development activities that could be used to inform the assessment of Glen Lorne's potential to contain archaeological remains.

Glen Lorne is an archaeological and landscape site. A single non-heritage modern brick structure is located on the northern side of the primary archaeological zone. The remains of the homestead have been removed, which followed the place's destruction by fire in the early 1980s.

Evidence of the former homestead is visible across the homestead area in the form of sandstone and brick footings and piles of bricks. Water management features, including cisterns and a well, were identified. One standing (but degraded) sandstone building was also recorded. No isolated artefacts, artefact scatters or deposits were identified during the site visit.

Evidence of some of the original mid-nineteenth-century to mid-twentieth-century plantings around the homestead remain standing. These include bunya pines and Port Jackson figs. The original frontispiece garden layout, to the west of the former dwelling, has been lost due to general dilapidation of the property over several decades. Cleared land associated with the original accessway leading to Appin Road is exposed.

The identified archaeology is outlined in Section 6. Glen Lorne is subject to a separate archaeological project being jointly undertaken by GML, Sydney University and Lendlease. This report considers Glen Lorne in the context of the Stage 2 lands, although all future research and management for this site will be undertaken separately to the other Stage 2 works.

# The Archaeological Record—Mount Gilead Estate



# 5 The Archaeological Record—Mount Gilead Estate

## 5.1 Introduction

Archaeological survey identified 45 historical archaeological sites/features within or associated with the Stage 2 area. This section provides an overview of historical archaeology site ‘types’. The full catalogue of the archaeological sites, with their location and description, a summary of the archaeological potential, integrity, significance, and proposed management principles is provided in Appendix A.

## 5.2 Summary of the Archaeological Record

The majority of the 45 historical archaeological sites/features identified during the survey are located along the corridors of Woodhouse Creek and Nepean Creek. In these areas, the most common sites encountered were quarries and associated sandstone processing locations (Sites 1 to 18). Drystone walls (Site 19), utilising sandstone cut from the quarries, were also identified along the creek lines, and have been grouped together as a single item.

Several sites relating to the construction of the Upper Canal were identified. These included chimneys associated with houses belonging to construction workers or maintenance workers (Sites 20 to 24), and the potential location of a temporary construction workers’ camp (Site 36).

A series of early nineteenth century public and private roads were known to have run through the Mount Gilead Stage 2 area (Sites 42 to 45). Two bridges (Sites 28 and 29) and a ford (Site 31) were connected to the accessways. Some of these paths (Site 44 and Site 45) appear to have been associated with the quarries and construction workers’ accommodation.

In addition, agricultural sites were also identified. These included a field that was likely the earliest cultivated land on the Mount Gilead Estate located south of Woodhouse Creek (Site 34), and a potential cattle or hay shed from the late-nineteenth century (Site 33). Fenceposts (Site 25 and Site 26) were found throughout the property. A weir (Site 30) was also constructed to assist with the water management of the site.

A cottage (Site 27) located on the eastern side of Appin Road was identified on the 1888 Dawson & Dawson survey plan. However, only evidence of a fence could be identified in this location.

A series of miscellaneous sites were recorded immediately outside the Mount Gilead Stage 2 boundary. The sites included piles of sandstone blocks (Sites 37 and 39), nineteenth and twentieth century rubbish dumps (Sites 38 and 41), and an abandoned car (Site 40). These sites were located within the SHR boundary of the Mount Gilead Estate, but have not previously been recorded.

A summary of these items is provided in Table 5.1, and the spatial relationship of these is shown in Figure 5.1. Descriptions of these sites, by group, are provided. The inventory cards (Appendix A) summarise the archaeological potential of the item, its integrity, heritage significance, and present recommended future heritage management in the context of the proposed land rezoning process.

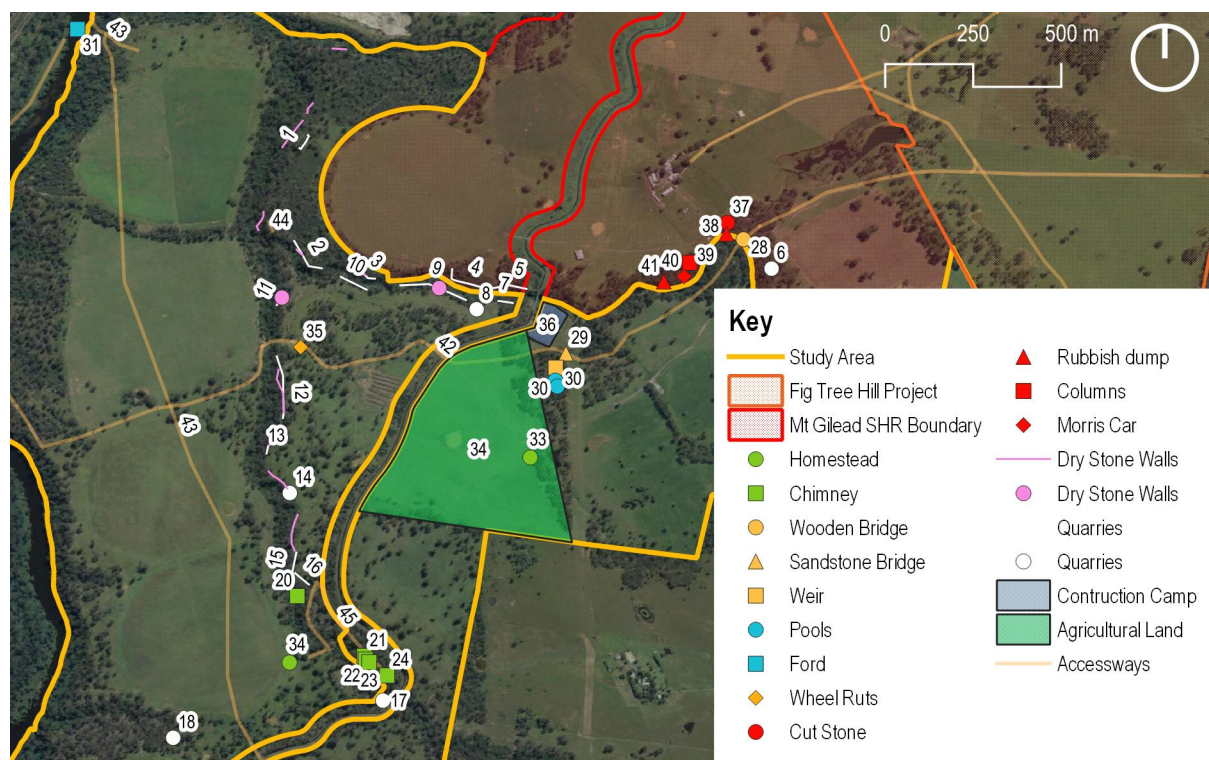
**Table 5.1** Overview of all historical archaeology sites, grouped by site type.

Site Number	Site Type	Main Fabric/Material	Significance (Section 7.5)	Primary Heritage Recommendation
1	Sandstone quarry 1	Sandstone	Local	Management, Interpretation Plans
2	Sandstone quarry 2	Sandstone	Local	Management Plan
3	Sandstone quarry 3	Sandstone	Local	Management Plan
4	Sandstone quarry 4	Sandstone	Local	Nil
5	Sandstone quarry 5	Sandstone	Local	Nil
6	Sandstone quarry 6	Sandstone	Local	Management, Interpretation Plans
7	Sandstone quarry 7	Sandstone	Local	Management Plan, SoHI
8	Sandstone quarry 8	Sandstone	Local	ARD, SoHI, Archival recording
9	Sandstone quarry 9	Sandstone	Local	Management Plan
10	Sandstone quarry 10	Sandstone	Local	Management Plan
11	Sandstone quarry 11	Sandstone	Local	Management Plan, SoHI, Archival recording
12	Sandstone quarry 12	Sandstone	Local	ARD, Management, Interpretation Plans, Archival recording
13	Sandstone quarry 13	Sandstone	Local	Management Plan
14	Sandstone quarry 14	Sandstone	Local	ARD, Management Plan, SoHI, Archival recording
15	Sandstone quarry 15	Sandstone	Local	ARD, Management Plan, SoHI, Archival recording
16	Sandstone quarry 16	Sandstone	Local	ARD, Management Plan, SoHI, Archival recording
17	Sandstone processing location 1	Sandstone	Local	Nil
18	Sandstone processing location 2	Sandstone	Local	Management, Interpretation Plans
19	Drystone walls	Sandstone	Local	ARD, Management, Interpretation Plans, Archival recording
20	Chimney (inside a rock shelter)	Sandstone	Local	ARD, Management, Interpretation Plans, SoHI
21	Chimney (former cottage site)	Sandstone	State	None, inside Upper Canal SHR boundary

Site Number	Site Type	Main Fabric/Material	Significance (Section 7.5)	Primary Heritage Recommendation
22	Chimney (former cottage site)	Sandstone	State	None, inside Upper Canal SHR boundary
23	Chimney (former cottage site)	Sandstone	State	None, inside Upper Canal SHR boundary
24	Chimney (former cottage site)	Sandstone	State	None, inside Upper Canal SHR boundary
25	Timber fence post(s)	Timber	None	Nil
26	Timber fence post(s)	Timber	None	Nil
27	Potential 1888 cottage site	TBC	Local	Conservation, if 'work' is required that an ARD for a S140 should be prepared.
28	Timber bridge	Timber	Local	ARD, Management Plan, SoHI, Archival recording
29	Sandstone bridge	Sandstone	Local	Management Plan, Interpretation Plan
30	Sandstone weir, drystone walls, and pools	Sandstone	Local	ARD, Management Plan, SoHI, Interpretation plan, monitoring, archival recording and test excavation
31	Nepean River Ford	Landscape feature	Local	ARD, Management Plan, SoHI, monitoring, archival recording and test excavation
32	Record not used			
33	1888 Potential homestead site	One location has discoloured grass indicating a possible former structure	Local	ARD, SoHI, monitoring and/or test excavation
34	Agricultural land/area	Landscape element	Local	ARD, SoHI
35	Wheel ruts (possible)	Cut into sandstone bedrock	Local	ARD, SoHI, Archival recording
36	Upper canal construction camp	Possible archaeological deposits	Local	ARD, Monitoring, Test Excavation
37	Cut stone	Sandstone	Not assessed	None, inside Mt Gilead SHR boundary



Site Number	Site Type	Main Fabric/Material	Significance (Section 7.5)	Primary Heritage Recommendation
38	Twentieth-century rubbish dump	Metal	Local	None, inside Mt Gilead SHR boundary
39	Stone columns	Sandstone	Not assessed	None, inside Mt Gilead SHR boundary
40	Morris 8 Car	Metal	Not assessed	None, inside Mt Gilead SHR boundary
41	Bottle dump	Ceramic and glass	Not assessed	None, inside Mt Gilead SHR boundary
42	Roads and public accessways	Landscape elements	Local	Interpretation Plans
43	Roads and public accessways	Landscape elements	Local	Management Plan, Interpretation Plans
44	Roads and public accessways	Landscape elements	Nil	Management Plan, Interpretation Plans
45	Roads and public accessways	Landscape elements	Nil	Management Plan, Interpretation Plans



**Figure 5.1** Overview of archaeological sites identified during the survey. (Source: GML 2021, over Nearmap)

## 5.3 Quarries and Sandstone Processing Locations (Sites 1 to 18)

Sixteen separate sandstone quarries were identified; these were located on both sides of Woodhouse Creek, and the eastern side of Nepean Creek (Figure 5.2). The majority of the quarries were operated from the early 1880s to procure stones for the construction of the Upper Canal. The methods used to extract sandstone, the cutting of blocks and the landscape locations provide evidence for the historical connection of these quarries to the canal.

All of the quarries are on the same side as the canal channel. The exception to this pattern was Site 6, which was located on the opposite side of Woodhouse Creek to the canal. It was located away from the other quarries, and we suggest this quarry was produced stones for the construction of structures associated with the Mount Gilead Estate.

All the sandstone quarry sites possessed clear archaeological evidence of stone-working. The quarried stone faces, cut either flat or in terraces, were on the side away from the creek channel. A number of the quarries provide evidence of the techniques used to extract stones from the bedrock. Evidence of horizontal and vertical drill holes was evident at Site 1, Site 6 and Site 12. These are similar in form to markings identified at another Upper Canal quarry—the Thornleigh Quarry (Figure 5.3).<sup>1</sup> Feather-and-wedge is another technique used to dislodge stones from the bedrock. Site 10, for example, provided evidence of the small marks on the shelf. The feather-and-wedge technique was also used to cut down or split freestones into more appropriate sizes. Evidence of this was identified on, for example, the large, cut stones at Site 11 (Figure 5.50).

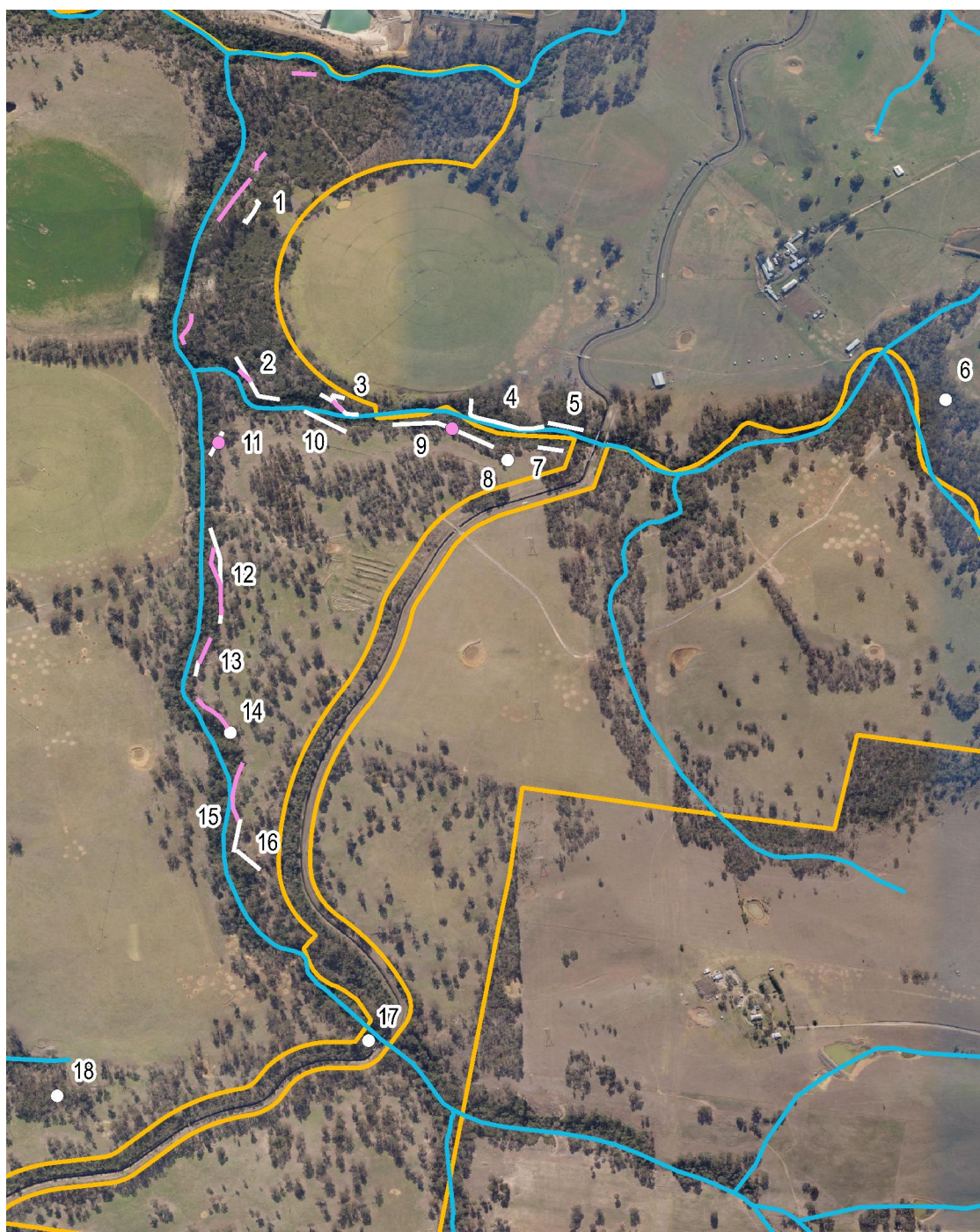
Each quarry site comprised one or more cut sandstone bedrock faces. Each quarry site also incorporated a deliberately levelled and cleared area immediately in front of the bedrock face. The area averaged 10m wide. A pile of semi-cut stones was located on the opposite side of the flattened area.

Many quarry sites had evidence for one or two accessways. These accessways comprised a cleared ramp leading in and out of the site. The accessways were usually located on the edges of the main quarry area, with the exception of Site 3. The sloped ramps were 4 to 6 metres wide, a width suitable for carts. The ramps often had stones deposited on the edge to build-up the ground level.

Two sites (Site 16 and Site 17) were identified as locations for processing the procured stones. They appeared to be locations where stones could be brought to construct either the Upper Canal or nearby aqueducts. The sites were also close to the canal but far from other quarry sites. They did not possess cut bedrock faces. They instead included piles of semi-cut and cut stones. The minimal working and debitage suggests that the stones were not further shaped at these locations. Piles of semi-cut medium-sized stones were also identified to the north of Site 17, within the SHR boundary. These piles were located between the chimney (Sites 21 to Site 25) and the Upper Canal.

We note that Sites 4, 5 and 6 are outside the Mount Gilead Stage 2 boundary, but have been included here because they are part of the historical landscape, are located inside the SHR boundary, but have not been previously recorded.





### Key



**Figure 5.2** Location of quarries and sandstone processing centres (Sites 1 to 18) and drystone walls (shown as the pink line, and grouped under Site 19). (Source: GML 2021 over Nearmap)





**Figure 5.3** Rock cutting on upper access road to Thornleigh Quarry showing drill hole for blasting (identified by arrow). (Source: Higginbotham 2002, plate 3.6)

## 5.4 Drystone Walls (Sites 19)

Drystone walls were identified in multiple locations along the eastern side of Nepean Creek, and on both sides of Woodhouse Creek (Figure 5.2). The drystone walls (all described as Site 19) were constructed haphazardly, with no regular coursing or mortar. The stones selected were uncut or semi-cut. Many of the drystone walls were located below or abutting the 1880s sandstone quarries created to source stone for the construction of the Upper Canal. As such, it is likely that the drystone walls were built with off cuts from these quarries.

It is impossible to date the construction of the drystone walls. The walls had no mortar or associated artefacts. Moreover, as most of the walls were built directly onto exposed bedrock shelves, no foundation cuts and fills were present. Some deeper tributary creeks had been walled across their open depressions, with deeper multilayered walls present in these places. In such instances, the construction was more substantial and less ad hoc. On the basis of the relationship with the quarries, it is reasonable to conclude that the walls were built after or during the 1880s.

The drystone walls appear primarily to have been constructed to contain livestock and prevent them from falling into or crossing the creeks and their steep banks. This interpretation is supported by the irregular construction style and utilisation of natural ledges along the creek bank. With an abundance of accessible and already cut stone, it is reasonable to assume that landowners built stone walls rather than install wooden fences.

## 5.5 Sandstone Chimneys (Former Cottages) (Sites 20 to 24)

The remains of four sandstone chimneys (Sites 21 to 24) were located on a flat, cleared area near the edge of the Upper Canal. The sites are located within the SHR curtilage for the Upper Canal and are not within the Mount Gilead Stage 2 site. They were identified and assessed by both Higginbotham in 1992 (Item 17) and Navin Officer in 2006 (MGH4). The houses associated with these features were standing until at least 1920 (Figure 5.5).

The sites have been interpreted as evidence of houses constructed in the early 1880s for workers who built the canal.<sup>2</sup> However, based on their location, it appears more likely that the four chimneys belonged to cottages managed by the inspector and maintenance men who were stationed along the canal to ensure its correct functioning (Figure 5.6).

These maintenance cottages, dotted along the canal, were owned and maintained by the Water Board. In total, the Upper Canal was divided into 11 maintained sections with separate precincts (refer to Figure 2.19). Initially, the maintenance workers walked or used horses to patrol their assigned length of canal. With the gradual construction of roadways along the canal, their jobs were eased. Their jobs included regular cleaning of the canal. However, during cooler months when demand for water was lower, maintenance works, including the relining of some sections was undertaken. More extensive work was either contracted out or completed by the Water Board, utilising day labour.<sup>3</sup> The four chimneys comprise a small grouping. No evidence of additional structures in the area was identified. A path (Site 45) joined the buildings to the other major roadways (Site 42).

In addition a further location (Site 20) with sandstone 'chimneys' was identified at a distance from the group of houses. The site was not positioned on a flat, cleared area, but located inside a shallow rock shelter on the upper slope of the Nepean Creek. The interpretation of this site was unclear. The mortar and construction type appeared similar to the other chimneys (Sites 21 to 24). However, the site was in a different location away from the canal, other dwellings, and the quarries. This item is more likely to relate to a temporary living place, possibly associated with a construction work, or transient place used by the workers who lived in the cottages. No material culture (eg bottle dumps etc) were observed in connection with site 20.



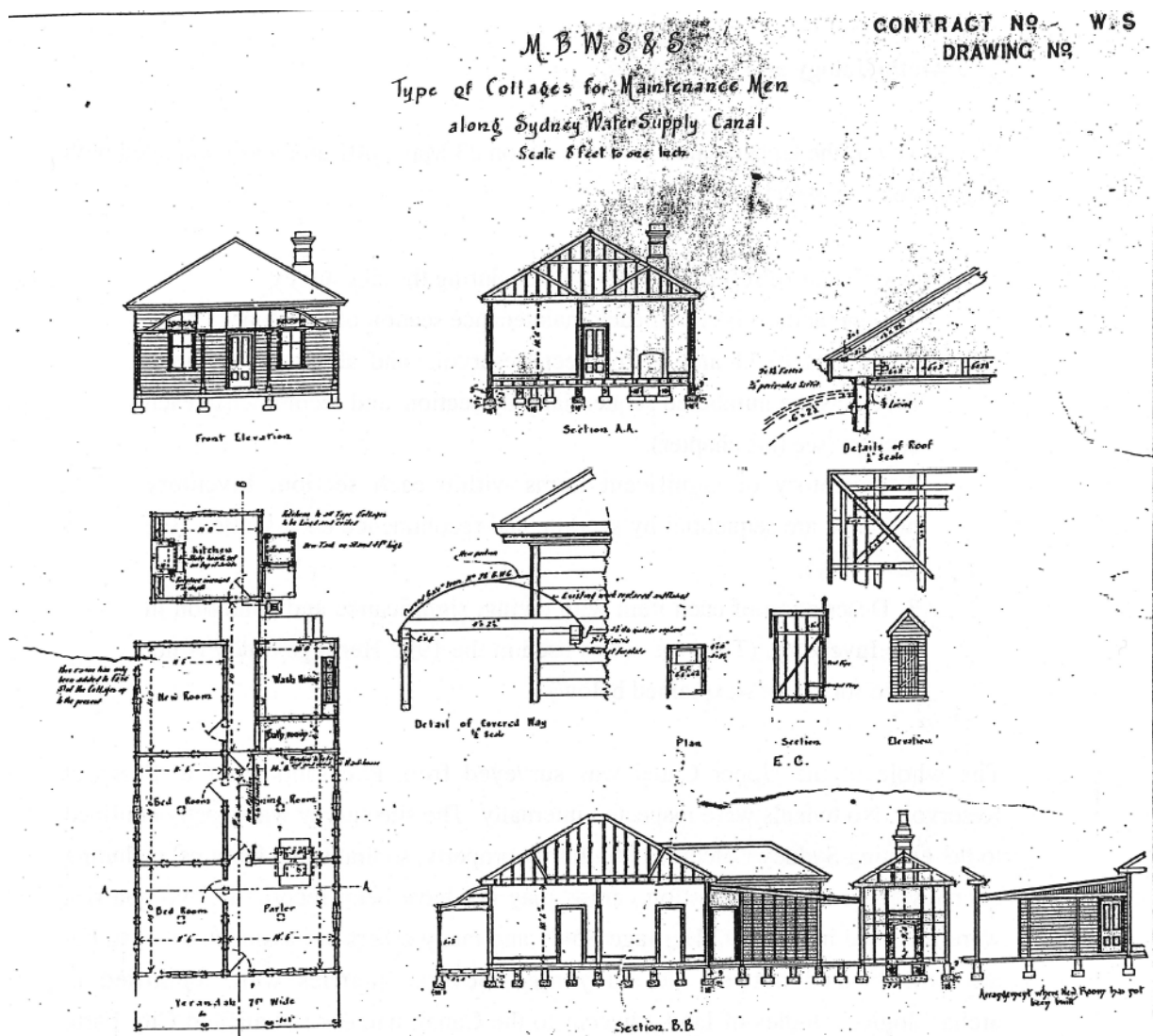


**Figure 5.4** Identified remains of chimneys associated with the construction and/or maintenance of the Upper Canal. (Source: GML 2021, over Nearmaps)



**Figure 5.5** One of four workers' cottages on the Mount Gilead Estate. A separate chimney can be seen in the background, possibly part of the 'kitchen', refer to the plan in the following figure. Remnant parts of the wooden fencing also remain. (Source: Sydney Mail, 22 December 1920, p 24)





**Figure 5.6** Standard plan of cottages built and occupied by maintenance men along the Sydney Water Supply Canal. (Source: Higginbotham 2002, 50 with Plan no. 105/22 from Sydney Water Plans Room)

## 5.6 Wooden Fence Posts (Sites 25 and 26)

Linear groups of fence posts were identified across the Mount Gilead Stage 2 site (Sites 25 and 26, Figure 5.7). The fences were no longer functional, and were not associated with any structures. Most were interpreted as being part of the agricultural management of cattle or sheep.

The fence posts were rectangular, with four small round holes holding barbed wire. Similar fence posts were identified at the Appin Road entrance to the site (Figure 5.8) and on Figtree Hill (the Mount Gilead Stage 1 site). The fenceposts were unable to be dated. They were a different style to the original wooden fences surrounding the Mount Gilead homestead. The fences around the homestead were post-and-rail, with horizontal wooden beams rather than barbed wire (Figure 5.9).

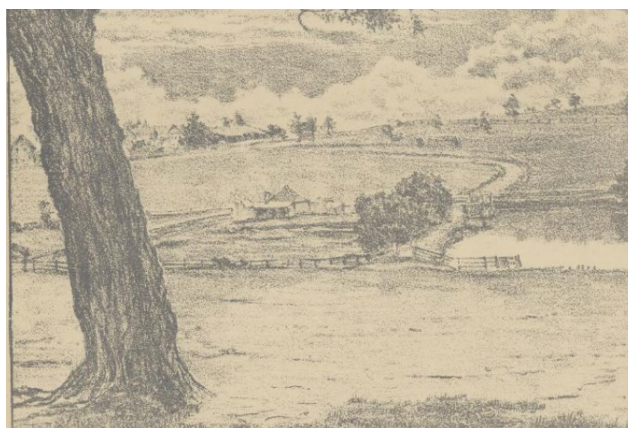




**Figure 5.7** Wooden fence posts and gates identified within the Mount Gilead Stage 2 site boundary in relation to chimneys (Sites 21 to Site 24). (Source: GML 2021)



**Figure 5.8** Wooden fence posts, with similar style to those identified at Site 25 and Site 26, at the Appin Road entrance to Mt Gilead. (Source: GML 2020)



**Figure 5.9** Post and rail fence posts surrounding the Mount Gilead homestead. (Source: Dawson 1888)



## 5.7 Potential 1888 Cottage Site (Site 27)

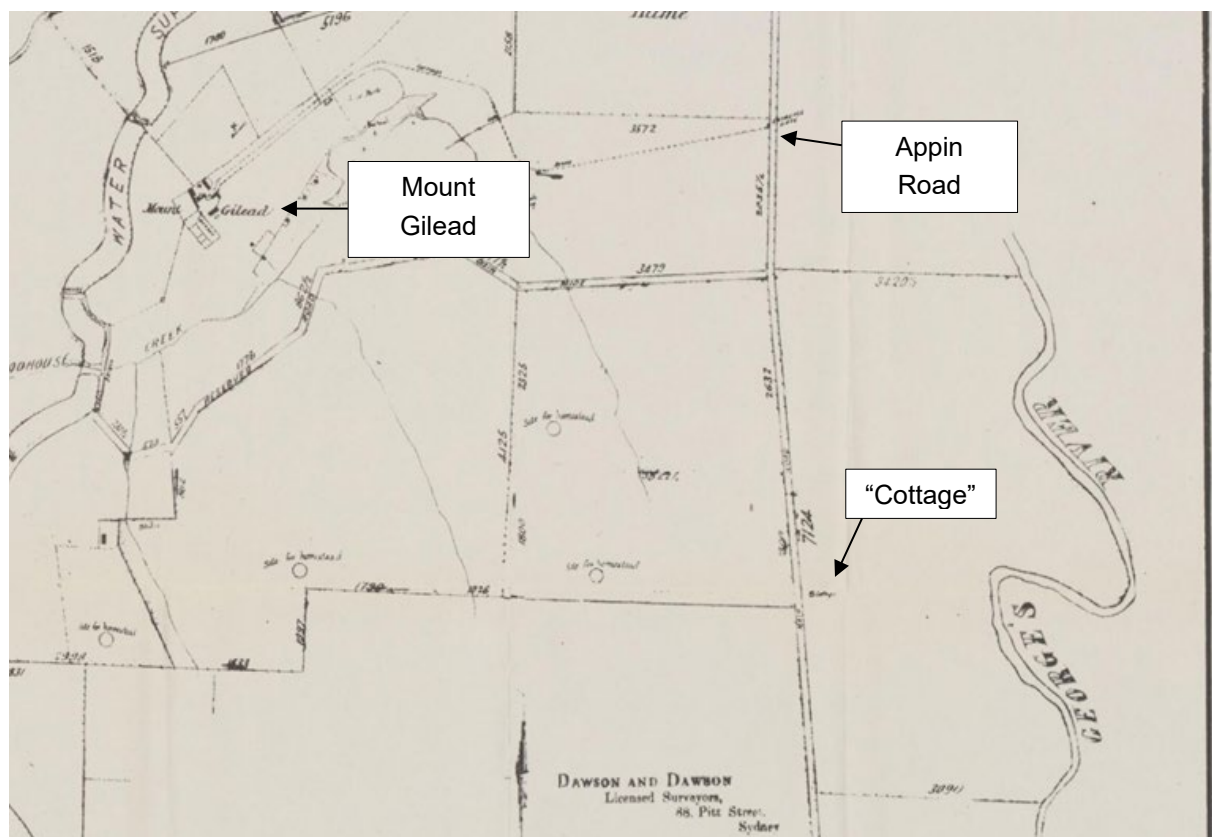
The 1888 Dawson & Dawson subdivision plan of the Mount Gilead Estate, identifies a ‘cottage’ fronting Appin Road (Figure 5.10 and Figure 5.11). This location has been described as Site 27. Survey of the area failed to identify any evidence of an archaeological site associated with this cottage, and analysis of aerial photography shows no clear evidence for a structure in this location.

The only evidence noted was a gate in the position of an entrance driveway. The approximate location of the cottage site has been identified in Figure 5.12. However, the only landscape evidence of a potential site was in an area cleared of trees. We note the later 1917 plan (Figure 5.16) shows several buildings, but no structure is located in the position of Site 27.



**Figure 5.10** The location of a cottage, as identified on the 1888 Dawson & Dawson plan. (Source: GML 2021, over Nearthmaps)





**Figure 5.11** Cottage identified on the 1888 Dawson & Dawson plan. (Source: 1888 Dawson & Dawson plan with GML addition 2021)



**Figure 5.12** Detail showing approximate location of the cottage identified on the 1888 Dawson & Dawson plan. (Source: GML 2021, over Nearthmaps)

## 5.8 Bridges and Weir (Sites 28 to 30)

Two bridges were identified within the Mount Gilead Stage 2 area (Figure 5.13). They likely connected 'Reserved Road', identified in the 1888 Dawson & Dawson plan of Mount Gilead Estate (Figure 5.14). The 1888 map does not specifically identify the timber bridge (Site 28) or the sandstone bridge (Site 29). However, the bridges appear to align with the section of river identified on the plan. The widening of the river associated with the weir (Site 30), directly south of the sandstone bridge, is also indicated on the map.

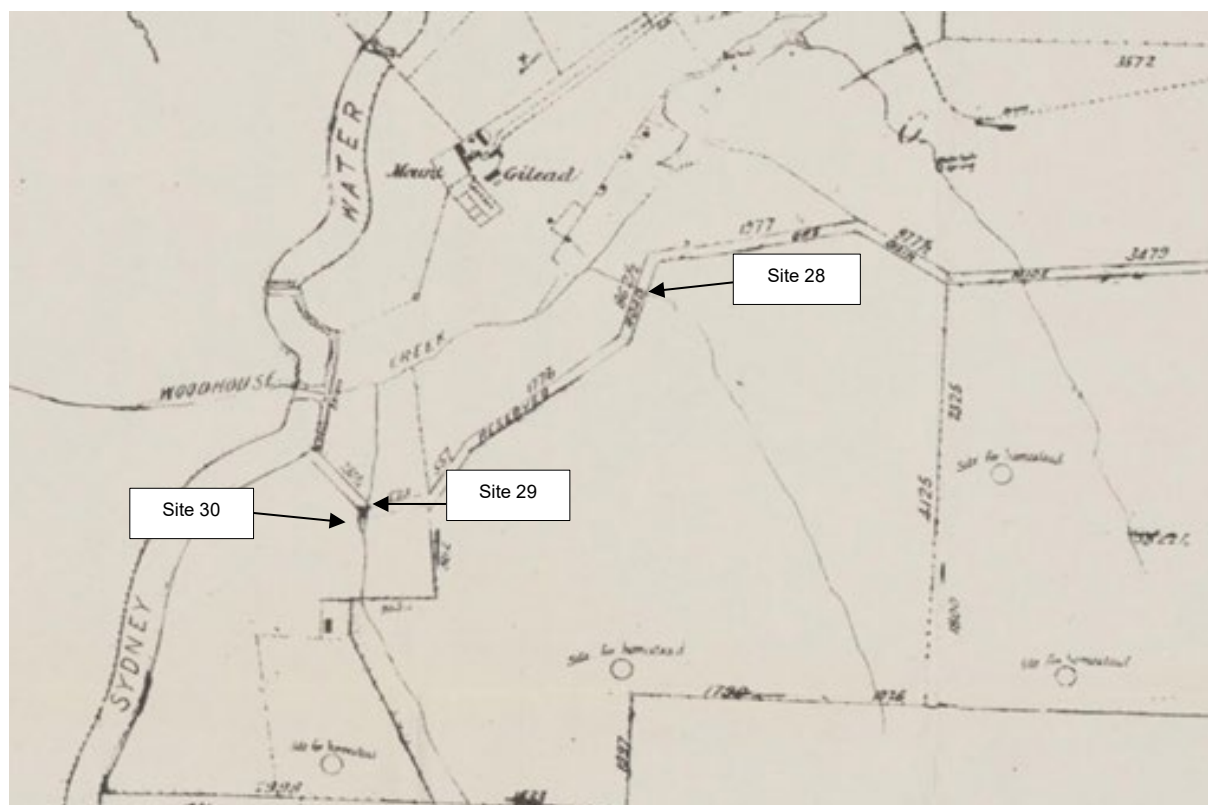
A sandstone weir (Site 30) was identified directly south of the sandstone bridge (Site 29) (Figure 5.13). The weir appears to have been identified in the 1888 Dawson & Dawson plan, which marks a wider section of the river (Figure 5.14).

The site was originally recorded by Higginbotham in 1992 (Item 29) and re-recorded by Navin Officer in 2006 (MGH1). Descriptions of the item only incorporated the weir. However, the 2021 survey identified additional features in its vicinity. Drystone walls were noted to the north and south, running alongside the creek. Drystone walls were also constructed across the river, forming two terraces or 'pools'. These appeared to be a form of water management, although the specific function was unclear.



**Figure 5.13** Location of Sites 28, 29 and 30 in relation to Reserved Road. (Source: GML 2021, over Nearmaps)





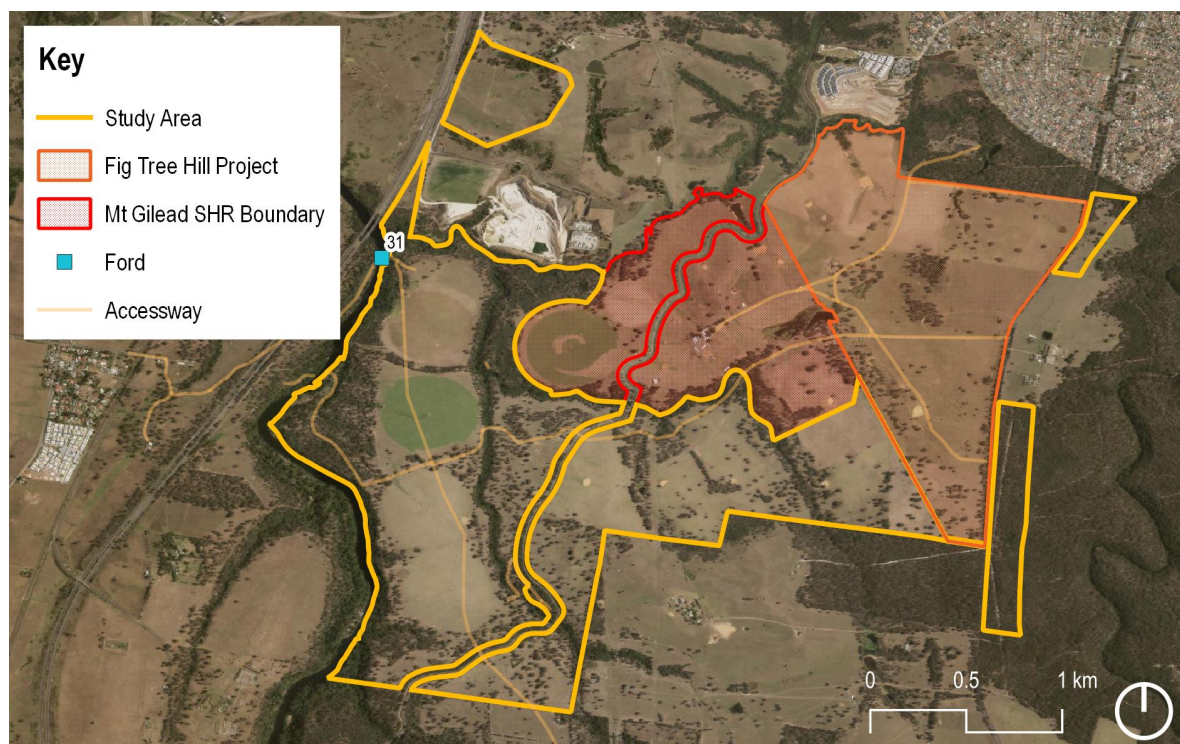
**Figure 5.14** Location of Sites 28, 29 and 30, in relation to Reserved Road (Site 42). (Source: 1888 Dawson & Dawson plan with GML additions 2021)

## 5.9 Nepean River Ford (Site 31)

A ford (Site 31) crossed the Nepean River on the edge of the Mount Gilead Stage 2 site (Figure 5.15 to Figure 5.18). The ford was located just south of the junction with Menangle Creek. The ford was identified on three maps, the 1917 Map of Liverpool-Menangle Manoeuvre Area (Figure 5.16), the 1861 Allen & Wigley subdivision of Mount Gilead Estate (Figure 5.17) and the 1888 Dawson & Dawson plan of Mount Gilead Estate (Figure 5.18). The associated road (Site 43) ran southeast to northwest, crossing the Nepean River and connecting to Menangle.

Fords crossing the Nepean River are, by nature, sites of low archaeological visibility. They usually only comprise low crossing points—a majority of the fords identified as part of the Penrith Lakes Scheme did not possess any visible features.<sup>4</sup> As a result, there is often very little additional physical evidence relating to early ford use and creation in addition to land clearing.

Within the Mount Gilead Stage 2 area, landscape evidence for the ford included a flat area on the riverbank directly beside the ford area, and a cleared 'road' route that lead into the estate was identifiable.

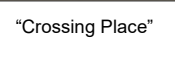


**Figure 5.15** Nepean River Ford (Site 31) crossing the Nepean River and the associated tracks and public accessways. (Source: GML 2021, over Nearthmap)



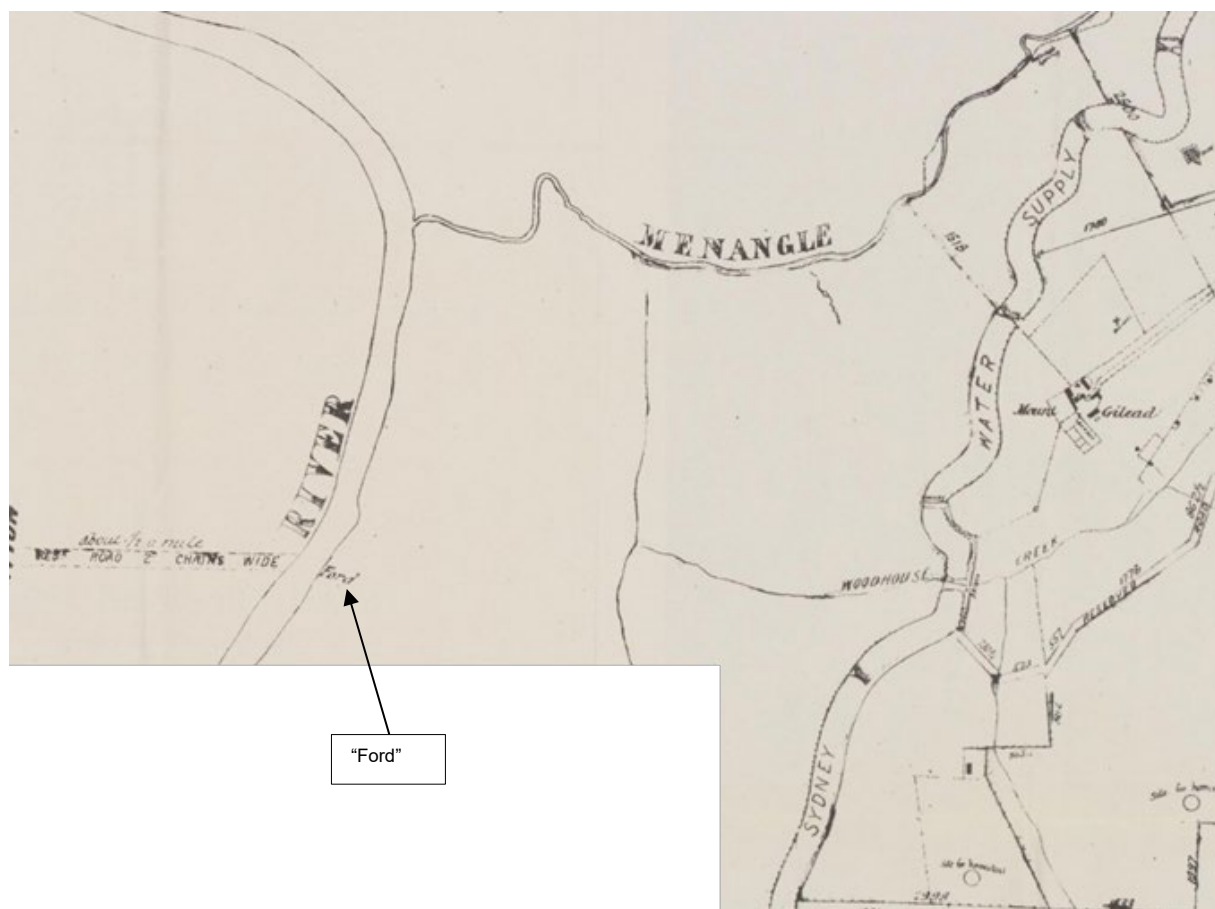
**Figure 5.16** Detail of the ford (Site 31) crossing the Nepean River, with the road access route (Site 43), extending south from the ford. This plan also details numerous house and cottage structures. (Source: 1917 Commonwealth Department of Defence with GML additions 2021)





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**Figure 5.18** Detail of the Site 31 ford crossing of the Nepean River. (Source: 1888 Dawson & Dawson plan with GML additions 2021)

## 5.10 Access Roads and Routes (Sites 42 to 45)

Several private and public access roads ran through the Mount Gilead Estate from the 1830s onwards. It is likely that some of these paths were previously used by Aboriginal people. Modern evidence of these roads are most clear on the 1917 Commonwealth Department of Defence plan (Figure 5.16), 1888 Dawson & Dawson plan (Figure 5.14 and Figure 5.18), and 1861 Allen & Wigley plan (Figure 5.17).

Reserved Road (Site 42) ran from Appin Road in the east to the Upper Canal in the west. The 1888 Dawson & Dawson map marked the road as 'one chain wide'. A public accessway (Site 43) ran from the ford (Site 31) that crossed the Nepean River and connected Menangle to Campbelltown. Two additional roads (Site 44 and Site 45) were identified as minor accessways to the Mount Gilead Estate.

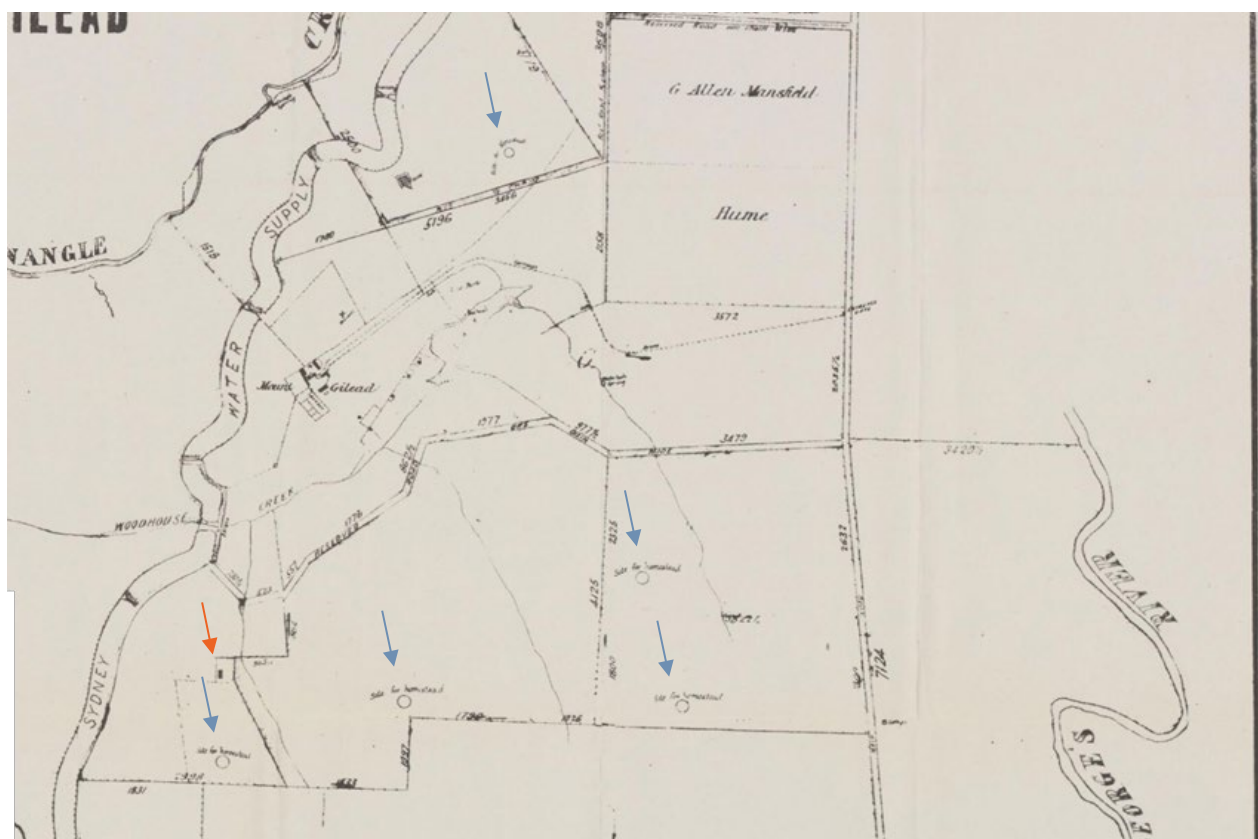
A further road was identified on the 1861 Allen & Wigley subdivision plan. The road was to be an extension westward of Reserved Road. On the 1861 plan (Figure 5.17), the addition section of road intersected with the Site 43 road and continued directly to the Nepean River, where an additional crossing point was likely to be located or constructed. It is unclear whether this road extension was ever built as the subdivision was never completed.

## 5.11 Potential 1888 Homestead Sites (Site 33)

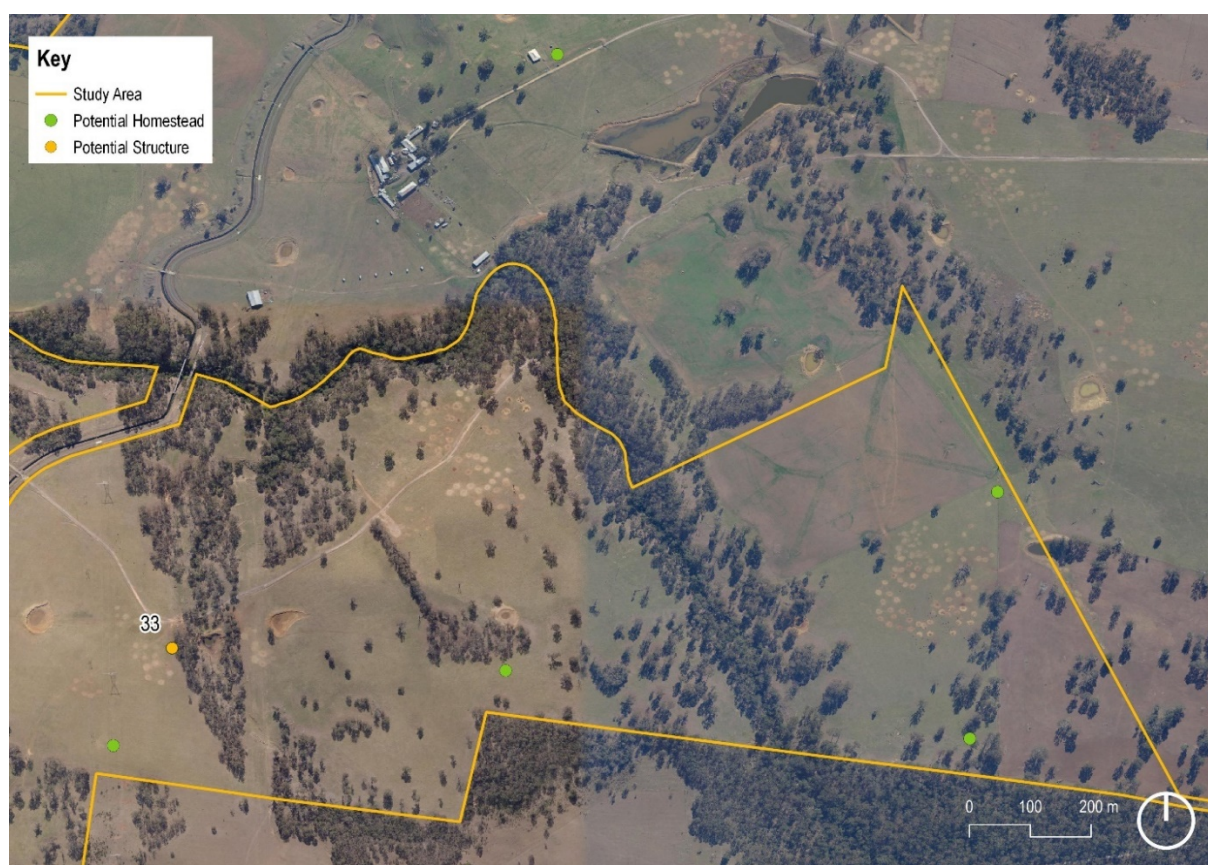
The 1888 Dawson & Dawson plan of Mount Gilead Estate identified five locations as 'site for homestead' (Figure 5.19). Of note is that the wording is not 'site of homestead'. The sites were likely indicated as the best location for houses to be constructed as part of the proposed subdivision of the estate. Existing structures noted on the map were cleared labelled, for example the 'cottage' (Site 27). The subdivision was never undertaken and no later indications of houses across the Mount Gilead Estate have been identified. As a result, it is unlikely that the proposed homesteads were built.

To confirm the archaeological potential, GML inspected the areas marked as 'site for homestead' (Figure 5.20). None of the 'site for homestead' locations had any evidence of archaeological deposit or landscape modification which could have suggested a former structure had been constructed.

A separate feature on the 1888 Dawson & Dawson map suggested a standing structure in the vicinity of one of the potential homestead sites (Figure 5.19). The unmarked black, rectangular feature was located in a small fenced off paddock. The item or structure may have been a cattle or hay shed rather than a homestead. Site 33 (Figure 5.20) comprised areas of discoloured grasses that suggested possible subsurface archaeological features. However, no above-ground remains or building materials were evident in the area.



**Figure 5.19** 1888 Dawson & Dawson plan showing locations marked as 'site for homestead' (five blue arrows) and a potential existing structure (red arrow). (Source: 1888 Dawson & Dawson plan, with GML additions 2021)

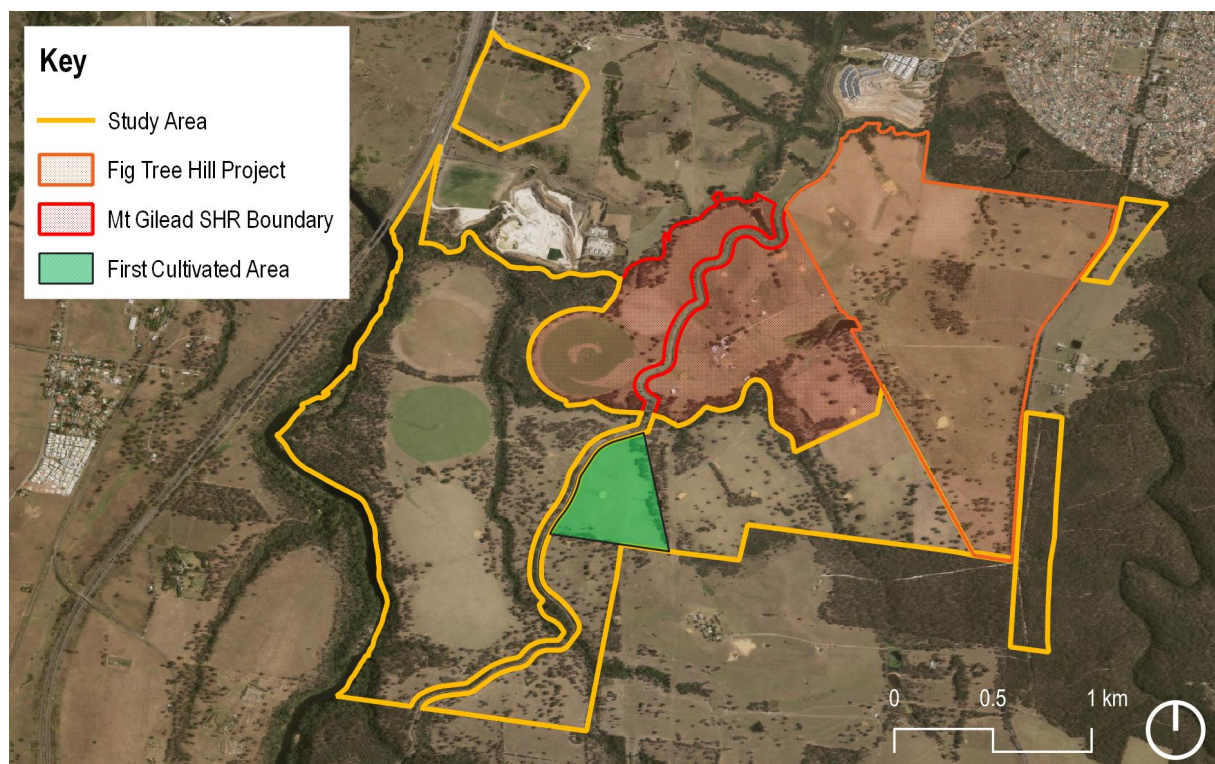


**Figure 5.20** Locations marked as 'site for homestead', and the site of a potential structure (Site 33), based on the 1888 Dawson & Dawson plan. (Source: GML 2021)

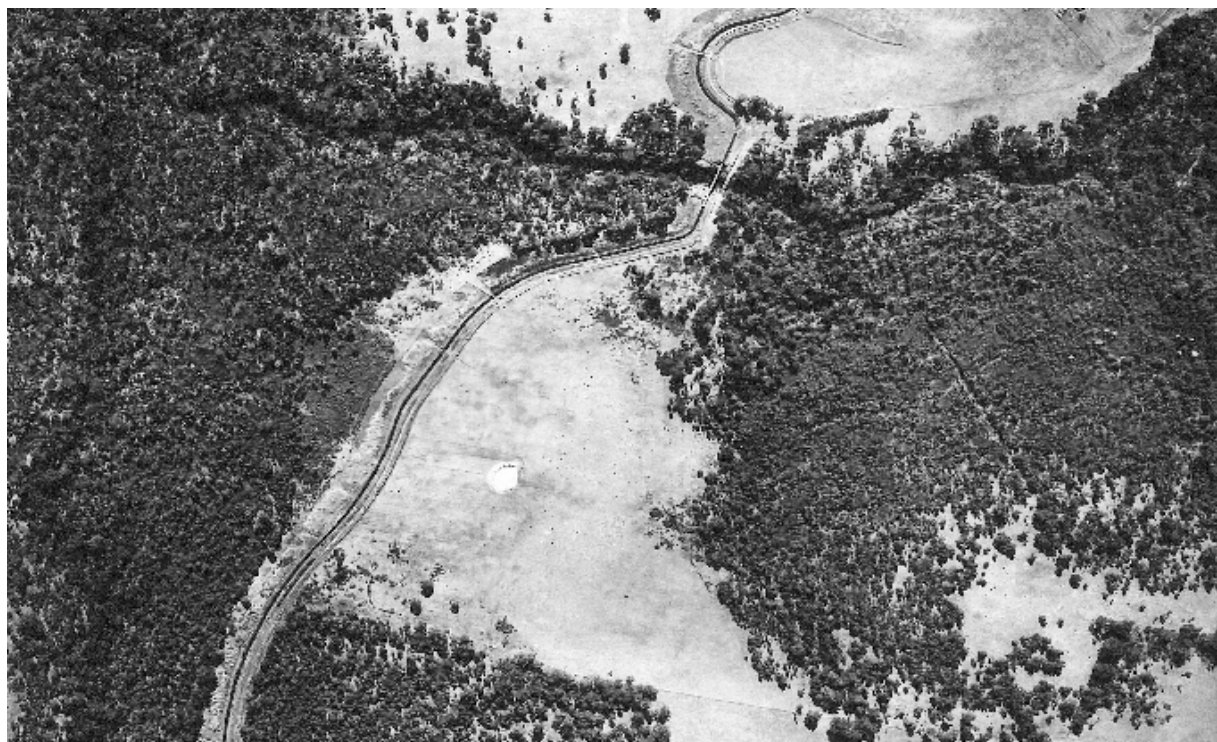
## 5.12 Agricultural Land (Site 34)

The landscape analysis (Section 4) identified a field system used for early agriculture. This location is described as Site 34, the lot of land south of Woodhouse Creek cultivated c1878 (Figure 5.21). Ridge and furrows through this zone are apparent on the 1947 aerial (Figure 5.22). It is likely that Woodhouse Bridge (located inside the SHR curtilage of the Upper Canal, Figure 5.24) was constructed to provide direct access to this area from the Mount Gilead homestead.





**Figure 5.21** Location of the first area south of Woodhouse Creek to be cultivated. (Source: GML 2021, over Nearthmap)



**Figure 5.22** Aerial photograph from 1947, showing ridge and furrow marks in Site 34 area outlined in green. Woodhouse Bridge can be seen on the east (right) of the Upper Canal. (Source: DPIE)



### 5.13 Possible Wheel Ruts (Site 35)

The iron tires of wooden wheels belonging to carriages and carts could carve out ruts into hard surfaces, such as bedrock, when a route was heavily used. Heavy carts and wagons could have axels up to 1.5m wide (59 inches), with the iron or steel tires measuring up to 125mm (5 inches) wide. A common axel size was 1.3208m (52 inches) with a tire 50mm wide. For carriages that were used for transport, the axels were smaller, 1.1684m (46 inches) or less.<sup>5</sup>

The sandstone bedrock on the approach down slope to Nepean Creek, located along the road connecting Appin Road to Menangle (Site 42) has potential long straight cuts into the bedrock which could possibly be made by wheels. This is a tentative hypothesis, and the markings may have been formed by other mechanical means.



**Figure 5.23** Location of potential wheel ruts (Site 35) in relation to accessways. (Source: GML 2021, over Nearthmaps)

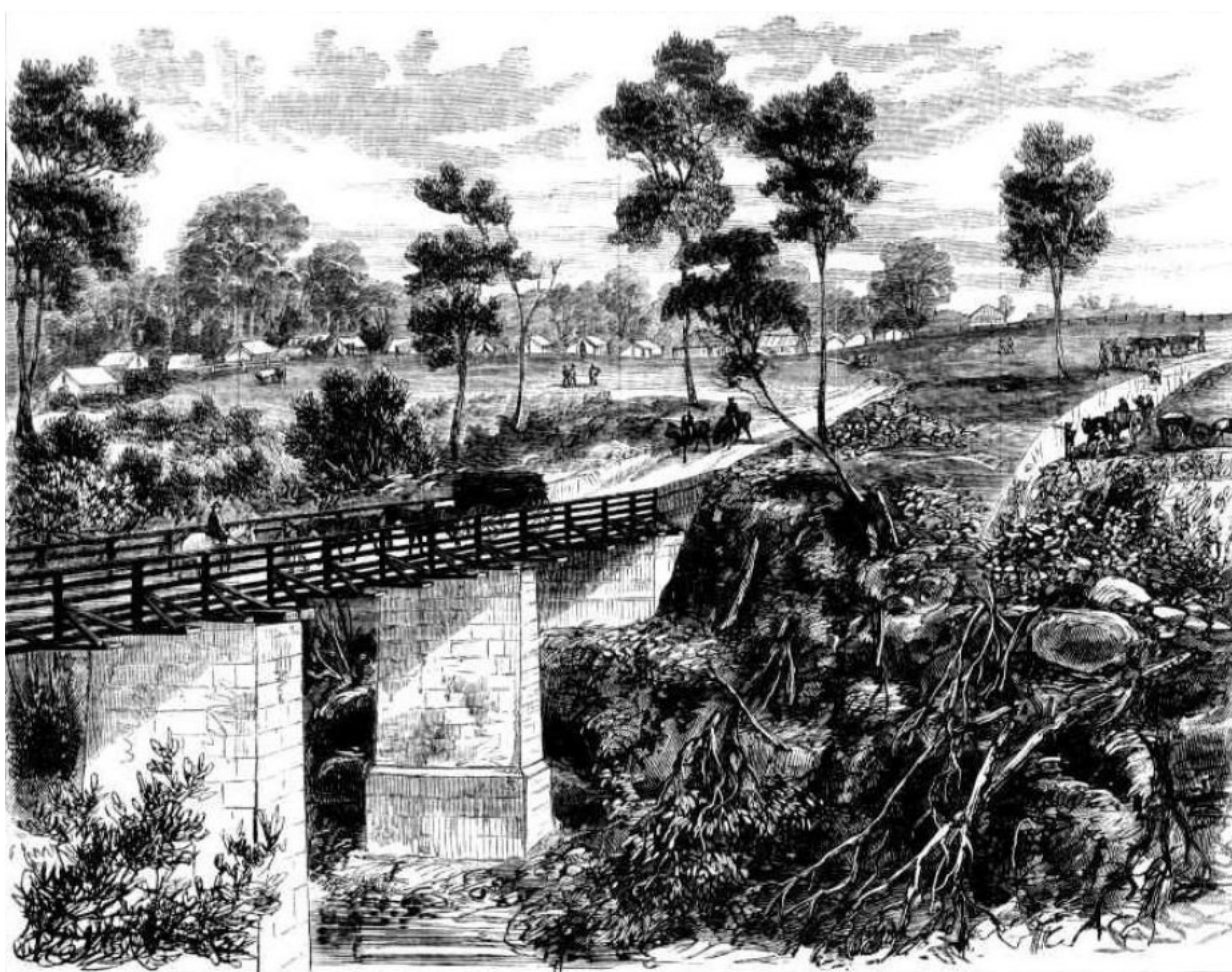
### 5.14 Construction Camp (Site 36)

A construction workers' camp was identified in the background of a drawing printed in the Sydney Mail and New South Wales Advertiser in October 1881 (Figure 5.24). The camp in the illustration comprised many tents on the periphery of a cleared field. The structures were likely constructed from light timber frames.<sup>6</sup>

In the foreground of the image, the substantial Woodhouse Creek Bridge (Higginbotham 1992, Item 28) is being crossed by carts and horses (Figure 5.25). The Upper Canal is being constructed on the right-hand side of the image. The Woodhouse aqueduct has yet to be built.

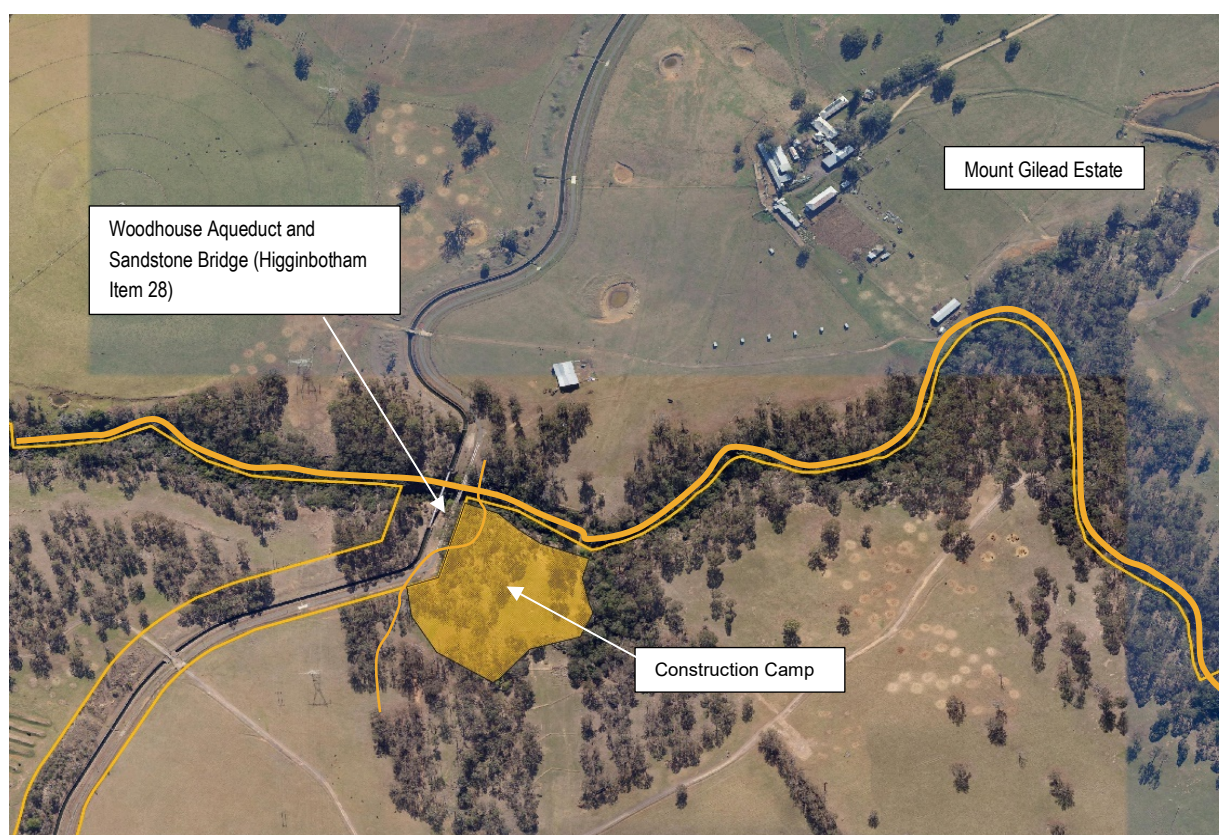
No mention of a camp in this location Woodhouse Creek has been identified during the research for this project. Within the Mount Gilead Estate, Higginbotham only noted the huts beside the Upper Canal (Sites 21 to 24). He also noted that there were a number of similar camp sites along Upper Canal.<sup>7</sup>

An inspection of the area where this camp would have been located was undertaken. Whilst being a flat grass area suitable for such use, it was noticed that soils were skeletal, with bedrock exposed across the area. There was no evidence for historical material in the area.



**Figure 5.24** The main sandstone road bridge (Higginbotham 1992, Item 28) crossing Woodhouse Creek to the Mount Gilead homestead. The tents of the temporary construction camps are seen in the background, while work on the Upper Canal is being undertaken in the right-hand side of the image. The image is facing south. (Source: Sydney Mail and New South Wales Advertiser, 22 October 1881)





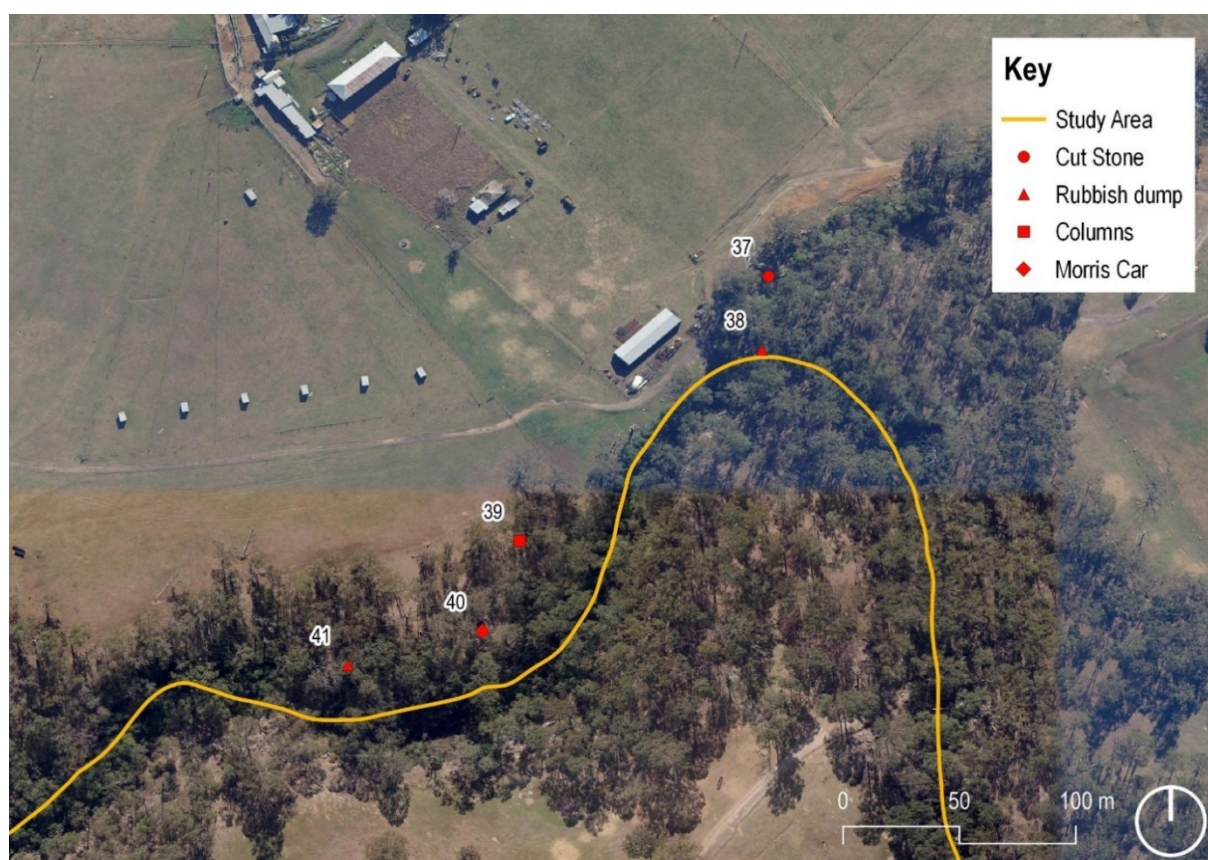
**Figure 5.25** Zone (yellow) showing the approximate location of temporary camps for Upper Canal construction identified in 1881 illustration (above). (Source: GML 2021, over Nearmaps)

## 5.15 Other Items (Sites 37 to 41)

The northern edge of Woodhouse Creek, in the vicinity of the sheds associated with the Mount Gilead Estate, contained five further items. Each of the features (Sites 37 to Site 41) were distinct and discrete. The sites were:

- Site 37—cut stone storage/dump
- Site 38—twentieth-century rubbish dump
- Site 39—stone columns
- Site 40—Morris 8 car
- Site 41—bottle dump

All of these sites were located within the SHR boundary for the Mount Gilead Estate, and not within the Mount Gilead Stage 2 site. They have been included in this report as they are additional archaeological features relating to the overall use of the farm and creeks and have not been previously recorded. Their locations are shown in Figure 5.26.



**Figure 5.26** Items on the north of Woodhouse Creek. (Source: GML 2021, over Nearmaps)

## 5.16 Endnotes

- <sup>1</sup> Higginbotham, E, Historical and Archaeological Assessment of Proposed Cycleway, Near Thornleigh Quarry, Via de Saxe Close, THornleigh (Berowra Valley Regional Park), N.S.W., report prepared for Hornsby Shire Council, March 2002, pp 17, 24.
- <sup>2</sup> Higginbotham, E, Conservation Management Plan for the Upper Canal, Pheasant's Nest to Prospect Reservoir, NSW: History, Survey and Significance, vol. 1, report prepared for The Sydney Catchment Authority, August 2002, p 87.
- <sup>3</sup> Higginbotham, E, Heritage study of the Upper Canal, Prospect Reservoir & Lower Canal (Upper Nepean Scheme) Assessment, report prepared for Water Board, Sydney, October 1992, p 10.
- <sup>4</sup> Godden Mackay Logan, Penrith Lakes Scheme - Nepean Fords Archaeology Handbook—Archaeological Management Plan, report prepared for Penrith Lakes Development Corporation, September 2008.
- <sup>5</sup> Personal comms. Jeff Powell. Cobb & Co Museum, Toowoomba.
- <sup>6</sup> Navin Officer, Mount Gilead Campbelltown, NSW Cultural Heritage Assessment, report prepared for Manidis Roberts Consultants, May 2006, p 53.  
Higginbotham, E, Heritage study of the Upper Canal, Prospect Reservoir & Lower Canal (Upper Nepean Scheme) Assessment, report prepared for Water Board, Sydney, October 1992. Item 17
- <sup>7</sup> Higginbotham, E, Conservation Management Plan for the Upper Canal, Pheasant's Nest to Prospect Reservoir, NSW: History, Survey and Significance, vol. 1, report prepared for The Sydney Catchment Authority, August 2002, p 87.

# Glen Lorne & The Wider Cultural Landscape



# 6 Glen Lorne & The Cultural Landscape

## 6.1 Introduction

Glen Lorne is located on the eastern side of Appin Road and is a landscape and archaeological site with local significance (Campbelltown LEP 2015 Item No. 155). The historical structures at Glen Lorne were destroyed by a fire in 1981. However, evidence of the former buildings and water management features can be seen beneath the overgrowth. Evidence of several the early cultural plantings around the original property also remain standing.

This section also provides a preliminary note with respect to the whole cultural landscape encompassing Mount Gilead and Glen Lorne.

## 6.2 Glen Lorne—The Archaeological Resource

Most of the built structures which remained on site until the early 1980s have been destroyed or removed. However from an archaeological perspective the site is readable, and can be considered to hold extensive archaeological deposits.

The main accessway to Glen Lorne is still visible (Figure 6.1 and Figure 6.2). The wide road was overgrown with grass. It remained lined with historical wooden fenceposts and modern metal fence posts with barbed wire. The original wooden gateway at Appin Road also remains in situ (Figure 6.3). The original frontispiece garden layout, to the west of the former dwelling, has been lost due to general dilapidation of the property over several decades. This dilapidation has also impacted the degree to which former working gardens of the estate can be interpreted. A small remnant orchard and concrete-lined wells south and east of the former dwelling's footprint provide some evidence of past utilitarian features of the grounds.

The Glen Lorne home yard landscape has retained remnant cultural plantings from the time it was a prominent estate on Appin Road—essentially from the mid-nineteenth century until the mid-twentieth century. The most prominent landscape features remaining in the immediate grounds of the former homestead are several stands of mature landmark trees—chiefly bunya pines and Port Jackson figs (Figure 6.4 to Figure 6.7). Four bunya pines (Figure 6.4) are dotted across the relict home yard—two offset from the alignment of the former house's northern façade, one to the principal building's south and one abutting the entry drive. A pair of Port Jackson figs (Figure 6.5) also abut the entry drive, where the carriage drive fencing opens up into the front garden. Other plants recorded in this assessment include species found commonly in rural estates during the nineteenth century and early twentieth century, including a pepper tree marking what may have been a rear corner of the homeyard, privet, *Tecomaria*, citrus species, African olive, bamboo, agave and bougainvillea (Figure 6.7).

Sandstone and brick footings were identified to the south of the main accessway (Figure 6.8 to Figure 6.10). A number of medium-sized rooms or structures were identified, although the overgrown vegetation and piles of rusted corrugated iron (Figure 6.12) made the remains difficult to fully assess. The foundations are at the same elevation as the ground, and not standing. The bricks were primarily

poor-quality sandstock, with a large amount of speckling from organic material in the material (Figure 6.13). It is likely that these belonged to the original estate buildings.

Two piles of bricks were identified beneath trees (Figure 6.14). The bricks were mixed. They mostly included poor-quality sandstone bricks, such as those identified in some of the foundations. However, other bricks were modern.

One sandstock building was standing 30m east of the footings (Figure 6.16). A door was identified on the southern side, and a window with iron bars on the northern side (Figure 6.17). The mortar was a sandy lime mineral mortar.

Three concrete-lined cisterns (Figure 6.18 and Figure 6.19) were identified in a row to the east of the footings. The size and date were not able to be determined. One large brick well was identified south of the footings (Figure 6.20 and Figure 6.21). The well was concrete-lined and capped with a corrugated iron lid.

No isolated artefacts, artefact scatters or deposits were identified during the site visit. A large modern brick house remains standing (Figure 6.22)—this is not a heritage item.



**Figure 6.1** Entrance way to Glen Lorne from Appin Road. (Source: GML 2020)



**Figure 6.2** Entrance way to the Glen Lorne from Appin Road. (Source: GML 2020)



**Figure 6.3** Gateway to the Glen Lorne. (Source: GML 2020)



**Figure 6.4** The Port Jackson figs and bunya pine (middle-ground) on the entry driveway to the Glen Lorne homeyard. (Source: GML 2020)





**Figure 6.5** Three of the four bunya pines at Glen Lorne, seen from the southeast of the former homestead. (Source: GML 2020)



**Figure 6.6** Bamboo and agave in what was formerly the front garden of Glen Lorne. (Source: GML 2020)



**Figure 6.7** Stone pine row to the south of the Glen Lorne homestead. (Source: GML 2020)



**Figure 6.8** Sandstone footings of the former Glen Lorne homestead. (Source: GML 2020)



**Figure 6.9** Sandstone footings of the former Glen Lorne homestead. (Source: GML 2020)



**Figure 6.10** Sandstone footings of the former Glen Lorne homestead. (Source: GML 2020)





**Figure 6.11** Brick footings of the former Glen Lorne homestead. (Source: GML 2020)



**Figure 6.12** Corrugated iron remains of the Glen Lorne estate. (Source: GML 2020)



**Figure 6.13** Detail of bricks with sand lime mortar from remains of the Glen Lorne estate. (Source: GML 2020)



**Figure 6.14** Piles bricks located on the southern side of the Glen Lorne estate. (Source: GML 2020)



**Figure 6.15** Ruins of a sandstone structure at Glen Lorne. (Source: GML 2020)



**Figure 6.16** Ruins of a sandstone structure at Glen Lorne. (Source: GML 2020)





**Figure 6.17** Ruins of a sandstone structure at Glen Lorne. (Source: GML 2020)



**Figure 6.18** Three concrete-lined cisterns in the Glen Lorne homestead. (Source: GML 2020)



**Figure 6.19** Detail of concrete-lined cistern in the Glen Lorne homestead. (Source: GML 2020)



**Figure 6.20** Large brick well located on the southern side of the Glen Lorne homestead. (Source: GML 2020)



**Figure 6.21** Large brick lined well located on the southern side of the Glen Lorne homestead. (Source: GML 2020)



**Figure 6.22** Standing modern brick structure at Glen Lorne. (Source: GML 2020)

### 6.2.1 Archaeological Potential

The site of Glen Lorne has high archaeological potential. One structure remains standing that appears to be associated with the original homestead. Several features were identified on the surface, including wells, cisterns, foundations of buildings and piles of bricks. Moreover, the site has not been developed. The brick building appears to be the only modern structure constructed on the site and no landscaping appears to have been undertaken on the site.

The full extent of the archaeological potential of the site is unknown. Additional features may include artefacts, rubbish pits, and evidence of additional structures. These features are often deep and have a high potential for survival. As the site appears to be relatively undisturbed, the site also holds a moderate potential for identifying evidence of more shallow and ephemeral features, such as garden beds, yard surfaces and paths. There is a low potential for evidence of land clearing.

The archaeological potential at Glen Lorne has been summarised in the following table.

**Table 6.1** Summary of the archaeological potential at Glen Lorne.

Possible Archaeological Remains	Potential
Tree boles (burnt or stumped) associated with land clearing.	Low
Ephemeral evidence associated with garden beds, including pollen and seeds to identify planting types. Yard surfaces and garden paths.	Moderate



Possible Archaeological Remains	Potential
Landscape evidence including modifications for agricultural and water management purposes. Pits cut and filled with rubbish as a form of expedient disposal. Sealed artefact deposits contained within structural features such as cesspits, wells, drains, cisterns, etc. Isolated artefacts or surface scatters. Potential remains of a homestead structure and associated outbuildings might include postholes, wall footings/foundations, paths, yard surfaces and floor surfaces. Water management structures, including wells and cisterns. Evidence of fencing, including fenceposts and gate. Evidence of a driveway to the site. Cultural plantings around the homestead site.	High

### 6.2.2 Integrity of the Archaeological Deposit

The historical Glen Lorne homestead was destroyed by fire. Aside from a single modern brick building, no additional developments have been undertaken at the site. The integrity of the site will not be fully known without undertaking test excavations. However, the remains of building foundations, wells, cisterns and one structure remains standing, suggesting that the integrity of the subsurface archaeological remains may be high.

### 6.2.3 Future Research and Management

Glen Lorne is currently identified to be an item of local significance. The site is a component of a future joint project between Lendlease, GML and Sydney University. A preliminary Archaeological Research Design has been prepared to guide the work, and should be referred to for reference.

## 6.3 The Whole Cultural Landscape

NSW Heritage states that the Mount Gilead estate is of exceptional significance as a cultural landscape on account of the property's nationally-rare surviving features, its intactness as an estate, its collective value as part of a continuum of notable colonial properties along Appin Road, and its association with influential entrepreneurs and families.<sup>1</sup> These values can be considered to extent to the wider landscape outside the SHR boundary.

The site is an archetypal pastoral landscape. In terms of its establishment, evolution, and workings, it is representative in layout and function of a typology of colonial and mid to late-nineteenth century rural estates. The Mount Gilead estate meets the criteria for both cultural landscape models discussed by Morris and Britton in their study, *Colonial Landscape of the Cumberland Plain and Camden* (Section 3).<sup>2</sup> The place is both a landscape that provides a setting for a dwelling and a landscape which, due to historical context, degree of intactness, and consistency of character is valuable in heritage terms, irrespective of the buildings on the property.

The degree of intactness of the Mount Gilead estate landscape should be understood both in terms of its land title proportions and its changing agrarian development over time. Whilst the overall geometry of the estate is largely 'intact' (as per its amalgamated early nineteenth century form), the late twentieth century, and early twentieth first century scale of grazing and cropping activity dwarfs lands which were under agricultural activity on the property during the nineteenth century. Substantial sectors of the estate, especially to the west of Nepean Creek, appear to have remained forested land

until the latter decades of the twentieth century, as did a substantial area of the current Stage 2 Balance Lands facing the neighbouring Beulah. The Figtree Hill lands could be considered to have a high degree of intactness, based on the retention of the cleared/lightly forested form existing during the 1870s.

## 6.4 Endnotes

- <sup>1</sup> <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5052615>.
- <sup>2</sup> Morris, C and Britton, G, Colonial Landscapes of the Cumberland Plain and Camden, NSW A survey of selected pre- 1800 Cultural Landscapes from Wollondilly to Hawkesbury LGAs, report prepared for National Trust of Australia (NSW), August 2000.

# Historical Archaeological Assessment



# 7 Historical Archaeological Assessment

## 7.1 Overview

This section more broadly assesses the Stage 2 site's potential to contain significant historical archaeological remains, these are likely to be linked to the broader State Heritage listings (for Mount Gilead and the Upper Canal), and may be set within an associated historical cultural landscape. The assessment of archaeological potential is based on examination of historical information related to the site's development and occupation, current site conditions and previous disturbance, and comparable archaeological studies to identify the archaeological potential of the site. The significance of the potential archaeology is assessed by considering its research potential and value within the NSW heritage criteria.

## 7.2 Summary of Historical Development

The following three main phases of historical development at Mount Gilead have been identified:

- Phase 1:
  - Early land grants (1812–1880s);
  - Uther and Rose (1812–1861);
  - proposed subdivision (1861–1867); and
  - Woodhouse (1867–1880s).
- Phase 2: Upper Canal (1880s).
- Phase 3: twentieth-century cattle grazing and dairy (1941–present).

### 7.2.1 Phase 1a: Early land grants—Uther and Rose (1812–1861)

From 1795, the area of Menangle was known as the Cowpastures. The name was a result of a heard of escaped cattle that had become wild and roamed the area. The area became developed from the early nineteenth century as land grants were given out. In 1812, Uther was granted 400 acres and he named his farm 'Gilead'. Only 100 acres was cleared and felled. Uther cultivated this land and grazed cattle for four years. He also constructed a house and barn.

Rose purchased the land in 1818, renaming the site Mount Gilead, and expanded the size of the property. He constructed the artificial lake, dam, and windmill (which are within the SHR boundary). The land within the Mount Gilead Stage 2 site remained mostly forested during this period. After Rose's death in 1837, the large estate was leased out.

### 7.2.2 Phase 1b: Early land grants—proposed subdivision (1861–1867)

In 1861, Mount Gilead Estate was subdivided into 17 allotments. The property was put up for sale but never sold. The 1861 Allen & Wrigley plan of the proposed subdivision showed a road running east to west through the site (an extension of the existing Reserved Road) and locations marked 'site for

homestead'. As the land was never subdivided, it is unclear whether this road extension or the proposed homesteads were built.

At this point in time, the majority of the site was still well-timbered, predominantly by ironbark forests. The area within Lot 1 (around the Mount Gilead Estate inside the SHR boundary) and Lot 17 (joining the Nepean River in the west of the Mount Gilead Stage 2 site) were the main cleared areas (Section 2.1.1).

### **7.2.3 Phase 1c: Early land grants—Woodhouse (1867–1880s)**

In 1867, Woodhouse purchased the Mount Gilead Estate and Glen Lorne. Mount Gilead Estate was developed into a dairy and grazing property, with livestock including cattle, sheep, poultry and pigs, and more exotic animals, such as deer, alpacas, and llamas.

Woodhouse attempted to sell his property, unsuccessfully, in 1888. After the death of Woodhouse in 1892, the estate was sold a number of times in the early twentieth century. At this point, the site had 12 paddocks, 1000 acres of good grazing land and 500 acres of cultivated land.

### **7.2.4 Phase 2: Upper Nepean Scheme (1880s)**

In the 1880s, 73 acres of Mount Gilead Estate was resumed for the Upper Canal. Work on the Upper Canal was underway by mid-1881. Stones used to construct the canal were cut from quarries located along Woodhouse Creek and Nepean Creek. For a period, construction workers lived in temporary and semi-temporary buildings within a camp located to the south of the Woodhouse Creek aqueduct. Additional buildings with stone chimneys most likely used to house maintenance workers were constructed along the edge of the Upper Canal.

Drystone walls, built with stones excavated from the quarry sites, were also constructed along the creek edges. The construction of these walls is unable to be dated.

### **7.2.5 Phase 3: twentieth-century cattle grazing and dairy (1941–present)**

In 1941, the site was sold to the Macarthur-Onslow family. A dairy was opened and operated between 1945 and 1984. The physical remains of the dairy are located within the Mount Gilead Estate SHR boundary, with the rest of the land used for cattle grazing. Despite the closure of the dairy, cattle breeding and grazing has continued on the property until the present day.

Three large areas in the west of the Mount Gilead Stage 2 site have been turned into round agricultural fields watered by pivots.

## **7.3 Analysis of Site Disturbance**

The degree of disturbance from past activities and/or developments within the site is assessed on a scale as minor, moderate or major. These are defined as:

- Minor disturbance—the area or feature has been subject to activities that may have had a minor effect on the integrity and survival of archaeological remains.
- Moderate disturbance—the area or feature has been subject to activities that may have affected the integrity and survival of archaeological evidence. Archaeological evidence may be present, but it may be disturbed.

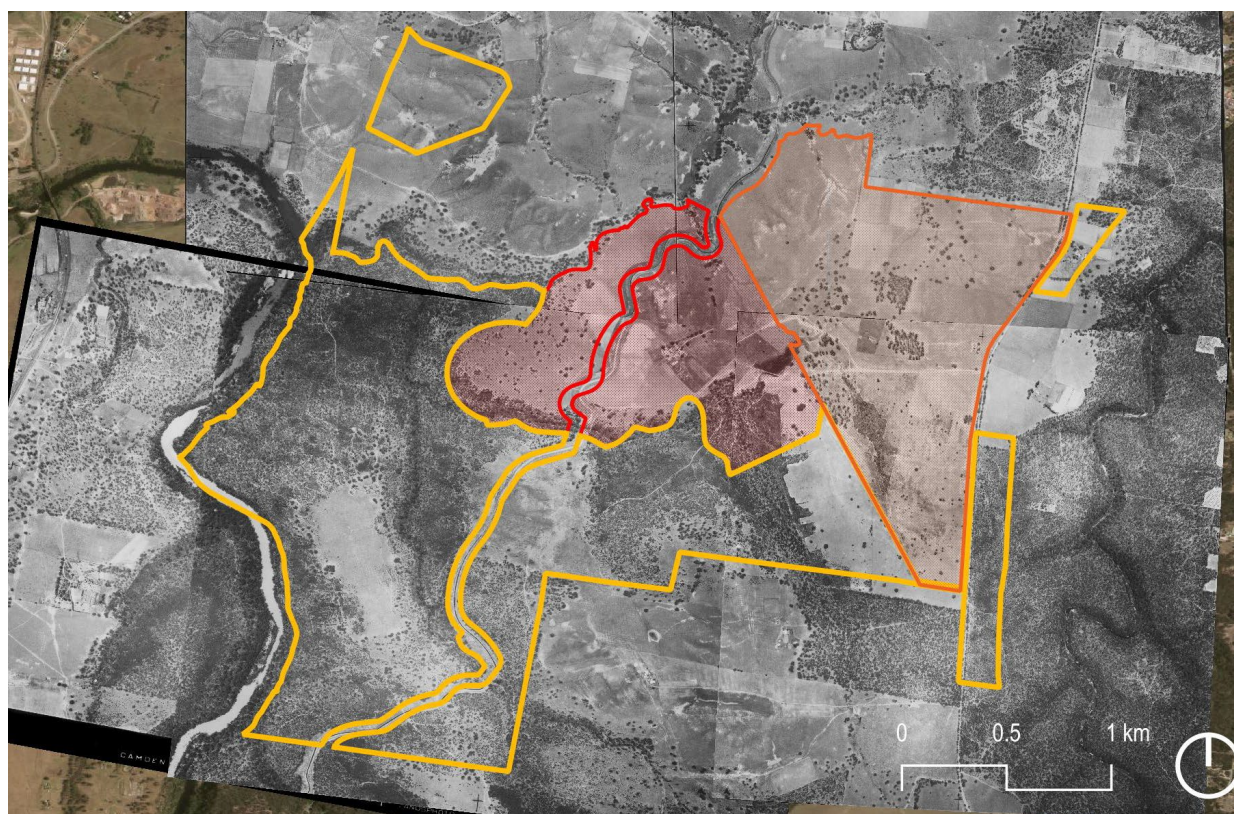
- Major disturbance—the area or feature has been subject to activities that would have had a major effect on the integrity and survival of archaeological remains. Archaeological evidence may be greatly disturbed or destroyed.

A large portion of the Mount Gilead Stage 2 site has undergone major impacts as a result of continued agricultural activities, namely ploughing. The following aerials demonstrate the extent of the agricultural development across the estate from 1947 to the present day (Figure 7.1 to Figure 7.7). The 1947 aerial (Figure 7.1) shows deforestation and modification of the landscape. Agricultural fields are present in the western, central, and eastern portions of the Mount Gilead Stage 2 site. The area surrounding Glen Lorne and to the north of the Mount Gilead Estate has also been turned into agricultural fields. The 1956 aerial (Figure 7.2) shows no major changes to the areas that were being worked. However, the white colouring of the fields indicates heavy scouring of the landscape. The 1969 (Figure 7.3) aerial shows further heavy agricultural activities in the central portion of the Mount Gilead Stage 2 site. The two fields have dark horizontal and vertical lines across them. The 1971 and 1984 aerials (Figure 7.4 to Figure 7.5) show minimal changes to the landscape, but the field in the western portion of the estate has been extended. The 1994 aerial (Figure 7.6) presents the Mount Gilead Estate in a similar layout to its present form (Figure 7.7). Round fields watered by pivots have been installed in the western half of the estate, deforesting the northwestern area of the Mount Gilead Stage 2 site.

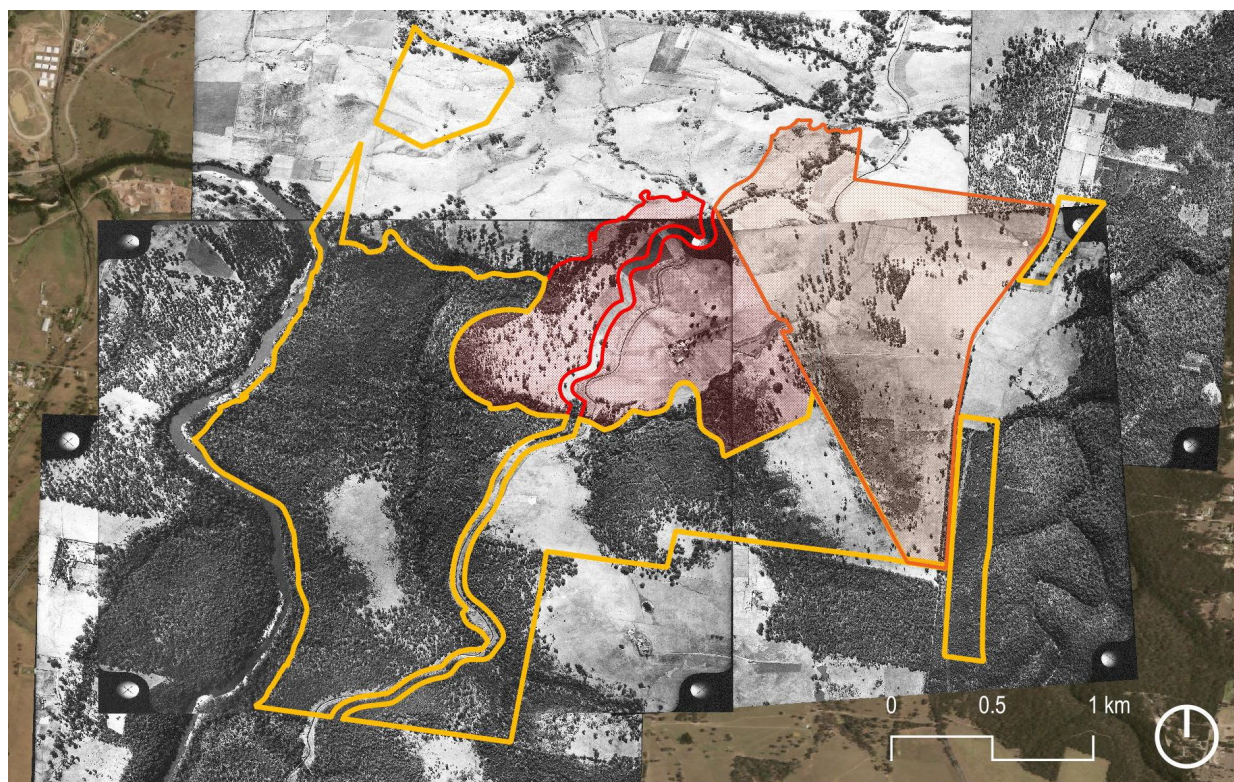
The level of disturbance across the Mount Gilead Stage 2 site is summarised in Figure 7.8. The figure was created by assessing the modern aerials and undertaking surface survey across the site. The corridors around the waterways, namely Woodhouse Creek, Nepean Creek and the Nepean River have remained comparatively undisturbed. The areas appear not to have been deforested, and the original woodland has been kept intact.

The archaeological sites identified within the Mount Gilead Stage 2 site predominantly fall into areas identified as having undergone minimal or no disturbance (Figure 7.9). As a result, they have been shown to be of high integrity. The exceptions are Site 33 (the unknown structure), Site 35 (wheel ruts) and Site 42 and Site 43 (two major accessways). The level of disturbance to Site 33 is likely to be minimal as it is located on the periphery of the field. An assessment of Site 35 shows that the archaeological feature has maintained high integrity. The roads (Site 42 and Site 43) are visible in areas identified as being undisturbed but removed in areas affected by agricultural activities. For example, the central portion of Site 42 (the road running north to south in the western portion of the Mount Gilead Stage 2 site) is not identifiable in the areas where the round fields are presently located.





**Figure 7.1** 1947 aerial of the Mount Gilead Estate. The Mount Gilead Stage 2 site is outlined in yellow. Note: the boundary is approximate when overlaid onto aerial photographs. (Source: DPI, with GML additions 2021)



**Figure 7.2** 1956 aerial of Mount Gilead Estate. The Mount Gilead Stage 2 site is outlined in yellow. Note: the boundary is approximate when overlaid onto aerial photographs. (DPI, with GML additions 2021)



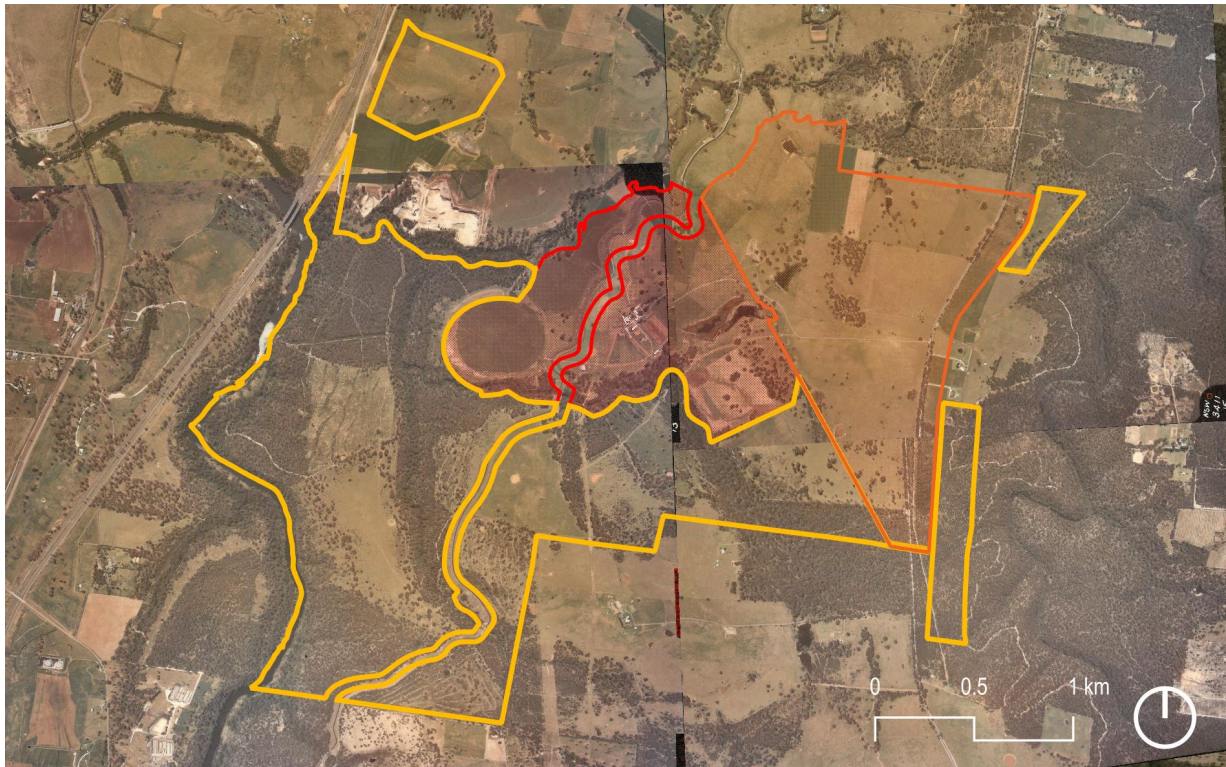


**Figure 7.3** 1969 aerial of Mount Gilead Estate. The Mount Gilead Stage 2 site is outlined in yellow. Note: the boundary is approximate when overlaid onto aerial photographs. (Source: DPI, with GML additions 2021)

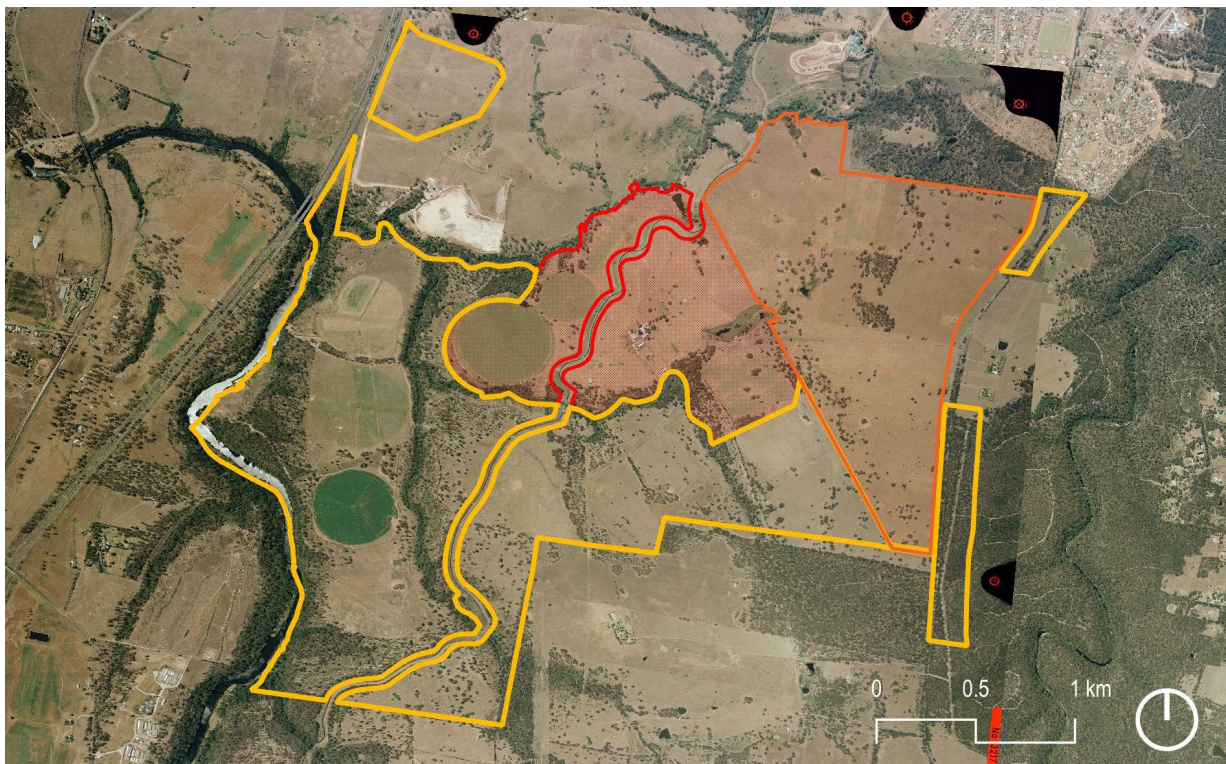


**Figure 7.4** 1971 aerial of Mount Gilead Estate. The Mount Gilead Stage 2 site is outlined in yellow. Note: the boundary is approximate when overlaid onto aerial photographs. (Source: DPI, with GML additions 2021)



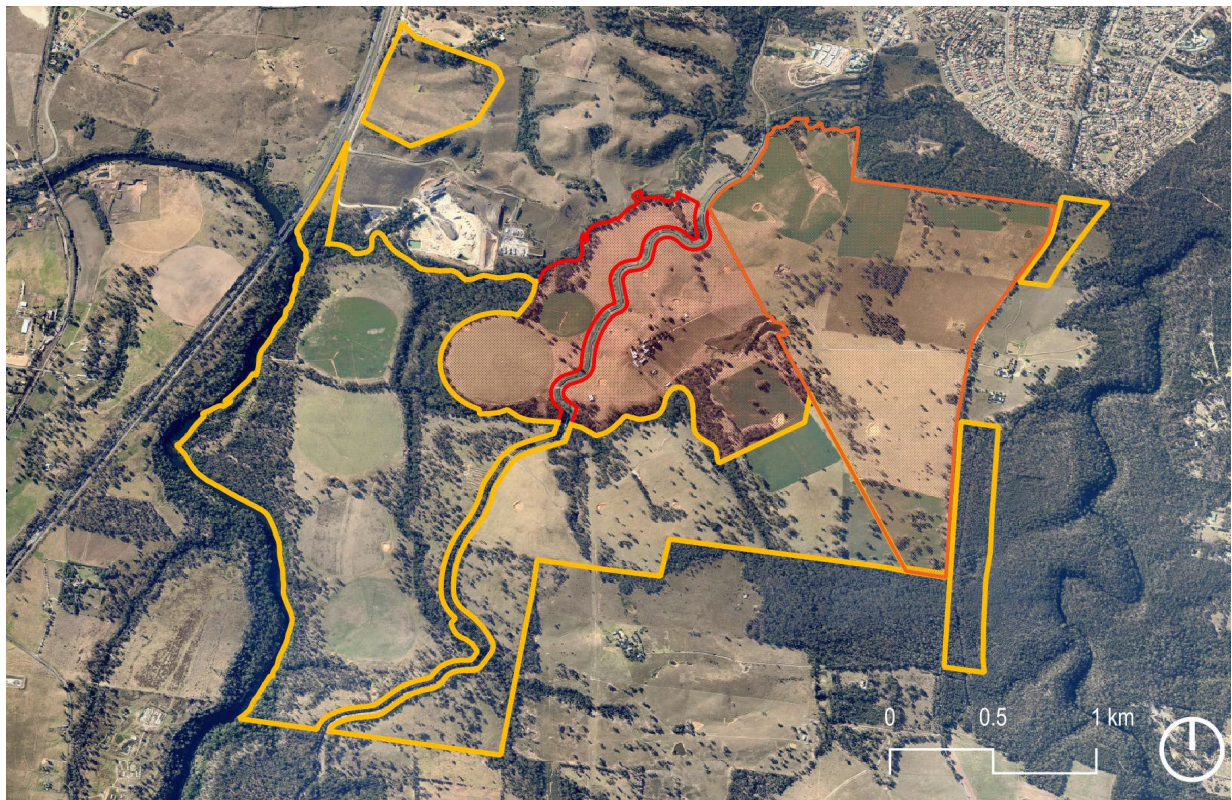


**Figure 7.5** 1984 aerial of Mount Gilead Estate. The Mount Gilead Stage 2 site is outlined in yellow. Note: the boundary is approximate when overlaid onto aerial photographs. (Source: DPI, with GML additions 2021)

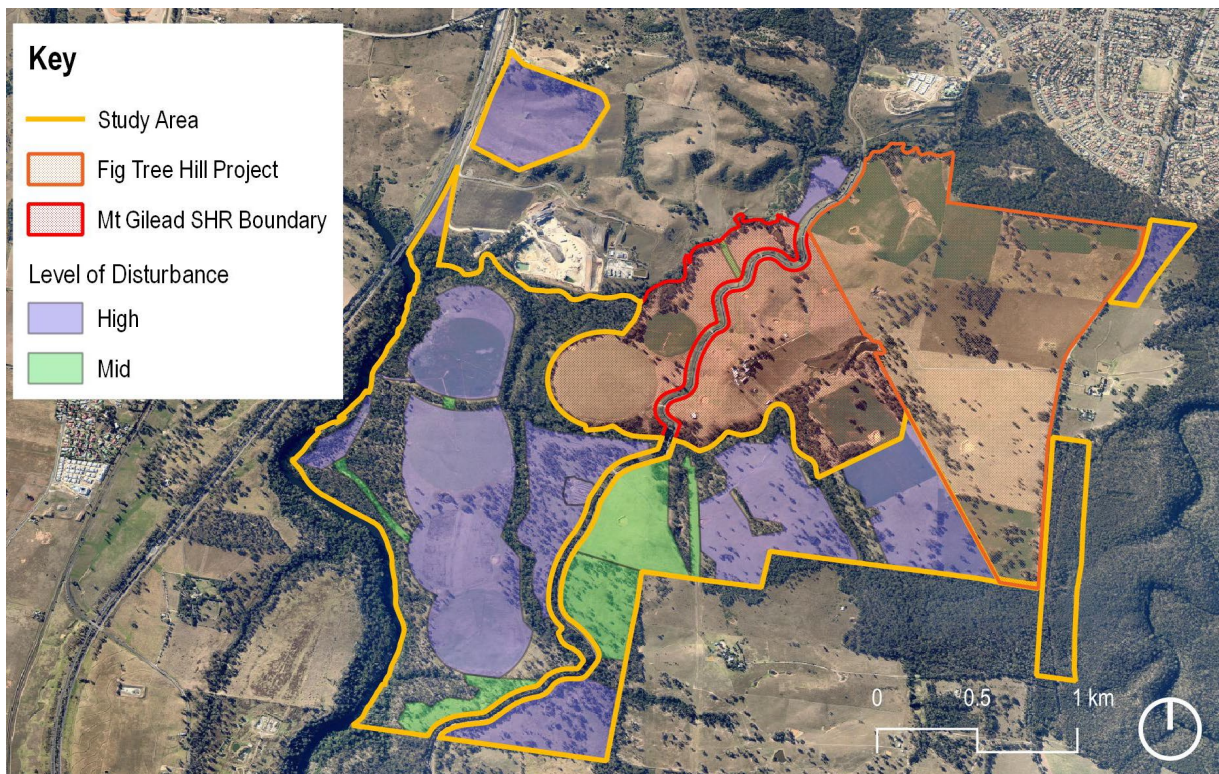


**Figure 7.6** 1994 aerial of Mount Gilead Estate. The proposed Mount Gilead Stage 2 site is outlined in yellow. Note: the boundary is approximate when overlaid onto aerial photographs. (Source: DPI, with GML additions 2021)





**Figure 7.7** 2020 aerial of Mount Gilead Estate. The Mount Gilead Stage 2 site is outlined in yellow. Note: the boundary is approximate when overlaid onto aerial photographs. (Source: DPI, with GML additions 2021)



**Figure 7.8** Disturbance mapping within the proposed Mount Gilead Stage 2 site boundary. (Source: GML 2021 over Nearmaps)





**Figure 7.9** Historical archaeological sites in relation to areas of disturbance across the north of the Mount Gilead Stage 2 site. (Source: GML 2021 over Nearmaps)

## 7.4 Archaeological Potential

‘Archaeological potential’ refers to the likelihood of archaeological remains to survive at a site, with the consideration of the condition and integrity of the associated archaeological fabric. It should be distinguished from ‘archaeological significance’ or ‘research potential’. For instance some extant items (such as fence posts) will be described as having high archaeological potential—however, within the context of the Stage 2 area, these items have little further research potential to provide new information or insight into the connected historical phases of the place.

The majority of the sites identified within the Mount Gilead Stage 2 site are visible above ground. The extent of their potential is therefore more or less understood. These include, for example, remains of weirs, bridges, quarries, and drystone walls. Other archaeological features and sites may be completely subsurface. These include, for example, evidence of tree felling, remains of construction camp sites, and refuse pits. The location of these sites have been suggested by interpreting historical maps, plans, and paintings. Further investigation would be required to fully determine the extent and integrity of the archaeology. However, indications of potential can be determined by several factors.

The potential for relics to survive at a site depends on the ‘site formation processes’ that have operated there. These processes include the physical development of the site and the activities that occurred there. In the case of the Mount Gilead Estate, disturbance was primarily caused by agricultural activities. Felling trees, landscaping, and continuous ploughing have likely disturbed or

completely removed surface and shallow subsurface archaeology. Deeper archaeological features, such as wells or cisterns, have a higher chance of having survived these activities.

Moreover, some archaeological remains are more vulnerable to disturbance, such as botanical remains, while others are more robust, such as wall footings. Archaeological remains that are ephemeral or made from organic material also have a lower potential for survival. For example, wooden remains have a lower chance of survival than stone features. These factors will be considered when determining the archaeological potential of each site identified within the Mount Gilead Stage 2 site.

Archaeological potential is usually described as low, moderate or high, and has been assessed as follows:

- Low—it is unlikely that archaeological evidence associated with this historical phase or feature survives (the items may have poor condition, with little integrity), and/or the activity is unlikely to have resulted in the archaeological signature described.
- Moderate—it is possible that some archaeological evidence associated with this historical phase or feature survives. If archaeological remains survive, they may have been subject to some disturbance (the condition and integrity of the item and/or the deposit has been impacted to some degree).
- High—it is likely or known that archaeological evidence associated with this historical phase or feature survives intact (the item and its deposit have good condition and integrity). Archaeology defined as having high potential also includes evidence that has been identified.

The heritage significance for each item is assessed in Section 7.5 against the NSW heritage criteria. The assessment of heritage significance is provide in Table 7.1 for ease of reference.



**Table 7.1** Assessed Levels of Archaeological Potential and Significance for the Sites identified in Section 5 of this Report.

Site Type	Number	Possible Archaeological Remains	Archaeological Potential	Extent: Known or Unknown	Significance
Sandstone Quarries and Processing Locations	1–18	<ul style="list-style-type: none"> <li>Tree boles (burnt or stumped) associated with land clearing for the accessways and quarry area.</li> <li>Artefacts associated with masonry.</li> </ul>	Low	Unknown	Local
		<ul style="list-style-type: none"> <li>Evidence of landscape modification.</li> <li>Flat or stepped/terraced rock faces.</li> <li>Cleared accessways and quarry areas.</li> <li>Tree boles from land clearing.</li> <li>Movement of stone rubble from accessways.</li> <li>Evidence of technologies, methods and/or processes for quarrying, eg vertical and/or horizontal drill holes, use of dynamite, pick marks, plug-and-feather technique, and unworked, semi-worked, and well-worked stones in piles within the boundary of the quarry site.</li> </ul>	High	Known	
Drystone Walls	19	<ul style="list-style-type: none"> <li>Standing and collapsed drystone walls in various locations along Nepean Creek and Woodhouse Creek.</li> <li>Uncut and semi-cut stones originally sources from nearby quarries.</li> </ul>	Moderate to low	Known	Local
Chimney in Rock Shelter	20	<ul style="list-style-type: none"> <li>Isolated artefacts or surface scatters.</li> </ul>	Low	Known	Local
		<ul style="list-style-type: none"> <li>Structural remains of chimneys inside and adjacent to the rock shelter.</li> <li>It is unlikely there is further buried archaeological material because the shelter does not have a floor deposit.</li> </ul>	High	Known	
Former Cottage Sites, with Chimneys	21–24	<ul style="list-style-type: none"> <li>Tree boles (burnt or stumped) associated with land clearing.</li> <li>Ephemeral evidence associated with garden beds, including pollen and seeds that could identify plant types.</li> </ul>	Low	Unknown	Material connected with

Site Type	Number	Possible Archaeological Remains	Archaeological Potential	Extent: Known or Unknown	Significance
		<ul style="list-style-type: none"> <li>Additional structural remains, including postholes, wall footings/foundations, paths, yard surfaces and floor surfaces.</li> <li>Water management structures, including cisterns and drains.</li> <li>Waste management, including cesspits and pits cut and filled with rubbish as a form of expedient disposal.</li> <li>Sealed artefact deposits contained within structural features such as cesspits etc.</li> <li>Isolated artefacts or surface scatters.</li> </ul>	High	Unknown	the former cottages is State Other items likely to be local
		<ul style="list-style-type: none"> <li>Structural remains of houses associated with the workers involved in the construction and/or maintenance of the Upper Canal.</li> <li>Stone chimney structures with mortar.</li> </ul>	High	Known	
Fence Posts	25–26	<ul style="list-style-type: none"> <li>Wooden fence posts.</li> <li>Metal gate.</li> <li>Barbed wire.</li> </ul>	High	Known	None
Potential 1888 Cottage Site	27	<ul style="list-style-type: none"> <li>Tree boles (burnt or stumped) associated with land clearing.</li> <li>Ephemeral evidence associated with garden beds, including pollen and seeds that could identify plant types.</li> </ul>	Low	Unknown	Local, but further research is required
		<ul style="list-style-type: none"> <li>Potential remains of cottage might include postholes, wall footings/foundations, paths, yard surfaces and floor surfaces.</li> <li>Water management structures, including wells and cisterns.</li> <li>Pits cut and filled with rubbish as a form of expedient disposal.</li> <li>Sealed artefact deposits contained within structural features, such as cesspits, wells, drains, cisterns, etc.</li> <li>Isolated artefacts or surface scatters.</li> </ul>	Moderate	Unknown	

Site Type	Number	Possible Archaeological Remains	Archaeological Potential	Extent: Known or Unknown	Significance
		<ul style="list-style-type: none"> <li>Evidence of fencing, including fenceposts and gates.</li> </ul>			
Bridges	28	<ul style="list-style-type: none"> <li>Foundation cuts and fills.</li> </ul>	High	Known	Local
		<ul style="list-style-type: none"> <li>Wooden bridge remains, cut and uncut felled trees.</li> <li>Metal bolts and joins.</li> </ul>	Moderate	Known	
	29	<ul style="list-style-type: none"> <li>Sandstone bridge structure.</li> <li>Evidence of landscaping and landscape modification, including cut bedrock and fills.</li> <li>Foundation cuts and fills.</li> </ul>	High	Known	Local
Sandstone weir, drystone walls, and pools	30	<ul style="list-style-type: none"> <li>Sandstone weir.</li> <li>Foundation cut and fill.</li> <li>Modifications to the weir over time, eg addition of concrete.</li> <li>Quarried rock face on both sides of the weir and additional evidence of land modifications.</li> <li>Drystone walls running along the waterway.</li> <li>Drystone wall structures forming pools or terracing in the waterway.</li> <li>Additional landscaping to form pool features.</li> </ul>	High	Known	Local
Ford	31	<ul style="list-style-type: none"> <li>Landscape modification, such as tree clearance, cut bedrock, fills and levelling.</li> </ul>	Low	Unknown	Local
		<ul style="list-style-type: none"> <li>Evidence of structures associated with the ford crossing, including pier or jetty structures.</li> <li>Stone road/infrastructure at the base of the river.</li> <li>Isolated artefacts or surface scatters.</li> </ul>	High	Unknown	
	33	<ul style="list-style-type: none"> <li>Tree boles (burnt or stumped) associated with land cleaning.</li> </ul>	Low	Unknown	



Site Type	Number	Possible Archaeological Remains	Archaeological Potential	Extent: Known or Unknown	Significance
1888 Potential homestead site					Likely to be local, but further archaeological research required.
		<ul style="list-style-type: none"> <li>Potential remains of a cattle or hay shed structure and associated buildings might include postholes, wall footings/foundations, paths, yard surfaces, and floor surfaces.</li> <li>Evidence of fencing may include postholes.</li> <li>Water management structures, including wells and cisterns.</li> <li>Pits cut and filled with rubbish as a form of expedient disposal.</li> <li>Sealed artefact deposits contained within structural features, such as cesspits, wells, drains, cisterns, etc.</li> <li>Isolated artefacts or surface scatters.</li> </ul>	Moderate	Unknown	
Agricultural Land	34	<ul style="list-style-type: none"> <li>Tree boles (burnt or stumped).</li> <li>Plough and furrow marks.</li> <li>Landscape modifications, including fills.</li> <li>Drainage channels and other water management features.</li> <li>Isolated artefacts or surface scatters relating to agricultural activities.</li> </ul>	Low	Unknown	Local
Wheel ruts	35	<ul style="list-style-type: none"> <li>Wheel ruts carved into the bedrock sheet.</li> </ul>	High	Known	Local
Construction Camp	36	<ul style="list-style-type: none"> <li>Tree boles (burnt or stumped) associated with land clearing.</li> </ul>	Low	Unknown	Local
		<ul style="list-style-type: none"> <li>Potential remains might include postholes, wall footings/foundations, paths, yard surfaces, and floor surfaces.</li> <li>Evidence of fencing may include posthole cuts and fills.</li> </ul>	Low	Unknown	

Site Type	Number	Possible Archaeological Remains	Archaeological Potential	Extent: Known or Unknown	Significance
		<ul style="list-style-type: none"> <li>Pits cut and filled with rubbish as a form of expedient disposal.</li> <li>Sealed artefact deposits contained within structural features, such as rubbish or cesspits.</li> <li>Isolated artefacts or surface scatters.</li> </ul>	Moderate	Unknown	
Sandstone Blocks	37	<ul style="list-style-type: none"> <li>Well-cut sandstone blocks, including architectural elements such as lintels.</li> </ul>	High	Known	Not assessed, inside the Mt Gilead SHR curtilage
Rubbish Dump	38	<ul style="list-style-type: none"> <li>Twentieth-century artefacts relating to the use and occupation of the Mount Gilead Estate.</li> <li>Artefacts including scrap metal, white goods, bottles.</li> </ul>	High	Known	
Sandstone Columns	39	<ul style="list-style-type: none"> <li>Sandstone columns, column bases, capitols, and a lintel.</li> <li>Remnants of mortar used to join the pieces.</li> </ul>	High	Known	
Morris Car	40	<ul style="list-style-type: none"> <li>Skeletal rusted body of Morris 8 car.</li> </ul>	High	Known	
Rubbish Dump	41	<ul style="list-style-type: none"> <li>Late-nineteenth/early twentieth century bottles, including beer and flat-bottomed torpedo bottles.</li> <li>Isolated artefacts and surface scatters.</li> </ul>	High	Known	
Roads	42–45	<ul style="list-style-type: none"> <li>Original road fabric.</li> <li>Isolated artefacts or surface scatters.</li> </ul>	Low	Unknown	Local
		<ul style="list-style-type: none"> <li>Evidence of landscape modification, including cut bedrock, tree boles and levelling fills.</li> </ul>	High	Known	

As the remains of a majority the sites were identified during survey, they a definable level of archaeological potential and/or known extent. The exceptions are Site 27 (cottage), Site 33 (possible cottage), and Site 36 (construction camp) where no above-ground archaeological evidence was identified.

A majority of the sites were located within wooded areas that had not undergone disturbance as a result of continued agricultural activities across the landscape. These sites were primarily located in the corridors along Woodhouse Creek and Nepean Creek.

A summary of the archaeological site by historical phase has been outlined in Table 7.2.

**Table 7.2** Potential Historical Archaeological Remains Likely to be Present within the Mount Gilead Stage 2 site.

Phase	Identified Archaeological Sites
Phase 1a: Early land grants—Uther and Rose (1812–1861)	<ul style="list-style-type: none"> <li>• Timber Bridge Remains (Site 28)</li> <li>• Sandstone Bridge (Site 29)</li> <li>• Sandstone Weir, Walls, and Pools (Site 30)</li> <li>• Ford (Site 31)</li> <li>• Wheel Ruts (Site 35)</li> <li>• Access Road (Site 42)</li> </ul>
Phase 1b: Early land grants—proposed subdivision (1861–1867)	None
Phase 1c: Early land grants—Woodhouse (1867–1880s)	<ul style="list-style-type: none"> <li>• 1888 Potential homestead sites (Sites 27 and 33)</li> <li>• Agricultural Land (Site 34)</li> </ul>
Phase 2: Nepean Scheme Upper Canal (1880s)	<ul style="list-style-type: none"> <li>• Quarries and stone processing locations (Sites 1 to Site 18)</li> <li>• Drystone walls (Site 19)</li> <li>• Hearth and Chimney (Site 20)</li> <li>• Access Road (Site 44 and Site 45)</li> <li>• Construction Camp (Site 36)</li> </ul>
Phase 3: Twentieth-century cattle grazing and dairy (1941–present)	None

## 7.5 Assessment of Archaeological Significance

Archaeological significance refers to the cultural, historic, social, aesthetic, or research value afforded to known or potential archaeological remains. A series of criterion developed by the NSW Heritage Division, now part of the Department of Planning, Industry and Environment (DPIE), are used to evaluate whether the known or potential archaeological remains meet the significance threshold of each criteria. In NSW, archaeological significance is assessed as being of either local or state significance.

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



In NSW, archaeological remains are managed in accordance with their assessed levels of significance in line with *Assessing Significance for Historical Archaeological Sites and 'Relics'*, published by the NSW Heritage Branch in 2009. The framework for assessing archaeological research potential developed by Bickford and Sullivan in 1984<sup>1</sup> is considered in addressing criterion E.

This significance assessment specifically considers the historical archaeological resource of the Mount Gilead Stage 2 site and is presented below.

### 7.5.1 Sandstone Quarries and Processing Locations (Sites 1 to 18)

The sandstone quarries and stone processing locations within the Mount Gilead Stage 2 site should be considered of **local significance** under the NSW Heritage Criteria. The sites are closely associated with the SHR listed Upper Nepean Scheme and provide an understanding of the construction methods for this major infrastructure project that brought a permanent supply of fresh water to Sydney. Moreover, the quarries have become an integral part of the local landscape, running along Nepean Creek and Woodhouse Creek.

**Table 7.3** Significance Assessment of Potential Archaeological Remains of Site 1 to Site 18 against the NSW Heritage Criteria.

Criterion	Response
(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)	The construction of the Upper Canal, part of the Upper Nepean Scheme, is considered an important in the course of the development of modern Sydney. It provided a permanent supply of fresh water to the Sydney.  The quarries identified within the Mount Gilead Estate were created for the procurement of stone to use in the construction of the canal. By association, the sites should be considered of <b>local significance</b> under this criterion for their contribution to the development of this vital infrastructure project.
(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)	The quarries were created by construction workers who built the Upper Canal. However, there is no specific archaeological evidence at the sites that provide a greater understanding of this group of people.  The sites do not meet the threshold of significance under this criterion.
(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)	The quarries running along both Nepean Creek and Woodhouse Creek have become an integral part of the local landscape. The sites are aesthetically distinct, having altered the natural bedrock faces by carved flat platforms and terraces into the exposed stone.  Site 1 to Site 16 (the quarries) can be considered of <b>local significance</b> under this criterion.
(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)	Archaeological evidence at the quarries and stone processing locations within the Mount Gilead Stage 2 site is mainly limited to evidence of land clearing and quarrying. The sites and associated archaeological evidence do not demonstrate social, spiritual, or cultural associations with a particular community or cultural group.  The sites are not considered of significance under this threshold.
(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural	Quarries used to procure stone for the construction of the Upper Canal can be found along the entire route of the canal. The frequency and styles of the quarries identified within the Mount Gilead Stage 2 site provides insight into the technical and physical construction of the Upper Canal, and therefore the cultural history of

Criterion	Response
history (or the local area)	the local area. Further research could provide additional evidence on the industry associated with construction of the Upper Canal, land management practices, and construction techniques. The quarry sites should be considered of <b>local significance</b> under this criterion.
(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)	Quarries associated with the construction of the Upper Canal are present along the length of the canal route. As a result, the quarries identified within the Mount Gilead Stage 2 site are not uncommon or rare elements of the infrastructure project. However, the Mount Gilead Stage 2 site provides an opportunity to preserve and interpret representative examples of the quarries. As a result Sites 1, 4, 6, 12 and 16 should be considered of <b>local significance</b> under this criterion.
(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)	The quarry sites clearly demonstrate the methods and techniques for sandstone rock extraction and transport for use in the Upper Canal. The quarry sites and processing locations are simple examples of this site type, and demonstrate the principal characteristics of this industry. The quarries and processing locations are considered of <b>local significance</b> under the criterion.

### 7.5.2 Drystone Walls (Site 19)

The drystone walls along Nepean Creek and Woodhouse Creek have limited significance in connection with their aesthetic value and principal characteristics of rural dry stone walling. If the walls were shown to be associated with an earliest phase of agricultural management of the Mount Gilead Estate, then they could hold further value in connection with criterion a.

The date of construction is unknown, but appear to be closely associated with the sandstone quarries opened in the 1880s. The stones used in the walls were most likely obtained from the quarries. Moreover, they were likely constructed to contain livestock belonging to the Mount Gilead Estate. The walls may add to the understanding of the overall use of the estate for agricultural purposes and for the construction of the Upper Canal.

**Table 7.4** Significance Assessment of Potential Archaeological Remains of Site 19 against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	The drystone walls were (most likely) constructed after the 1880s. The walls performed an ancillary function to the process of cattle management, and are not a component of local history. They do not meet the threshold of significance under this criterion.
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	The date of construction for the drystone walls is indictive, being likely constructed during or after the 1880s (when the nearby quarries were created) as they appear to have utilised the same stones. As a result, the walls have not been associated with any specific owner of the Mount Gilead Estate. At the current time, the dry stone walls do not meet this criterion.

Criterion	Response
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	The drystone walls were constructed haphazardly, without coursing, foundation cuts or mortar. They have a moderate to poor condition, with long sections being removed. As such they are poor examples of technical or creative achievement.  Some longer and better constructed sections are clearly visible as walls and do have an aesthetic. The longer lengths of remnant wall, connected with their specific landform location, on the upper slope above (mainly) Nepean Creek, have a <b>local level of significance</b> under this criterion.
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	It is unclear who constructed the walls and when. As a result, the drystone walls have not been associated with a particular community or cultural group. Without further research into Site 19, the significance of the drystone walls under this criterion cannot be determined.
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	The drystone walls have little potential to yield further information about their construction or use. The structures do not possess foundation cuts or mortar which many provide evidence for dating. Moreover, no additional features have been identified associated with the sites.  As a result, the sites do not meet the threshold of significance under this criterion.
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	Further research into the date of construction for the drystone walls is required before their rarity or uncommonness can be fully interpreted. If the walls are linked to the earliest agricultural use of the Mount Gilead Estate then they may represent a relatively rare landscape feature.  Without further research into Site 19, the significance of the site under this criterion cannot be determined.
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	The longer lengths of better constructed drystone walls present the principal characteristics of a rural agricultural pursuits, where the availability of a local natural material was used to form a barrier for cattle management.  The longer sections of wall meet this criterion at the <b>local level</b> .

### 7.5.3 Hearth and Chimney (Sites 20 to 24)

Three of the chimney sites, Site 21 to Site 24, are located within the SHR boundary of the Upper Nepean Scheme, and are outside the Mount Gilead Stage 2 site. They have been registered as state significant due to their close association with the construction and maintenance of the Upper Canal.

The hearth and chimney within the Mount Gilead Stage 2 site, Site 20, is an additional and unique example of this site type, and could be associated with the cottages. It is considered to have **local significance** under the NSW Heritage Criteria.

The following table, Table 7.5, only assesses the significance of the chimney and hearth Site 20.



**Table 7.5** Significance Assessment of the Potential Archaeological Remains of Site 20 against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	<p>The Site 20 chimney may be associated with the construction and/or maintenance of the Upper Canal, part of the state heritage listed Upper Nepean Scheme. The scheme is considered a highly valuable piece of infrastructure that allowed fresh water to be delivered to Sydney. Site 20 may have been used as a housed for a worker(s) connected with this project.</p> <p>The archaeological remains can be considered an ancillary element in the course of constructing the Upper Canal. The site should be considered of <b>local significance</b> under this criterion.</p>
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	<p>The location of Site 20 is unique compared to the other chimney sites (Site 21 to Site 24) identified to the east. Site 20 was situated further from the edge of the Upper Canal, under a natural rock shelter located on the upper slope of Nepean Creek. The other chimneys were built on a cleared and exposed piece of land directly beside the canal.</p> <p>Additional information about the lifestyle of people working on the Upper Canal may be illuminated by the site. As such, it should be considered of <b>local significance</b> under this criterion.</p>
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	<p>The chimney and hearth associated with Site 20 were constructed with semi-cut pieces of local sandstone, held by sandy clay mortar. The site does not appear to demonstrate strong aesthetic characteristics, or creative or technical achievements.</p> <p>The site does not meet the threshold of significance under this criterion.</p>
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	<p>Little is known about the lives of those who worked on the construction of the Upper Canal. As a result, the site does not appear to hold a special association with any community of cultural group within NSW or the local area. There is no indication that the site possessed any specific social, spiritual, or cultural associations with any communities in the past.</p> <p>The site does not meet the threshold for this criterion.</p>
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	<p>If associated with the habitation of Upper Canal construction workers, archaeological remains could provide new information on the lives and economy of these workers.</p> <p>It should be considered of <b>local significance</b> under this criterion.</p>
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	<p>The chimney and hearth associated with Site 20 were constructed in a similar style to other chimneys associated with the construction of the Upper Canal (Sites 21 to 24). Similar structures associated with the canal are uncommon. Their degrading quality, as a result of natural collapse, further attests to the increasing rarity of such features. As such, the archaeological remains associated with Site 20 have become an uncommon feature. The location of the site under a large rock shelter has assisted in protecting the integrity of the structures.</p> <p>The site should be considered of <b>local significance</b> under this criterion.</p>
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	<p>The site of the chimney and hearth was likely occupied by a construction worker associated with the SHR-listed Upper Nepean Scheme. The Upper Canal is a significant site, and is a unique example of hydraulic engineering. Despite its association, Site 20 does not appear to possess any of the characteristics or features that are significant to the canal itself.</p> <p>As a result, the site does not meet the threshold for this criterion.</p>

### 7.5.4 Fence Posts (Site 25 and Site 26)

The fenceposts are not important in the history of the local area, and are not associated with a specific person or historical period. Further research is unlikely to provide additional information that enhances our understanding of this place. Moreover, several similar fenceposts have been identified across the Mount Gilead Estate outside the Mount Gilead Stage 2 study area. As a result, the fence posts do not constitute an uncommon or rare site type.

The sets of fence posts (Site 25 and Site 26) are **not considered of significance** under the NSW Heritage Criteria.

### 7.5.5 Potential 1888 Cottage Site (Site 27)

The significance of the cottage on the eastern side of Appin Road, Site 27, is generally unable to be determined without further research and investigation into its archaeological potential and history. The potential archaeological resources hold a **local** level of significance.

**Table 7.6** Significance Assessment of the Potential Archaeological Remains of Site 27 against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	Very limited information is known about the Site 27 cottage. The extent, intactness, and type of archaeological remains associated with the house, outbuildings, and activities must be further investigated. As there has been no further development on the site, it is likely that any sub-surface archaeological remains would be fairly intact and may provide additional information about the lives of local people living in the area in the nineteenth century.  Without additional exploration of the site, its significance under this criterion cannot be determined.
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	The location of Site 27 was marked 'cottage' on the 1888 Dawson & Dawson survey map. No further information has been gleaned about the owner or occupiers of the site. As a result, it presently possesses no strong or special association with the life or any person or group of persons of importance.  At the current time, Site 27 does not meet this criterion.
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	The technical and aesthetic characteristics of archaeological remains associated with the potential cottage sites are unknown, as they have not been excavated. While the remains of built structures, artefacts and other material evidence may demonstrate some distinctive or visual qualities, the potential archaeological resource is unlikely to contribute to the aesthetic significance of the site.  At the current time, Site 27 does not meet this criterion.
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	The location of Site 27 was marked 'cottage' on the 1888 Dawson & Dawson survey plan. No further information has been gleaned about the owner or occupiers of the site. As a result, it possesses no strong or special association with any community or group.  At the current time, Site 27 does not meet this criterion.
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	Very limited information is known about the Site 27 cottage. The extent, intactness, and type of archaeological remains associated with the house, outbuildings, and activities must be further investigated before it can be determined whether the site has the potential to yield information that will contribute to an understanding of the cultural history of the area. As there has been no further development on the site, it is likely that sub-surface archaeological

Criterion	Response
	remains will be fairly intact and may provide additional information about the lives of local people living in the area in the nineteenth century.  On the basis of the locations wider archaeological research potential, and ability to inform the local historical record, this site hold a <b>local</b> level of significance.
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	The extent and integrity of archaeological evidence associated with the Site 27 cottage is unknown. Further investigation and excavation is required. At present, the site does not appear to possess any uncommon, rare, or endangered aspects of the cultural history of NSW or the local area.  At the current time, Site 27 does not meet this criterion.
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	The history and archaeological evidence associated with the Site 27 cottage is unknown. Further investigation and excavation is required. At present, the site does not appear to possess any uncommon, rare, or endangered aspects of the cultural history of NSW or the local area.  At the current time, Site 27 does not meet this criterion.

### 7.5.6 Wooden Bridge (Site 28)

The wooden bridge crossing Woodhouse Creek is a rare example of an early nineteenth century timber structure in the Campbelltown area. It should be considered of **local significance** under the NSW Heritage Criteria. Prior comment on the bridge suggested it was associated with Cob & Co; however, our investigations have shown this not to be the case.

**Table 7.7** Significance assessment of Potential Archaeological Remains of Site 28 within the Study Area against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	Site 28 was associated with Reserved Road (Site 42). The road ran east to west through the Mount Gilead Estate from Appin Road. The bridge, through its association with the road, is considered important in the history of the Mount Gilead Estate.  It is considered of <b>local significance</b> under this criterion.
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	The date of construction for the timber bridge has not been determined. As such, it does not possess a strong or special association with any particular phase of occupation of the Mount Gilead Estate.  The site is not considered to meet the threshold of significance for this criterion.
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	The bridge is heavily degraded. As a result, it does not demonstrate important aesthetic qualities or a high degree of creative or technical achievement.  The site is not considered the meet the threshold of significance under this criterion.
<i>(d) an item has strong or special association with a particular</i>	The date of construction for the timber bridge has not been determined by the preliminary research into the site undertaken for this report. As such, it does not possess a strong or special association with any particular phase of occupation of



Criterion	Response
<i>community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	the Mount Gilead Estate. Moreover, the bridge does not appear to have a strong or special association with any additional community or cultural group. The site is not considered to meet the threshold of significance for this criterion.
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	The bridge does not possess the potential to yield information that will contribute to an understanding of the cultural history of the area of NSW. The site is not considered the meet the threshold of significance under this criterion.
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	The wooden bridge is a rare and endangered example of a nineteenth-century timber structure in the Campbelltown area. Some similar structures have been identified in the surrounding area, but their construction style is different to that of Site 28. During preliminary research, no structures with a similar form were identified. As such, the site should be considered of <b>local significance</b> under this criterion.
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	The bridge is heavily degraded and falling apart. Similar structures identified in the surrounding area provide a better preserved example of this class of structure. The site is not considered the meet the threshold of significance under this criterion.

### 7.5.7 Sandstone Bridge (Site 29)

The sandstone bridge crossing Woodhouse Creek is an example of an early nineteenth century sandstone structure in the Campbelltown area. It comprises large sandstone blocks, and could have been rebuilt at some more recent point in its history with the inclusion of the large metal pipe through the creek. It does not appear to have the same quality of construction as the adjacent weir (site 30). It should be considered of **local significance** under the NSW Heritage Criteria.

**Table 7.8** Significance assessment of Potential Archaeological Remains of Site 29 within the Study Area against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	Site 29 was associated with Reserved Road (Site 42). The road ran east to west through the Mount Gilead Estate from Appin Road. The bridge, through its association with the road, is considered important in the history of the Mount Gilead Estate. It is considered of <b>local significance</b> under this criterion.
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	The bridge was likely constructed in the early to mid-nineteenth century and continues to be used, although the date has not been determined during this preliminary research. As such, it has not been shown not possess a strong or special association with any particular phase of occupation of the Mount Gilead Estate. The site is not considered to meet the threshold of significance for this criterion.

Criterion	Response
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	The bridge remains highly intact. However, it does not demonstrate important aesthetic qualities or a high degree of creative or technical achievement. Other bridges in the area, including Woodhouse Bridge, do present these characteristics. The site is not considered to meet the threshold of significance under this criterion.
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	The bridge was likely constructed in the early to mid-nineteenth century, although the date has not been determined during this preliminary research. It was part of an internal roadway through the Mount Gilead Estate. As a result, the bridge has not been determined to have a strong or special association with any additional community or cultural group. The site is not considered to meet the threshold of significance for this criterion.
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	Further research into the site is unlikely to yield new information that will contribute to an understanding of the cultural history of the area of NSW. The site is not considered to meet the threshold of significance under this criterion.
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	The sandstone bridge is not a rare or uncommon feature. Several other sandstone bridges within the Campbelltown area, including Woodhouse Bridge (also within the Mount Gilead Estate), remain in good condition and in use. The site is not considered to meet the threshold of significance under this criterion.
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	The sandstone bridge is not particularly well built. Several other sandstone bridges within the Campbelltown area, including Woodhouse Bridge (also within the Mount Gilead Estate), remain in good condition and in use. The site is not considered to meet the threshold of significance under this criterion.

### 7.5.8 Weir (Site 30)

The weir, its associated drystone walls and pools, provide an interesting and unique example of landscape modification within the Mount Gilead Stage 2 site. The weir warrants further investigation in order to be fully understood. The site has considerable potential for future use, interpretation and integration into the future Masterplan. Site 30 should be considered of **local significance** under the NSW Heritage Criteria. Further assessment of the item could identify elements which are of State significance, if associated with comparable items within the Mt Gilead SHR listing area.

**Table 7.9** Significance assessment of Potential Archaeological Remains of Site 30 against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural</i>	The weir and associated pools are considered an important element in the development of water management features within the Mount Gilead Estate. They should be considered in conjunction with other water management features, such as dams and the artificial lake located within the estate.

Criterion	Response
<i>history (or the local area)</i>	The site should be considered of <b>local significance</b> under this criterion; further research into the item could elevate its significance to State levels, comparable to the other major dams within the SHR listed portion of the Mount Gilead Estate.
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	<p>The weir was constructed prior to 1888, although the exact date is unknown. It was likely associated with the occupation of the Mount Gilead Estate by the Woodhouse family. The site, however, does not appear to have a special association with the life or works of Woodhouse.</p> <p>As a result, the site does not appear to meet the threshold of significance for this criterion</p>
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	<p>The weir is an important aesthetic feature that demonstrates a high degree of technical achievement. It is a well-preserved example of a sandstone weir with spillway. The additional features, including the drystone walling and terrace/pool features, do not possess these significant aesthetic characteristics. However, further research into the function and creation of the terrace/pool features is required to determine the level of creative or technical achievement for this element of the site.</p> <p>Overall, the site is considered of <b>local significance</b> under this criterion.</p>
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	<p>The weir and its associated features were a series of water management structures. They do not appear to hold a strong or special association with any particular community or cultural group for social, spiritual or cultural reasons.</p> <p>The site does not meet the threshold of significance for this criterion.</p>
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	<p>The weir and its associated features were a series of water management structures. They have the potential to yield information that will contribute to a better understanding of the development of water management at the Mount Gilead Estate.</p> <p>The site is considered of <b>local significance</b> under this criterion.</p>
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	<p>The intactness, aesthetic, and technical construction of the weir suggest that the site is a strong representative example of this type of water management feature in the local area.</p> <p>The site is considered of <b>local significance</b> under this criterion.</p>
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	<p>The intactness, aesthetic, and technical construction of the weir suggest that the site is a strong representative example of this type of water management feature in the local area. Further investigation into the terrace/pool element of feature is required to understand the full extent and nature of the site.</p> <p>The site is considered of <b>local significance</b> under this criterion.</p>



### 7.5.9 Ford (Site 31)

The ford crossing the Nepean River, Site 31, meets the threshold of **local significance** under the NSW Heritage Criteria. The site has the potential to possess archaeological evidence of pier or jetty structures associated with a ferry that allowed access across the Nepean River. Moreover, the location was originally forded by explorers Hume and Hovell in 1824.

**Table 7.10** Significance Assessment of the Potential Archaeological Remains of Site 31 against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	<p>Site 31 was forded by Hume and Hovell in 1824. As a result, the ford was an important location in the modern exploration of the area. During its continued use, the ford assisted with the connectivity between Appin and Menangle, by providing access across the Nepean River. Until the Bridge at Menangle was built in 1862, the ford was the only point in the area where the Nepean River could be crossed. In this way, it assisted with the movement of people, goods, and services in the area.</p> <p>The site is considered of <b>local significance</b> under this criterion.</p>
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	<p>Many fords crossing the Nepean River are named for and associated with well-known landowners or routes. Site 31 was forded by Hume and Hovell in 1824 during their explorations.</p> <p>As a result, the site is considered of <b>local significance</b> under this criterion.</p>
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	<p>Due to the lack of identified archaeological remains associated with the ford, it does not meet the threshold to demonstrate aesthetic characteristics or a high degree of creative or technical achievement. If archaeological remains were to be identified in future, the level of aesthetic and technical significance should be reassessed.</p>
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	<p>The ford was associated with public accessways that connected Appin and Menangle. It was likely to have been utilised by a range of people for private transport, goods, and services. It was not associated with a particular community or group.</p> <p>It does not meet the threshold for significance in this criterion.</p>
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	<p>Fords built to cross major riverways such as the Nepean River would have connected people and places. If the area retains archaeological deposits associated with the early ford (refer below) these items would contribute to our understanding of the cultural history and development of the local area.</p> <p>The site is considered to be of <b>local significance</b> under this criterion.</p>
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	<p>It is likely that the ford was crossed both by ferry and when the water level was low. As a result, associated infrastructure may include pier or jetty structures, and sandstone roads at the base of the river. Additional landscaping to drop the level of the road was possibly undertaken. If archaeological evidence of this infrastructure was identified, it would be considered uncommon.<sup>2</sup></p> <p>The site is considered to be of <b>local significance</b> under this criterion.</p>
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or</i>	<p>Several fords that cross the Nepean River have been identified and catalogued.<sup>3</sup> Site 31 does not demonstrate a strong example of this site type.</p>

Criterion	Response
<i>cultural or natural environments (or the local area)</i>	As a result, it does not meet the threshold under this criterion.

### 7.5.10 Potential 1888 Homestead Site (Site 33)

The unknown structure located in the Mount Gilead Estate (Site 33) may have been a small cottage, or more likely a cattle or hay shed. Further research and investigation of this site is required through archaeological test excavation. The site has a **local level of significance** for its archaeological research potential.

**Table 7.11** Significance Assessment of the Potential Archaeological Remains of Site 33 against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	<p>The structure can be dated prior to 1888, but is unlikely to be associated with the initial agricultural activities on the property, which initially focused around the homestead. As a result, archaeological evidence of the unknown structure is unlikely to provide evidence that is considered important in the history or course of Mount Gilead Estate and the local area.</p> <p>The site does not meet the threshold of significance under this criterion.</p>
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	<p>The unknown structure was constructed prior to 1888, but its exact date of construction is unknown. The site was likely associated with Woodhouse, but further investigation is required to determine this connection. The site is likely a cattle or hay shed. If this is the case, it does not appear that the structure has a strong or special association with the family and the site would not meet the threshold of significance under this criterion.</p> <p>However, further investigation is required to prove the function and dating of the feature.</p>
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	<p>The technical and aesthetic characteristics of archaeological remains associated with the structure are unknown, as they have not been excavated. While the remains of built structures, artefacts and other material evidence may demonstrate some distinctive or visual qualities, the potential archaeological resource is unlikely to contribute to the aesthetic significance of the site.</p> <p>The site is unlikely to meet the threshold for this criterion.</p>
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	<p>The unknown structure was marked on the 1888 Dawson &amp; Dawson map with no indication of its function. As a result, there is no indication that the site was associated with any particular community or cultural group.</p> <p>As a result, the site does not appear to meet the threshold of significance under this criterion.</p>
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	<p>The unknown structure may be a small cottage or a cattle or hay shed. This requires confirmation through archaeological excavation and/or further research. This information will contribute to our understanding of the local area.</p> <p>The archaeological site is considered to be of <b>local significance</b>.</p>
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	<p>The unknown structure is likely to be a cattle or hay shed. If this is confirmed through excavation and/or further research, it is unlikely that the site has the potential to yield further information that will contribute to an understanding of the history of the area. However,</p>

Criterion	Response
	further research and investigation of the site is required before the significance of this criteria can be determined.
<i>g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	Further research and investigation of the site is required before the significance of this criteria can be determined.

### 7.5.11 Agricultural Land (Site 34)

The lot of agricultural land on the southern side of Woodhouse Bridge was the first area south of Woodhouse Creek to be cultivated (in c1878). The site is important in the overall narrative of land use across the Mount Gilead Estate. The site is considered of **local significance** against the NSW Heritage Criteria.

**Table 7.12** Significance assessment of Potential Archaeological Remains of Site 34 against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	The site marks the beginning of early agricultural activities on the southern side of Woodhouse Creek and, as a result, is a fundamental part of the narrative of land use across the Mount Gilead Estate. The site is considered of <b>local significance</b> under this criterion.
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	The area of land associated with Site 34 appears to have been cleared and worked from c1878. As such, it was associated with the agricultural activities of Woodhouse undertaken on the site. However, the association of this site is not considered to have a strong or special association with the life or works of Woodhouse. The site does not meet the threshold of significance under this criterion.
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	Archaeological evidence associated with the agricultural development of the area associated with Site 34 is likely to include furrow and plough marks, drainage and other water management features, and evidence of land clearing. These potential archaeological remains are unlikely to contribute to the aesthetic significance of the site. The site is unlikely to meet the threshold for this criterion.
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	The area of land associated with Site 34 was likely cleared and managed by the Woodhouse family. The area of land is within the Mount Gilead Estate and not associated with any other particular community or cultural group. It does not meet the threshold of significance under this criterion.
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	The area of land associated with Site 34 does not have the potential to yield information that will contribute to an understanding of the local history of the area. The parts of the Mount Gilead Estate located within the SHR boundary, which were agriculturally managed from an earlier date, have a higher potential to yield such information. As a result, Site 34 does not meet the threshold of significance under this criterion.



Criterion	Response
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	The area of land associated with Site 34 does not possess an uncommon, rare, or endangered aspect of the local history. The parts of the Mount Gilead Estate located within the SHR boundary, which were agriculturally managed from an earlier date, have a higher potential to possess these features. Site 34 does not meet the threshold of significance under this criterion.
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	The area of land associated with Site 34 does not possess an uncommon, rare, or endangered aspect of the local history. Other parts of the Mount Gilead Estate, especially areas located within the SHR boundary which were agriculturally managed from an earlier date, have a higher potential to possess these features. Site 34 does not meet the threshold of significance under this criterion.

### 7.5.12 Wheel Ruts (Site 35)

The wheel ruts, Site 35, may be considered of **local significance** under the NSW Heritage Criteria. However, further research is required to determine that the cuts formed by the passing of historical vehicles is required.

**Table 7.13** Significance Assessment of the Potential Archaeological Remains of Site 35 against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	Further investigation of the wheel ruts may indicate the predominant types of vehicles (carriages or carts) that were utilising the road. As such, the site provides information about the cultural history of movement across the rural landscape.  In this way, the wheel ruts might be considered of <b>local significance</b> under this criterion.
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	The road on which the wheel ruts, Site 35, were carved was an accessway through the Mount Gilead Estate that connected Appin Road with Menangle. The road was likely utilised to transport a range of people, goods, and services across the landscape. Further investigation into the wheel ruts may reveal the types of carriages or carts frequenting the accessway. However, the physical archaeological remains are not likely to provide any further information about particular person or groups of persons who created them.  As such, the site does not meet the threshold for this criterion.
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	The wheel ruts do not demonstrate an aesthetic characteristics or technical achievement.  The site does not meet the threshold of significance under this criterion.
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	Reserved Road (Site 42) is associated with the wheel ruts but has not been associated with a particular community or group of people. As a result, Site 35 does not possess any strong or special associations with particular community or cultural groups.  For this reason, it does not meet the threshold for this criterion.
<i>(e) an item has potential to yield information that will contribute to an</i>	Further research into the nature of the cuts (confirming they were made by the passing of historical vehicles), their dimensions and associations with vehicle movement could add to our understanding of this places cultural history.

Criterion	Response
<i>understanding of NSW's cultural or natural history (or the local area)</i>	The wheel ruts might be considered of <b>local significance</b> under this criterion.
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	For wheel ruts to be carved so deeply into a hard bedrock surface, the accessway on which they are located had to be repetitively used. The site is uncommon and a rare physical marker of trade and movement across the rural landscape. As such, the wheel ruts should be considered of <b>local significance</b> under this criterion.
<i>g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	Further investigation of the site is required to determine that the depressions are not natural. If it is concluded that the depressions were created by wheel ruts, then the site would be considered a rare and unique. It would be considered of <b>local significance</b> under this criterion.

### 7.5.13 Construction Camp (Site 36)

Archaeological remains of the Site 36 construction camp would provide a unique opportunity to understand the archaeological signature of temporary construction camps built to house workers of the Upper Canal, as well as the lives and lifestyles of those living in the camps. The site should be considered of **local significance** under the NSW Heritage Criteria.

**Table 7.14** Significance assessment of Potential Archaeological Remains within the Mount Gilead Stage 2 site against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	The Upper Nepean Scheme, with which the construction camp is associated, is considered significant piece of infrastructure that allowed fresh water to be delivered to Sydney. It is considered significant in the course of developing NSW's cultural and natural history. The construction camp, housing workers for this major project, supported the development of the Upper Canal. The site should be considered of <b>local significance</b> under this criterion.
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	The construction camp is strongly associated with the workers (and potentially their families) who built sections of the Upper Canal. The demographic of people involved in the construction of the camp is unknown. Archaeological evidence of the construction camp may provide further insight into the lives of this group of people. The workers on the Upper Canal were instrumental in constructing this important piece of infrastructure that provided a reliable water source to Sydney. As a result, archaeological evidence of the construction camp should be considered of <b>local significance</b> under this criterion.
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	No archaeological evidence of the construction camp site has been identified or excavated. The integrity of the semi-temporary and temporary canvas and wooden tent structures is unknown. As a result, it is unclear whether the remains of these structures will reveal any aesthetic qualities or examples of creative or technical achievement that will enable the site to reach the threshold of this criterion. Further exploration and excavation of the site is required before determining its significance in regard to this criterion.
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social,</i>	The site does not appear to hold a special association with any community of cultural group within NSW or the local area. Moreover, there is no indication that the site possessed any specific social, spiritual, or cultural associations with any

Criterion	Response
<i>spiritual or cultural reasons (or the local area)</i>	communities in the past. As a result, the site does not meet the threshold for this criterion.
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	The construction camp within the Mount Gilead Estate holds the potential to yield information about the lives of construction workers who built the Upper Canal in the 1880s. The site also has the potential to provide information about the type of support infrastructure necessary for the construction process. The Upper Nepean Scheme was a major piece of infrastructure that played a significant role in developing Sydney. As a result, archaeological evidence of the construction camp may yield information that further illuminates an understanding of the Upper Canal construction process.  It should be considered of <b>local significance</b> under this criterion.
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	Archaeological evidence of the construction camp would provide a rare and uncommon example of this infrastructure associated with the construction of the Upper Canal. No similar camp sites have been excavated along the canal route. As a result, Site 36 may reveal rare information about the layout and infrastructure of such camps, and about the lives and lifestyles of workers who built the Upper Canal. The site should be considered of <b>local significance</b> under this criterion.
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	The site of the construction camp is strongly associated with the SHR-listed site of the Upper Nepean Scheme which is a significant piece of infrastructure and unique example of hydraulic engineering. Despite its association, the construction camp does not appear to possess any of the characteristics or features that are significant to the canal itself.  As a result, the site does not meet the threshold for this criterion.

#### 7.5.14 Miscellaneous Sites (Sites 37 to 41)

The miscellaneous sites, Site 37–Site 41, are located within the SHR boundary for the Mount Gilead Estate. As such, their significance is not assessed here. These sites should be managed according to relevant SHR listing conditions.

#### 7.5.15 Roads (Sites 42 to 45)

The accessways within the Mount Gilead Estate demonstrate a network of connectivity across both the Mount Gilead Estate and wider communities. The two main roads (Site 42 and Site 43) running through the Mount Gilead Estate should be considered of **local significance**. The roads acted as major thoroughfares that connected to Menangle to Campbelltown and Wollongong via Appin Road. Two smaller, internal roads (Site 44 and Site 45) within the Mount Gilead Estate were likely associated with the construction of the Upper Canal. The sites should be considered of **local significance** under the NSW Heritage Criteria.

**Table 7.15** Significance assessment of Potential Archaeological Remains of Site 42–Site 45 against the NSW Heritage Criteria.

Criterion	Response
<i>(a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the local area)</i>	Site 42 was an early public road that connected Menangle with Wollongong and beyond. The associated ford across Nepean River (Site 31) was forded by Hume and Hovell in 1824. The road remained in use until 1910.  The road was a very important thoroughfare. Until 1862, when the bridge at Menangle was built, the ford was the only point where the Nepean River could be



Criterion	Response
	<p>crossed. The road is, as a result, an important element contributing to regional development.</p> <p>Site 43 was a similarly important element to the Mount Gilead Estate. Reserved Road ran along the divide of the original lot boundaries purchased by Uther and Rose. It allowed movement through the southern portion of the estate. The road joined Appin Road and intersected with Site 42 allowing further access to the south and west.</p> <p>Site 42 and Site 43 should be considered of <b>local significance</b> under this criterion. Site 44 and Site 45 are minor internal roads within the Mount Gilead Estate. They are not considered to meet the threshold of significance under this criterion.</p>
<i>(b) an item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the local area)</i>	<p>The roadways through the Mount Gilead Estate are not considered to have a strong or special association with the life of a person or group of persons and do not meet the threshold for this criterion. The Site 42 road was a public accessway and the Site 43 road has been in use from the early nineteenth century to the present. The minor roads, Site 44 and Site 45, were likely associated with the phase of construction of the Upper Canal in the estate but cannot be specifically associated with any person or groups of persons.</p>
<i>(c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)</i>	<p>The archaeological remains associated with the road sites do not appear to demonstrate creative or technical achievement. The roads were likely cleared tracks, potentially built up with soil or gravel. The road sites are not considered to meet the threshold for this criterion.</p>
<i>(d) an item has strong or special association with a particular community or cultural group in NSW for social, spiritual or cultural reasons (or the local area)</i>	<p>The roads do not appear to have a special association with a particular community or cultural group for social, spiritual, or cultural reasons. While the roads provided connectivity and networking across the wider landscape, no specific or strong connections have been identified. Archaeological evidence of the sites does not meet the threshold of significance under this criterion.</p>
<i>(e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the local area)</i>	<p>The roads provide an understanding of movement across the landscape. This relates to both the owners and occupiers of the Mount Gilead Estate and to the wider communities living in towns in the vicinity of the estate. Further research into how places, people, and goods connected from major hubs such as Campbelltown and Wollongong to more rural town areas could contribute to an understanding of the cultural history of the local area.</p> <p>As a result, the sites should be considered of <b>local significance</b> under this criterion.</p>
<i>(f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the local area)</i>	<p>Roadways from the nineteenth to twentieth century often remain in use. Some parts of the roads through the Mount Gilead Estate Stage 2 site are still used, especially in locations where they cross waterways. However, other parts of the roads through the centre of the Mount Gilead Estate have been destroyed, meaning the estate has become disconnected. The roads are not an uncommon or rare aspect of the cultural history of the local area or NSW.</p>
<i>(g) an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places or cultural or natural environments (or the local area)</i>	<p>The road sites through the Mount Gilead Stage 2 site do not appear to demonstrate any principal characteristics associated with a class of NSW's cultural or natural places or environments. As a result, the sites do not meet the threshold of this criterion.</p>

## 7.6 Statement of Historical Archaeological Significance

A majority of the sites identified within the Mount Gilead Stage 2 site have been determined to hold local significance under the NSW Heritage Criteria. The quarries (Sites 1 to 18), construction camp (Site 36) and Chimneys (Site 20) are strongly associated with the construction of the significant infrastructure project, the Upper Canal. The bridges (Sites 28 and 29), ford (Site 31) and wheel ruts (Site 35), associated with the accessways through the estate (Site 42 to 45) and agricultural land (Site 34) have been considered integral to the movement through the landscape from the early nineteenth century to the present. The weir site is important because of its connection with early water management, and could be of state significance if proven to be comparable to the SHR listed dams within the primary Mount Gilead Estate.

Two sites, the potential cottage sites (Site 27 and Site 33) as assessed to hold local levels of significance for their archaeological potential and ability to inform the historical record. Both sites require further archaeological research to reassess their significance. Two sites, the fence posts (Site 25 to Site 26), were not able to be directly associated with a phase and therefore are not considered of heritage significance. A number of other identified sites are located within the SHR boundary of the Mount Gilead Estate, but outside the Stage 2 area. These have not been assessed as part of this work.

**Table 7.16** Summary of Archaeological Significance within the Mount Gilead Stage 2 site.

Site Type	Number	Significance
Sandstone Quarry and Processing Location	1–18	Local
Drystone Walls	19	Local
Hearth and Chimney	20	Local
Fence Posts	25–26	None
Cottage	27	Local—archaeological potential
Wooden Bridge Remains	28	Local
Sandstone Bridge	29	Local
Weir	30	Local
Ford	31	Local
Unknown Structure	33	Local—archaeological potential
Agricultural Land	34	Local
Wheel Ruts	35	Local
Construction Camp	36	Local
Roads	42–45	Local



**Figure 7.10** Sites identified as being of local significance under the NSW Heritage Criteria. Site 30 *could* hold elements of State significance, but requires further archaeological investigation. Sites 4 to 6, 17, and 21 to 24 are located outside the Mount Gilead Stage 2 site. (Source: GML 2021 over Nearmaps)

## 7.7 Endnotes

- <sup>1</sup> Bickford, A and Sullivan S 1984, 'Assessing the Research Significance of Historic Sites', in Sullivan S and Bowdler S (eds), *Site Surveys and Significance Assessment in Australian Archaeology*, Proceedings of the 1981 Springwood Conference on Australian Prehistory, Department of Prehistory, Research School of Pacific Studies, the Australian National University, Canberra.
- <sup>2</sup> Godden Mackay Logan, Penrith Lakes Scheme - Nepean Fords Archaeology Handbook—Archaeological Management Plan, report prepared for Penrith Lakes Development Corporation, September 2008.
- <sup>3</sup> Godden Mackay Logan, Penrith Lakes Scheme - Nepean Fords Archaeology Handbook—Archaeological Management Plan, report prepared for Penrith Lakes Development Corporation, September 2008.



# Appendices

# Appendices

## Appendix A

Inventory of Historical Archaeology Sites and Features

# A1 Inventory of Historical Archaeology Sites and Features

## A.1 Introduction

Archaeological survey identified 45 historical archaeological sites/features within or associated with the Stage 2 area. This section provides an overview of historical archaeology site ‘types’. This appendix provides a catalogue of the archaeological sites, with their location and description, a summary of the archaeological potential, integrity, significance, and proposed management principles.

A summary of these items is provided in Table 1.1, and the spatial relationship of these is shown in Figure 1.1. Descriptions of these sites, by group, are provided, followed by inventory cards for each individual item. The inventory cards summarise the archaeological potential of the item, its integrity, heritage significance, and present recommended future heritage management in the context of the proposed land rezoning process.

**Table 1.1** Overview of all historical archaeology sites, grouped by site type.

Site Number	Site Type	Main Fabric/Material	Significance	Primary Heritage Recommendation
1	Sandstone quarry 1	Sandstone	Local	Management, Interpretation Plans
2	Sandstone quarry 2	Sandstone	Local	Management Plan
3	Sandstone quarry 3	Sandstone	Local	Management Plan
4	Sandstone quarry 4	Sandstone	Local	Nil
5	Sandstone quarry 5	Sandstone	Local	Nil
6	Sandstone quarry 6	Sandstone	Local	Management, Interpretation Plans
7	Sandstone quarry 7	Sandstone	Local	Management Plan, SoHI
8	Sandstone quarry 8	Sandstone	Local	ARD, SoHI
9	Sandstone quarry 9	Sandstone	Local	Management Plan
10	Sandstone quarry 10	Sandstone	Local	Management Plan
11	Sandstone quarry 11	Sandstone	Local	Management Plan, SoHI
12	Sandstone quarry 12	Sandstone	Local	ARD, Management, Interpretation Plans
13	Sandstone quarry 13	Sandstone	Local	Management Plan
14	Sandstone quarry 14	Sandstone	Local	ARD, Management Plan, SoHI
15	Sandstone quarry 15	Sandstone	Local	ARD, Management Plan



Site Number	Site Type	Main Fabric/Material	Significance	Primary Heritage Recommendation
16	Sandstone quarry 16	Sandstone	Local	ARD, Management Plan
17	Sandstone processing location 1	Sandstone	State	Nil
18	Sandstone processing location 2	Sandstone	Local	ARD, Management, Interpretation Plans
19	Drystone walls	Sandstone	Unknown	ARD, Management, Interpretation Plans
20	Chimney (part of a former structure)	Sandstone	Local	ARD, Management, Interpretation Plans, SoHI
21	Chimney (part of a former structure)	Sandstone	State	None, inside Upper Canal SHR boundary
22	Chimney (part of a former structure)	Sandstone	State	None, inside Upper Canal SHR boundary
23	Chimney (part of a former structure)	Sandstone	State	None, inside Upper Canal SHR boundary
24	Chimney (part of a former structure)	Sandstone	State	None, inside Upper Canal SHR boundary
25	Timber fence post(s)	Timber	Nil	Nil
26	Timber fence post(s)	Timber	Nil	Nil
27	Potential 1888 cottage site	TBC	Local	Conservation, if 'work' is required that an ARD for a S140 should be prepared.
28	Timber bridge	Timber	Local	ARD, Management Plan, SoHI
29	Sandstone bridge	Sandstone	Local	Management Plan, Interpretation Plan
30	Sandstone weir, drystone walls, and pools	Sandstone	Local	ARD, Management Plan, SoHI
31	Nepean River Ford	Landscape feature	Local	ARD, Management Plan, SoHI
32	Record not used			
33	1888 Potential homestead sites	One location has discoloured grass indicating a possible former structure	Unknown	Monitoring, ARD

Site Number	Site Type	Main Fabric/Material	Significance	Primary Heritage Recommendation
34	Agricultural land/area	Landscape element	Local	ARD, SoHI
35	Wheel ruts (possible)	Cut into sandstone bedrock	Local	ARD, SoHI
36	Upper canal construction camp	Possible archaeological deposits	Local	Monitoring, ARD, Test Excavation
37	Cut stone	Sandstone	Not assessed	None, inside Mt Gilead SHR boundary
38	Twentieth-century rubbish dump	Metal	Local	None, inside Mt Gilead SHR boundary
39	Stone columns	Sandstone	Not assessed	None, inside Mt Gilead SHR boundary
40	Morris 8 Car	Metal	Not assessed	None, inside Mt Gilead SHR boundary
41	Bottle dump	Ceramic and glass	Not assessed	None, inside Mt Gilead SHR boundary
42	Roads and public accessways	Landscape elements	Local	Interpretation Plans
43	Roads and public accessways	Landscape elements	Local	Management Plan, Interpretation Plans
44	Roads and public accessways	Landscape elements	Nil	Management Plan, Interpretation Plans
45	Roads and public accessways	Landscape elements	Nil	Management Plan, Interpretation Plans





## Site 1—Sandstone Quarry 1

Site Number	1—Sandstone Quarry 1		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and eastern side of Woodhouse Creek.		
Start	150.763797	-34.125535	
End	150.763553	-34.125919	
Date	1880s		
Dimensions	48m long (north–south)	35m wide (east–west)	2m high
Description	<p>Site 1 was the most substantial quarry recorded. The quarry had a wide, cleared entryway on its western side. The accessway had been cleared of stones and trees, and levelled. The entry way split, to encapsulate a substantial pile of semi-cut medium-sized stones. The pile was significantly larger than those identified in the other quarries within the site. The pile was 6m by 10m in length and 1.5m high.</p> <p>The quarried rock face was located behind the rock pile (on the eastern side of the site). The rock face included evidence of several horizontal and vertical drill holes designed to be filled with dynamite to dislodge freestones.</p>		
Potential	<div><input checked="" type="checkbox"/> High</div> <div><input type="checkbox"/> Moderate</div> <div><input type="checkbox"/> Low</div>	<p>A quarry and accessway was clearly identified. Evidence of landscape modification included the long flat (i.e. unnatural) rock face. As the area was cleared to create the quarry and associated accessways, additional evidence of landscape modification might include tree boles.</p> <p>The site also possessed evidence of stone cutting techniques, including vertical and horizontal drill holes for dynamite use. A pile of stones quarried from the rock face was also identified within Site 1.</p> <p>As Site 1 was large, overgrown, and on a flat area, there is a high potential for isolated artefacts or artefact scatters to be present. Unlike other quarry sites, these objects are unlikely to have rolled down the creek slope.</p>	
Integrity	<div><input type="checkbox"/> Poor</div> <div><input type="checkbox"/> Fair</div> <div><input checked="" type="checkbox"/> Good</div> <div><input type="checkbox"/> Unknown</div>	<p>The integrity of Site 1 is good. This quarry was not located on the edge of the creek line, like most of the other quarries within the site, but on a flat area back from the slope. As a result, the stones discarded during the quarrying process were stacked into a large pile in the centre of the site.</p> <p>Evidence of the horizontal and vertical drill holes in the rock face remain well-defined.</p> <p>The site is overgrown with low grasses. However, this does not affect the integrity of the stone features.</p>	
Significance	<div><input type="checkbox"/> State</div> <div><input checked="" type="checkbox"/> Local</div> <div><input type="checkbox"/> Nil</div>	<p>Site 1 is considered of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal. It is a well-preserved, large, and interesting example of a quarry site within the Mount Gilead Stage 2 site. The examples of drilling on the rock face are clear and highly visible.</p>	
Management	<div><input type="checkbox"/> Monitoring</div> <div><input type="checkbox"/> ARD</div> <div><input type="checkbox"/> Test Excavation</div>	<p>Site 1 is located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, it is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. The preparation of a management plan should be undertaken. This plan should include all quarries.</p>	

Site Number	1—Sandstone Quarry 1
<input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>As Site 1 is a large and unique example of the sandstone quarries that once occurred across the Mount Gilead Stage 2, it would also be a strong candidate heritage interpretation.</p>



Site 1, facing southwest. The photograph shows a long section of quarried rock face. (Source: GML 2020).



Site 1, facing northeast, showing a section of rock face in the former quarry. (Source: GML 2020).



Detail of vertical and horizontal drill holes at Site 1, facing east. (Source: GML 2020).



Detail of vertical and horizontal drill holes at Site 1, facing southwest. (Source: GML 2020).

## Site 2—Sandstone Quarry 2

Site Number	2—Sandstone Quarry 2		
Site Type	Sandstone Quarry 2		
Location	The quarry is located on the upper slope and northern side of Woodhouse Creek.		
Start	150.763348	-34.128753	
End	150.764196	-34.129592	
Date	1880s		
Dimensions	133m long (northwest–southeast)	10m wide (northeast–southwest)	4m high
Description	Site 2 was a long quarry comprising a rock face between 0.5m to 4m in height. The main area of the quarry had three terraces cut into the bedrock facade. An accessway, 6m wide, was located at the western extent of the site. It had been cleared of stones and trees, and levelled. Unlike most other quarries identified within the proposed Mount Gilead Stage 2 site, Site 2 contained no piles of stones. It is likely all the stones from Site 2 were removed, or were pushed down the hill.		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	A quarry and accessway was clearly identified. Evidence of landscape modification in the cut rock face and terracing was easily identifiable. A pile of stones quarried from the rock face was also present within Site 2’s boundary. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway.  No artefacts were identified in the area around the quarry. However, the ground was heavily covered with fallen bark and leaves. There is a low potential for isolated artefacts and surface scatters to be found.	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	The integrity of Site 2 is good. The accessway remains cleared, although some branches have fallen over the path. The quarry, as a whole, is not overgrown with vegetation but is covered by fallen bark and leaves.	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	Site 2 is considered of local significance under the NSW Heritage Criteria.  The quarry was directly associated with the construction of the Upper Canal. It is a well-preserved, large, and interesting example of a quarry site within the Mount Gilead Stage 2 site. The technique of terracing the rock façade is clear and highly visible.	
Management	<input type="checkbox"/> Monitoring <input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan	Site 2 is located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, it is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be prepared.	





Stepped rock face in main section of Site 2, facing north. (Source: GML 2020).



Detail of quarried rock face in Site 2, facing north. (Source: GML 2020).



Accessway on the northwestern side of the Site 2 quarry. Photograph taken facing northwest. (Source: GML 2020).

### Site 3—Sandstone Quarry 3

Site Number	3—Sandstone Quarry 3		
Site Type	Sandstone Quarry 3		
Location	The quarry is located on the upper slope and northern side of Woodhouse Creek.		
Start	150.765114	-34.129509	
End	150.765835	-34.129911	
Date	1880s		
Dimensions	83.5m long (east–west)	10m wide (north–south)	1.5–2.5m high
Description	<p>Site 3 is a long quarry comprising a single main stone face. In the eastern end of the quarry, a small number of small-sized stones were identified downhill. The western side of the quarry possessed a pile of medium-sized stones.</p> <p>An accessway was identified in the western side of the quarry. The 3m-wide path zig-zagged to the northwest and then returned to the east. It had been cleared of stones and trees, and levelled. The location of the accessway in Site 3 was unusual compared to the other quarries identified in the Mount Gilead Stage 2 site, which primarily possessed accessways at one or both extents of the quarry rather than the middle.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>A quarry was clearly identified. Evidence of landscape modification was easily identifiable by the creation of the long, flat rock face and minor terracing. The accessway was also cleared of trees. There is a low potential for identifying tree boles associated with the felling of trees. A pile of stones quarried from the rock face was also found within the Site 2 boundary.</p> <p>No artefacts were identified in the area around the quarry. However, there remains a low potential for isolated artefacts and surface scatters to be found.</p>	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of Site 2 was good. The accessway remained relatively clear, with some young thin trees growing in the centre. The site, otherwise, was not overgrown with vegetation.</p>	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 3 is considered of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal. It is a well-preserved, large, and interesting example of a quarry site within the Mount Gilead Stage 2 site. The examples of drilling on the rock face are clear and highly visible.</p>	
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan	<p>Site 3 is located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, it is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be prepared.</p>	

**Site Number 3—Sandstone Quarry 3**

- ☐ Statement of Heritage Impact
- ☐ Interpretation Plan



Site 3, showing stepped quarry face. Photograph taken facing northeast. (Source: GML 2020).



Site 3, showing cleared area in front of rock face. Photograph taken facing north. (Source: GML 2020).



Accessway in eastern side of Site 3 quarry. Photograph taken facing east. (Source: GML 2020).



## Site 4—Sandstone Quarry 4

Site Number	4—Sandstone Quarry 4		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and northern side of Woodhouse Creek. It is located within the SHR boundary of Mount Gilead Estate and not within the Mount Gilead Stage 2 site.		
Start	150.768215	-34.129622	
End	150.769683	-34.130165	
Date	1880s		
Dimensions	176m long (east–west)	10m wide (north–south)	3m high
Description	<p>The eastern side of Site 4 was a wide, flat area of exposed, uncut bedrock. The eastern side of the platform comprised uneven cut steps with scattered stones. The area may have been an accessway, but carts would not have been able to traverse the steep and uneven path.</p> <p>Following the platform westward, Site 4 turned into a quarry similar to the others identified across the Mount Gilead Stage 2 site. The main quarry area of Site 4 comprised three large terraces, approximately 3m high in total. Some of the stone faces were naturally laminated, which would have made splitting stones easy. The quarry also included a pile of large, well-worked stones at its western extent.</p> <p>A more common style of accessway, 4–6m wide, was identified on the western edge of the quarry. It had been cleared of stones and trees and levelled.</p>		
Potential	<div><input checked="" type="checkbox"/> High</div> <div><input type="checkbox"/> Moderate</div> <div><input type="checkbox"/> Low</div>	<p>The main quarry area of Site 4 was easily identifiable. However, its relationship to the flat bedrock area leading into the eastern side of the site is unclear.</p> <p>Evidence of landscape modification included the cut rock face and terracing. Marks from the use of plug-and-feather technique were also noted. A pile of stones quarried from the rock face was also identified within the site boundary. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway on the western side of the site.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters was identified. However, the ground and rock faces were covered with low vegetation. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>	
Integrity	<div><input type="checkbox"/> Poor</div> <div><input type="checkbox"/> Fair</div> <div><input checked="" type="checkbox"/> Good</div> <div><input type="checkbox"/> Unknown</div>	<p>The integrity of the site was good. The accessways and rock faces were heavily overgrown with low grasses, shrubs, and trees. This vegetation does not affect the integrity of the stone features themselves.</p> <p>Much of the rock face was obscured. As a result, it was unclear how far the quarry extended to the east.</p>	
Significance	<div><input type="checkbox"/> State</div> <div><input checked="" type="checkbox"/> Local</div> <div><input type="checkbox"/> Nil</div>	<p>Site 4 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal. It is a well-preserved, large, and interesting example of a quarry site. The examples of drilling on the rock face are clear and highly visible.</p>	

**Site Number**      **4—Sandstone Quarry 4**

- Management    ☐ Monitoring  
                       ☐ ARD  
                       ☐ Test  
                       Excavation  
                       ☐ Salvage  
                       Excavation  
                       ☐ Preparation of  
                       Management  
                       Plan  
                       ☐ Statement of  
                       Heritage Impact  
                       ☐ Interpretation  
                       Plan

Site 4 is located in the SHR boundary of Mount Gilead and not within the Mount Gilead Stage 2 site. As such, the site is subject to management under the SHR listing requirements.



Flat area of exposed bedrock sheet at entranceway to Site 4 quarry, facing west. (Source: GML 2020).



Accessway to exposed bedrock sheet, facing north-east. (Source: GML 2020).



Accessway from exposed bedrock sheet to quarry area, facing east. (Source: GML 2020).



Stepped rock face at Site 4 quarry. Photograph taken facing north. (Source: GML 2020).



Detail of the laminated bedrock sheets identified within the Site 4 quarry. Photograph taken facing east. (Source: GML 2020).



Pile of large well-worked stones from Site 4 quarry. Photograph taken facing east. (Source: GML 2020).



## Site 5—Sandstone Quarry 5

Site Number	5—Sandstone Quarry 5		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and northern side of Woodhouse Creek. It is located within the SHR boundary of Mount Gilead Estate and not within the Mount Gilead Stage 2 site.		
Start	150.769847	-34.130089	
End	150.7705	-34.130225	
Date	1880s		
Dimensions	63m long (east–west)	10m wide (north–south)	2m high
Description	<p>Site 5 was located directly to the west of the Upper Canal aqueduct that crosses Woodhouse Creek. The rock face was not as well worked as other quarries investigated by this report. An accessway, 4m wide, was recorded between the rock face and the edge of the stone pile. An accessway leading into the quarry was also identified at its western extent. As a result, the quarry did not directly join the Site 4 quarry to the west.</p> <p>Due to its closeness to the aqueduct, it is possible that Site 5 predominantly acted as a sandstone processing centre. Piles of medium to large-sized stones were identified on the southern side of the quarry.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The main quarry area of Site 5 was clear. Landscape modification was evident in the cut rock face, vertical and horizontal drill holes used for dynamite, and marks from the use of plug-and-feather technique. A pile of stones quarried from the rock face was recorded within the site boundary. Additional evidence of landscape modification may be include tree boles and signs of levelling for the quarry area and associated accessway.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified. However, the ground and rock faces were covered with low vegetation. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good. Evidence of the horizontal and vertical drill holes in the rock face remain well-defined.</p> <p>Some of the accessway and rock faces were heavily overgrown with low grasses, shrubs, and trees. This vegetation does not affect the integrity of the stone features themselves.</p>	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 5 is considered of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal. It is a well-preserved example of a quarry site. The examples of drilling on the rock face are clear and highly visible.</p>	
Management	<input type="checkbox"/> Monitoring <input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation	Site 5 is located in the SHR boundary of Mount Gilead and not within the Mount Gilead Stage 2 site. As such, the site is subject to management under the SHR listing requirements.	

**Site Number      5—Sandstone Quarry 5**

- ☐ Salvage  
Excavation
- ☐ Preparation of  
Management Plan
- ☐ Statement of  
Heritage Impact
- ☐ Interpretation Plan



Site 5 quarry with rock face on the left, an accessway in the centre, and pile of stones on the right. Photograph taken facing east. (Source: GML 2020).



Site 5 quarry, facing west. (Source: GML 2020).



Detail of stones with drill holes. (Source: GML 2020)



Wide cleared accessway on western side of the Site 5 quarry. Photograph taken facing west. (Source: GML 2020)

## Site 6—Sandstone Quarry 6

Site Number	6—Sandstone Quarry 6		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and eastern side of Woodhouse Creek. It is located outside the Mount Gilead Stage 2 site.		
Start	150.766080920672607	-34.142882409644677	
Date	1880s		
Dimensions	20m long	20m wide	1.5m high
Description	<p>Site 6 was a small quarry comprising a rectangular partially excavated pit. It was not an exposed bedrock face as most of the other quarry sites were. Two faces of the pit were excavated. The pit measured approximately 10m by 10m. Piles of semi-worked, medium-sized stones were deposited along the upper edges of the pit. An accessway into the pit was left clear of stones and trees.</p> <p>The location of the quarries used to construct the Upper Canal were always on the same side of the creek as the canal. Site 6 was the only quarry located on the opposite side of Woodhouse Creek to the canal channel. It was, moreover, located away from the other quarries generally. It is possible that this quarry was instead opened to produce stones for structures within the Mount Gilead Estate. The different quarrying technique of excavating into the bedrock as opposed to utilising an exposed bedrock face, further suggests that the quarry was not part of the same phase.</p>		
Potential	<div><input checked="" type="checkbox"/> High</div> <div><input type="checkbox"/> Moderate</div> <div><input type="checkbox"/> Low</div>	<p>The main quarry area of Site 6 was clear. Landscape modification was evident in the cut rock face and terracing, vertical and horizontal drill holes used for dynamite, and marks from the use of plug-and-feather technique. Piles of stones quarried from the rock face were also located within the Site 6. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified. However, the ground and rock faces were covered with low vegetation. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>	
Integrity	<div><input type="checkbox"/> Poor</div> <div><input type="checkbox"/> Fair</div> <div><input checked="" type="checkbox"/> Good</div> <div><input type="checkbox"/> Unknown</div>	<p>The integrity of the site was good, although the rock faces were slightly overgrown with low grasses, shrubs and trees. This vegetation does not affect the integrity of the stone features themselves.</p>	
Significance	<div><input type="checkbox"/> State</div> <div><input checked="" type="checkbox"/> Local</div> <div><input type="checkbox"/> Nil</div>	<p>Site 6 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was potentially related to the construction of the Mount Gilead Estate. Site 6 is a unique example of a quarry in the area as it was excavated into the ground as a pit, rather than using exposed bedrock faces. In this way, workers at this quarry likely utilised different techniques, methods, and/or processes of quarrying than sites within the Mount Gilead Stage 2 site.</p>	
Management	<div><input type="checkbox"/> ARD</div> <div><input type="checkbox"/> Test Excavation</div>	<p>Site 6 is located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, the site is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be prepared.</p>	



Site Number	6—Sandstone Quarry 6	
	<input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>As Site 6 is a unique example of an excavated sandstone quarry in the area, it would also be a strong candidate for heritage interpretation.</p>

References      Officer, 2006, Sandstone Quarry (MGH3)



Site 6 quarry, showing deep pit with worked faces. Photograph taken facing northeast. (Source: GML 2020).



Site 6 quarry, showing deep pit with worked faces. Photo taken facing northeast. (Source: GML 2020).



Detail of drill holes on the stone face. (Source: GML 2020).



View of the accessway to the Site 6 quarry. Photograph taken facing west. (Source: GML 2020).

## Site 7—Sandstone Quarry 7

Site Number	7—Sandstone Quarry 7		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and southern side of Woodhouse Creek.		
Start	150.7700782457054	-34.13065705527836	
End	150.7696353489208	-34.13059491062085	
Date	1880s		
Dimensions	41.5m (east–west)	5-6m (north–south)	3m high
Description	<p>Site 7 was a quarry that comprised two separate areas. The bedrock was cut along the southern side of the site, forming shelves up to 3m high.</p> <p>A pile of medium to large-sized stones was deposited on the northern side of the site. The pile was 4.6m long by 1.7m wide and 1m high. The stones averaged 0.25 x 0.23 x 0.14m to 0.4 x 0.25 x 0.22m. Some large stones were observed fallen down the slope. They measured 1.4 x 1.1 x 0.5m in size.</p> <p>A 4m-wide accessway was located between the bedrock shelf and stone pile. The path led from the fields above down into the quarry area. It had been cleared of stones and trees, and levelled.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The main quarry areas of Site 7 were clear. Landscape modification was evident in the cut rock face and terracing, as well as piles of stones quarried from the rock face. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified. However, the ground and rock faces were covered with low vegetation. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good. The accessways and rock faces were somewhat overgrown with low grasses, shrubs, and trees. This vegetation does not affect the integrity of the stone features themselves.</p>	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 7 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal.</p>	
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input checked="" type="checkbox"/> Statement of Heritage Impact	<p>Site 7 is only located partially within the proposed biobank area within the Mount Gilead Stage 2 site. As such, the eastern half of the site is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be prepared.</p> <p>The western half of the site may be impacted by future construction works. If construction works are undertaken at or in the direct vicinity of Site 7, a SoHI must be undertaken.</p>	



Site Number 7—Sandstone Quarry 7

□ Interpretation Plan



Cut sandstone bedrock and piled sandstone blocks creating cart access to quarry. The pile is comprised of medium to large-sized stones. Photograph taken facing northwest. (Source: GML 2020).



Cut sandstone face west of main quarry. Photograph taken facing southeast. (Source: GML 2020).



Smaller sandstone blocks piled in the quarrying process. Photograph taken facing northwest. (Source: GML 2020).



View of the accessway, sloping down into the main quarry area. Photograph taken facing northeast. (Source: GML 2020).



## Site 8—Sandstone Quarry 8

Site Number	8—Sandstone Quarry 8		
Site Type	Sandstone Quarry		
Location	The quarry is located on the area above the slope to Woodhouse Creek, on the southern side of the waterway.		
	150.7689671850511 -34.13085325211711		
Date	1880s		
Dimensions	26m	20m	1–1.5m high
Description	<p>Site 8 is a potential sandstone quarry located on the flat land above the valley of Woodhouse Creek. The area was flagged in the Lidar imagery as a distinct area of interest. It comprised a shallow depression in the landscape.</p> <p>Bedrock was exposed in places, with some evidence of plug-and-feather technique. However, no distinct shelves of bedrock or piles of stones were identified. The area may have instead been created to assist with water management/drainage.</p> <p>Site 8 may have been a small quarry with a short use life. Alternatively, the site might have acted as an early water management feature. The same techniques as the other quarries were identified in the small areas of exposed bedrock. As such, it was possible that the site was also created in the 1880s.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The area of Site 8 was not clearly identifiable as a quarry. Landscape modification was evident in some places, i.e. the cutting of low bedrock shelves. Some evidence of quarrying techniques, namely plug-and-feather, were identified on these stone faces.</p> <p>Additional evidence of landscape modification may include tree boles and signs of levelling for the possible quarry area and associated accessway. Further evidence of quarrying may be found below the present surface level.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified.</p>	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good. The site is overgrown with low grasses. However, this does not affect the integrity of the stone features.</p>	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 8 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry may have been directly associated with the construction of the Upper Canal. Alternatively, if Site 8 is determined to be a water management feature created in the 1880s, it would be a unique example of water management associated with agriculture at Mount Gilead Estate.</p>	
Management	<input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation	<p>Site 8 is not located within a proposed biobank area of the Mount Gilead Stage 2 site. As a result, it may be impacted by future construction works. If construction works are undertaken at or in the direct vicinity of Site 8, a SoHI must be undertaken. As the site's use is unclear, an additional ARD should be created to better understand the feature and its archaeological potential.</p>	

**Site Number      8—Sandstone Quarry 8**

- ☐ Preparation of Management Plan
- ☒ Statement of Heritage Impact
- ☐ Interpretation Plan



The western extent of potential quarry (Site 8) shows a clear south–north orientation towards Woodhouse Creek. Photograph taken facing west. (Source: GML 2020).



Eastern extent of potential quarry (Site 8). Felling of trees around perimeter of area is clear. Photograph taken facing northeast. (Source: GML 2020).

## Site 9—Sandstone Quarry 9

Site Number	9—Sandstone Quarry 9		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and southern side of Woodhouse Creek.		
Start	150.7686385815972	-34.13056777699691	
End	150.7666229731868	-34.13011637226032	
Date	1880s		
Dimensions	200m (east–west along the ridgeline)	11m (north–south)	4–5m high
Description	<p>The eastern and western extents of Site 9 comprised poorly cut bedrock cleared to form an accessway to the main quarry area. The accessway was approximately 4m wide. It had been cleared of stones and trees, and levelled.</p> <p>The middle section of the quarry comprised the main area of quarrying. The bedrock had sharp and well-cut shelves. One large section of bedrock possessed naturally curved edges. The stone was clearly cut to utilise its shape.</p> <p>Piles of medium to large-sized stones were deposited on the northern side of the accessway. An additional pile of small stones, &gt;20cm, was also deposited. Of the quarry sites identified at Mount Gilead, only site 16 also contained a pile of similarly small-sized stones.</p> <p>A drystone terrace wall was constructed on the northern edge of the accessway. The structure was approximately 30m long, 1.05m wide, and 1m high. Unlike the drystone walls of Site 19, this structure was more well-packed and well-made. The top of the structure was at the same elevation as the accessway. As such, it likely functioned to stabilise the accessway to the quarry. It does not appear to be a wall utilised to contain cattle.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The main quarry areas of Site 9 were clear. Landscape modification was evident in the cut rock, terracing, and piles of stones quarried from the rock face. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified. However, the ground and rock faces were covered with low vegetation. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good. The accessways and rock faces were somewhat overgrown with low grasses, shrubs and trees. This vegetation does not affect the integrity of the stone features themselves.</p>	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local	<p>Site 9 is of local significance under the NSW Heritage Criteria.</p>	



Site Number 9—Sandstone Quarry 9	
<input type="checkbox"/> Nil	The Site 9 quarry was directly associated with the construction of the Upper Canal.
Management	<div> <input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan </div> <div> Site 9 is located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, it is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be prepared. </div>



Accessway into the eastern side of the Site 9 quarry. A bedrock platform (background) and pile of stones (foreground) are visible on either side of the track. Photograph taken facing west. (Source: GML 2020)



Eastern extent of the sandstone quarry. The poorly cut bedrock to create accessway is visible. Photograph taken facing south. (Source: GML 2020).



Accessway of the sandstone quarry, facing east. (Source: GML 2020).



Accessway at the western extent of the sandstone quarry, facing west. (Source: GML 2020).

## Site 10—Sandstone Quarry 10

Site Number 10—Sandstone Quarry 10		
Site Type	Sandstone Quarry	
Location	The quarry is located on the upper slope and southern side of Woodhouse Creek.	
Start	150.7655785958418	-34.13025063858128
End	150.7647866307193	-34.12985753915282
Date	1880s	
Dimensions	85m (northwest–southeast)	12m (north–south) 1–1.5m high
Description	Site 10 is a shallow sandstone quarry. The eastern extent of the quarry comprised large semi-cut sandstone boulders cut to form an accessway to the main area of the quarry. The main quarry area comprised well-cut bedrock shelving. Evidence of feather-and-wedge technique was evident on some bedrock platforms.	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The main quarry areas of Site 10 was clear. Landscape modification was evident in the cut rock face and terracing. Piles of stones quarried from the rock face were also recorded within the Site 10 boundary. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified.</p>
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good. The accessways and rock faces were not overgrown.</p> <p>Evidence of the horizontal and vertical drill holes in the rock face remain well-defined.</p>
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 10 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal. It is a well-preserved example of a quarry site within the Mount Gilead Stage 2 site. The examples of drilling on the rock face are clear and highly visible.</p>
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	<p>Site 10 is located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, it is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be prepared.</p>





Accessway into the eastern side of the Site 10 quarry. Sandstone boulders and cut sandstone bedrock have been cleared. Photograph taken facing southwest. (Source: GML 2020).



Accessway into the eastern side of the Site 10 quarry, facing west. (Source: GML 2020).



Detail of feather-and-wedge marks along the face of exposed sandstone bedrock. (Source: GML 2020).



Middle section of sandstone quarry with clear bedrock shelving created from quarrying, facing south. (Source: GML 2020).



## Site 11—Sandstone Quarry 11

Site Number	11—Sandstone Quarry 11		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and eastern side of Nepean Creek.		
Start	150.7630401436437	-34.13030357722676	
End	150.7628122409452	-34.13072318292301	
Date	1880s		
Dimensions	51m (north–south)	12.5m (east–west)	3m high
Description	<p>Site 11 is a sandstone quarry located on the uppermost section of the eastern bank of Nepean Creek. The quarry comprised a large earth bank on the western side and cut bedrock shelves on the northern and eastern sides. The quarry was approximately 30m long, but its full extent was indeterminable due to vegetation overgrowth.</p> <p>Unlike most of the other quarries identified, Site 11 did not possess shelves cut into exposed bedrock platforms. Rather, the stone was quarried from a pit, excavated to a depth of 1.2m. Hillside quarries are generally self-draining, whereas pits such as Site 11 would have required pumping.<sup>1</sup></p> <p>The blocks were extra-large and very well-cut on all sides. Some possessed evidence of the feather-and-wedge splitting technique, used to detach the freestones from the bedrock. The faces also showed evidence of additional chisel marks to sculpt the surface of the stone. The blocks averaged 1.0.5 x 0.80.55m. At least 10 had fallen down the slope to the northwest of the main quarry area. An additional 1.5m-high pile of small to large-sized semi-cut stones were located to the western side of the quarry.</p> <p>Downslope from the extra-large sandstone blocks, a four-course high drystone wall was identified. It was 3.15m long, 0.7m wide, and 1m high. The wall sat on a natural bedrock terrace and was wedged between bedrock boulders. The wall does not appear to be associated with the drystone walls of Site 19 that were used to contain livestock. It was lower downslope than that feature, and likely functioned as a barrier to contain fallen stones from the quarry.</p>		
Potential	<div><input checked="" type="checkbox"/> High</div> <div><input type="checkbox"/> Moderate</div> <div><input type="checkbox"/> Low</div>	<p>The main quarry areas of Site 11 was clear. Landscape modification was evident in the cut rock face and terracing. Piles of stones quarried from the rock face were also recorded within the Site 11 boundary. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified. However, the ground and rock faces were covered with significant vegetation. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>	

Site Number 11—Sandstone Quarry 11		
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good. However, the rock faces and base of the quarry were heavily overgrown with shrubs and trees. This vegetation does not affect the integrity of the stone features themselves. The horizontal and vertical drill holes on the cut sandstone blocks were well-defined.</p>
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 11 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal. It is a large, and unique example of a quarry site within the Mount Gilead Stage 2 site.</p>
Management	<input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input checked="" type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	<p>Site 11 is only partially located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, the southwestern half of the site is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be prepared for this part of the site.</p> <p>The western half of the Site 11 may be impacted by future construction works. If construction works are undertaken at or in the direct vicinity of the site, a SoHI must be undertaken.</p> <p>The site is a unique example of quarrying along the section of Woodhouse Creek as it comprises excavation into the bedrock rather than utilisation of exposed bedrock faces. The overgrowth of vegetation has limited the full understanding of the site and its archaeological potential. As a result, an ARD should be undertaken to assist in developing a clearer interpretation of the site.</p>



Site 11 quarry, showing raised earth bank and overgrown vegetation. Photograph taken facing northwest. (Source: GML 2020).



Detail of clean-cut sandstone shelf, facing northwest. (Source: GML 2020).



Extra-large, well-cut sandstone blocks to northwest of main quarry area. Photograph taken facing north. (Source: GML 2020).



Detail of sandstone blocks showing the feather-and-wedge technique used on the bottom edge of the stone, and chiselling across the rest of the face. Photograph taken facing north. (Source: GML 2020).



Pile of small to large semi-cut sandstone pieces. Photograph taken facing south. (Source: GML 2020).



Drystone sandstone wall on slope below the sandstone quarry. Photograph taken facing east. (Source: GML 2020).



## Site 12—Sandstone Quarry 12

Site Number	12—Sandstone Quarry 12		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and eastern side of Nepean Creek.		
Start	150.762811	-34.1323	
End	150.7629941808506	-34.13369281601241	
Date	1880s		
Dimensions	213m (north-south)	10m (east-west)	2m high
Description	<p>Site 12 is a substantial sandstone quarry located on the upper slope of the eastern bank of Nepean Creek. The site possessed a wide accessway at both ends. The accessway had been cleared of stones and trees and levelled.</p> <p>The main quarry area was approximately 155m long, comprising a number of tall shelves cut along the eastern side of the site. Evidence of horizontal and vertical drilling, used to pack dynamite to detach freestones, was clearly visible on the bedrock shelves.</p> <p>Piles of medium-sized stones were deposited against the shelves, and on the western side of the accessway.</p> <p>A drystone wall (Site 19) ran along the top of the southern half of the quarry. The wall was constructed on the edge of the uppermost platform. At the northern half of the quarry, the drystone wall dropped down the bank slope below the quarry. The wall was clearly constructed after the quarry.</p>		
Potential	<div><input checked="" type="checkbox"/> High</div> <div><input type="checkbox"/> Moderate</div> <div><input type="checkbox"/> Low</div>	<p>The main quarry areas of Site 12 were clear. Landscape modification was evident in the cut rock face and terracing. Evidence of vertical and horizontal drill holes used for dynamite, and marks from the use of plug-and-feather technique, were also identified. Piles of stones quarried from the rock face was recorded within the Site 12 boundary. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters was identified. However, the ground and rock faces were covered with significant vegetation. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>	
Integrity	<div><input type="checkbox"/> Poor</div> <div><input type="checkbox"/> Fair</div> <div><input checked="" type="checkbox"/> Good</div> <div><input type="checkbox"/> Unknown</div>	<p>The integrity of the site was good. However, the rocks were heavily overgrown with grasses and fallen trees. This vegetation does not affect the integrity of the stone features themselves.</p>	

Site Number 12—Sandstone Quarry 12		
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 12 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal. It is a well-preserved and large example of a quarry site within the Mount Gilead Stage 2 site. The drilling on the rock face is clear and highly visible.</p>
Management	<input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input checked="" type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>Site 12 is only partially located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, the northern half of Site 12 is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be prepared for this part of the site.</p> <p>The southern half of Site 12 may be impacted by future construction works. If construction works are undertaken at or in the direct vicinity of Site 12, a SoHI and ARD must be undertaken for the site.</p> <p>The site presents a unique opportunity for heritage interpretation. It presents a good example of a quarry, with clear features.</p>
References	Officer, 2006, Sandstone Quarry (MGH6-1)	



Site 12 quarry showing three tiers of sandstone shelves on the left (east), a cleared accessway in the centre, and pile of stones on the right (west). Photograph taken facing south. (Source: GML 2020).



Accessway at the southern end of the sandstone quarry. Photograph taken facing south. (Source: GML 2020).



Example of vertical drilling method used to cut sandstone blocks, facing east. (Source: GML 2020).



Example of horizontal drilling method used to cut sandstone blocks, facing east. (Source: GML 2020).



Pile of medium-sized stones on the western side of the site, facing west. (Source: GML 2020).



Pile of medium-sized stones on the western side of the site, facing west. (Source: GML 2020).



## Site 13—Sandstone Quarry 13

Site Number	13—Sandstone Quarry 13		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and eastern side of Nepean Creek.		
Start	150.762546246379912	-34.135055106507558	
End	150.762496718336109	-34.135288623598981	
Date	1880s		
Dimensions	26.3m (north–south)	7m (east–west)	1.8m high
Description	Site 13 is a small quarry that comprised a main quarry area with high shelves. The southern extent comprised a narrow accessway (2m wide) that was not as substantial or well-cleared as those identified in other quarries. A small pile of medium-sized stones was deposited 5m to the west of the platforms.		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The main quarry area of Site 13 was clear. Landscape modification was evident in the cut rock face and terracing. Piles of stones quarried from the rock face were also recorded within the Site 13 boundary. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified. However, the ground and rock faces were covered with low vegetation. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good, but the rock faces and accessway were slightly overgrown with low grasses, shrubs and trees. This vegetation does not affect the integrity of the stone features themselves.</p>	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 13 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal.</p>	
Management	<input type="checkbox"/> Monitoring <input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan	<p>Site 13 is located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, it is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be prepared for the site.</p>	

**Site Number**      **13—Sandstone Quarry 13**

- ☐ Statement of Heritage Impact
- ☐ Interpretation Plan

**References**      Officer, 2006, Sandstone Quarry (MGH 6-9 or 6-8)



Site 13 quarry showing cut bedrock. Photograph taken facing south. (Source: GML 2020).



Accessway at the southern end of the Site 13 quarry. Photograph taken facing south. (Source: GML 2020).



Pile of medium-sized stones along the western extent of the Site 13 quarry. (Source: GML 2020).

## Site 14—Sandstone Quarry 14

Site Number	14—Sandstone Quarry 14		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and eastern side of Nepean Creek.		
	150.763212916641294 -34.136500827733180		
Date	1880s		
Dimensions	1m long	0.7m wide	0.2m high
Description	<p>Site 14 comprised only one rectangular cut into a large flat area of exposed bedrock. Along the western side of the cut, a large freestone block had also been dislodged from the bedrock but had not been removed.</p> <p>Site 14 had no additional features common to the other quarries identified along Nepean Creek and Woodhouse Creek.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>Site 14 was very small. Only two areas of cut stone were identified on the exposed bedrock platform. No associated archaeology, such as isolated artefacts or artefact scatters, was identified.</p>	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good. The quarry was minimally overgrown by low grasses. However, this vegetation does not affect the integrity of the stone features themselves.</p>	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 14 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal.</p>	
Management	<input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input checked="" type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	<p>Site 14 is located outside the proposed biobank area of the Mount Gilead Stage 2 site. As a result, it may be impacted by future construction works. If construction works are undertaken at or in the direct vicinity of Site 14, a SoHI and ARD must be undertaken for the site. If no works are being undertaken that will affect the integrity of the site, a management plan should be prepared.</p>	





Site 14 quarry, showing a small, shallow, rectangular cut into the bedrock bench. Photograph taken facing north. (Source: GML 2020).



The dislodged freestone at the Site 14 quarry is shown by an arrow. Photograph taken facing west. (Source: GML 2020).

## Site 15—Sandstone Quarry 15

Site Number	15—Sandstone Quarry 15		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and eastern side of Nepean Creek.		
Start	150.7634139647211	-34.13833477136222	
End	150.7632896687426	-34.13893658829838	
Date	1880s		
Dimensions	67.7m (north–south)	10m (east–west)	1m high
Description	<p>Site 15 is a shallow sandstone quarry located on the uppermost bank on the northern side of Nepean Creek. The quarry comprised a shallow accessway on the northern and southern extents of the site. The accessway had been cleared of stones and trees and levelled. Piles of medium-sized stones lined the western edge of the paths. The centre of the quarry comprised an area of exposed bedrock. The shelves were very low, at a maximum of 1m high.</p> <p>Site 15 is located directly to the north of Site 16. However, it has not been considered a single, continuous quarry as both have separate accessways.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The main quarry area of Site 15 was clear, despite the rock face being low. Piles of stones quarried from the rock face were also recorded within the Site 15 boundary. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified. However, the ground and rock faces were covered with vegetation. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good, but the rock faces and accessway were slightly overgrown with grasses, shrubs, bark and fallen trees. This vegetation does not affect the integrity of the stone features themselves.</p>	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 15 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal.</p>	
Management	<input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation	<p>Site 15 is not located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, it may be impacted by future construction works. If construction works are undertaken at or in the direct vicinity of the site, a SoHI and ARD must be undertaken for the</p>	

**Site Number 15—Sandstone Quarry 15**

- ☒ Preparation of Management Plan
- ☐ Statement of Heritage Impact
- ☐ Interpretation Plan

site. If no works are being undertaken that will affect the integrity of the site, a management plan should be prepared.



Northern accessway of Site 15 quarry, showing cleared area with stone pile (left). Photograph taken facing south. (Source: GML 2020).



Pile of medium-sized semi-cut stone, facing south. (Source: GML 2020).



Main area of sandstone quarry. Cleared accessway way (middle) between cut bedrock (left) and pile of stones (right). Photograph taken facing south. (Source: GML 2020).



Low exposed bedrock shelf (left) and accessway (right), facing southeast. (Source: GML 2020).



## Site 16—Sandstone Quarry 16

Site Number	16—Sandstone Quarry 16		
Site Type	Sandstone Quarry		
Location	The quarry is located on the upper slope and eastern side of Nepean Creek.		
Start	150.7633756602862	-34.13896520400925	
End	150.763800156164	-34.13931555368715	
Date	1880s		
Dimensions	55.2m (northwest-southeast)	20m (northeast-southwest)	3m (high)
Description	<p>Site 16 is the most substantial quarry located on the uppermost slope on the eastern bank of Nepean Creek. The quarry was the widest of those identified along Nepean Creek.</p> <p>The quarry comprised a 4m-wide accessway on the northern and southern extents of Site 16. The ends of accessway had been cleared of stones and trees, and levelled.</p> <p>The main area of the quarry was approximately 20m wide. There were large piles of small and medium-sized stones across the main quarry area. This is different from other quarries, which were narrower and required stones to be cleared away to the opposite side of the site. Only Site 9 also contained piles of similarly small stones.</p> <p>Site 16 is located directly to the south of Site 15. However, it has not been considered a single, continuous quarry as both have separate accessways.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The main quarry area of Site 16 was clear. Landscape modification was evident in the cut rock face and terracing. Piles of stones quarried from the rock face were also recorded within the Site 16 boundary. Additional evidence of landscape modification may include tree boles and signs of levelling for the quarry area and associated accessway.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified. However, the ground and rock faces were covered with bark and trees. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good, but the rock faces and accessway were slightly overgrown with bark, shrubs and trees. This vegetation does not affect the integrity of the stone features themselves.</p>	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 16 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal. It is a well-preserved and large example of a quarry site within the Mount Gilead Stage 2 site.</p>	
Management	<input checked="" type="checkbox"/> ARD	<p>Site 16 is only partially located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, the southern half of the site is likely</p>	

**Site Number 16—Sandstone Quarry 16**

<input type="checkbox"/> Test Excavation	to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be prepared for this part of the site.
<input type="checkbox"/> Salvage Excavation	
<input checked="" type="checkbox"/> Preparation of Management Plan	The northern half of Site 16 may be impacted by future construction works. If construction works are undertaken at or in the direct vicinity of Site 16, a SoHI and ARD must be undertaken for the site.
<input type="checkbox"/> Statement of Heritage Impact	
<input checked="" type="checkbox"/> Interpretation Plan	As Site 16 is a large and unique example of the sandstone quarries across the Mount Gilead Stage 2 site, it would also be a strong candidate for heritage interpretation.



Northern edge of Site 16 quarry, showing cut sandstone rock (left) and uncleared piles of rubble. Photograph taken facing east. (Source: GML 2020).



Site 16 quarry, showing accessway through centre of site. Photograph taken facing southeast. (Source: GML 2020).



Southern edge of Site 16 quarry, showing a cut bedrock shelf (background) and large piles of medium-sized stones (foreground). Photograph taken facing south. (Source: GML 2020).



Sloped accessway in the northern side of the quarry, facing north. (Source: GML 2020).

## Site 17—Sandstone Processing Location 1

Site Number	17—Sandstone Processing Location 1	
Site Type	Sandstone Processing Location	
Location	The quarry is located on the upper slope and western side of Nepean Creek and the Upper Canal.	
	150.7660809207	-34.142882409644677
Date	1880s	
Dimensions	40m (east–west)	25m (north–south)
Description	<p>Site 17 comprised piles of medium to large-sized stones. There was no sign of a quarry associated with the stones. Although, some stone outcrops were located around the piles, no bedrock platforms were present. The nearest quarry, Site 16, was located 420m to the northwest.</p> <p>Site 17 was likely a centre for processing the sandstone used to construct the Upper Canal—the location used for depositing the stones before they were either distributed along the canal or utilised for the construction of the aqueduct and/or section of canal immediately to the east of the site.</p> <p>The stones were unworked or semi-worked. There were no examples of well-worked, squared stones, although some stones possessed evidence of potential pick marks. This evidence does not suggest that the site was utilised as a place for further fashioning of the stones.</p>	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>Site 17 contained sandstone obtained from nearby quarries along the Nepean Creek. The stones did not indicate substantial evidence of working or technological processes associated with their procurement.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified. However, the ground and stone piles were covered with bark and low grasses. As such, there is a potential for isolated artefacts and surface scatters to be found.</p>
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good, but the stone piles were slightly covered with bark and low grasses. This vegetation does not affect the integrity of the stone features themselves.</p>
Significance	<input checked="" type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 17 is located within the SHR boundary of the Upper Nepean Scheme. As such, it is considered part of the larger heritage-listed site.</p> <p>The processing site was directly associated with the construction of the Upper Canal. Site 17 and Site 18 provide unique examples of this site type within original the Mount Gilead Estate.</p>
Management	<input type="checkbox"/> Monitoring <input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation	<p>Site 17 is located within the SHR boundary of the Upper Nepean Scheme. As such, it is not within the Mount Gilead Stage 2 site boundary. Its management will be determined in conjunction with the SHR listing.</p>



**Site Number 17—Sandstone Processing Location 1**

- ☐ Preparation of Management Plan
- ☐ Statement of Heritage Impact
- ☐ Interpretation Plan



Piles of stones associated with Site 17 quarry. Photograph facing southeast. (Source: GML 2020).



Piles of stones associated with Site 17 quarry. Photograph taken facing northeast. (Source: GML 2020).



Location of Site 17 quarry in relation to the Upper Canal. Photograph taken facing east. (Source: GML 2020).



Figure 1.1 Detail of pick marks on stones. Photograph taken facing north. (Source: GML 2020).

## Site 18—Sandstone Processing Location 2

Site Number	18—Sandstone Processing Location 2	
Site Type	Sandstone Processing Location	
Location	The site is located on a flat area to the north of the Upper Canal. It does not appear to relate to the unnamed waterway directly to the north.	
	150.759620360512088 -34.144026889498321	
Date	1880s	
Dimensions	30m (east–west)	20m (north–south)
Description	<p>Site 18 comprised a number of large piles of medium to large-sized stones. Most are naturally squared. Some large pieces were well-cut on all sides.</p> <p>This site was not an open quarry. Site 18 was located on flat land rather than a creek bank. It sits between the Upper Canal (south) and an unnamed first order creek (north) that feeds Nepean Creek. Only a small amount of exposed bedrock has been cut. The limited amount of exposed bedrock does not account for the large piles of semi-cut stones. The nearest quarry identified within the Mount Gilead Stage 2 site is Site 16, located 650m to the northeast.</p> <p>Site 18 was likely a processing location for sandstone used to construct the Upper Canal. The location was potentially designated for depositing the stones before they were either further distributed along the canal or utilised for the construction of the section of canal immediately to the southeast of the site.</p>	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>Site 18 contained sandstone obtained from nearby quarries along the Nepean Creek. The stones presented some evidence of working or technological processes associated with their procurement.</p> <p>No associated archaeology, such as isolated artefacts or artefact scatters, was identified. However, the ground and stone piles were covered with bark and low grasses. As such, there is a low potential for isolated artefacts and surface scatters to be found.</p>
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The integrity of the site was good, but the stone piles were slightly covered with bark and low grasses. This vegetation does not affect the integrity of the stone features themselves.</p>
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 18 is of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal. It presents the only clear example of a stone processing location within the Mount Gilead Stage 2 site.</p>
Management	<input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan	<p>Site 18 is located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, it is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. The preparation of an ARD should be undertaken prior to works to determine the full extent and archaeological potential of the site. A management plan should then be prepared.</p>



Site Number	18—Sandstone Processing Location 2	
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- ☐ Statement of Heritage Impact
- ☒ Interpretation Plan

Site 18 requires further research. Heritage interpretation is recommended for the stone processing location as no similar sites have been identified within the Mount Gilead Stage 2 site boundary.



Site 18 quarry, facing south. (Source: GML 2020).



Piles of stones associated with Site 18 quarry, facing southwest. (Source: GML 2020).



Piles of stones associated with Site 18 quarry, facing southwest. (Source: GML 2020).



Example of well-cut sandstone blocks, facing southeast. (Source: GML 2020).



## Site 19—Drystone Walls

Site Number	19—Drystone Walls		
Site Type	Drystone Wall		
Location	The drystone walls were identified in multiple locations along the western side of Nepean Creek and on both sides of Woodhouse Creek. Some were directly associated with quarries and others were stand-alone.		
Date	1880s		
Dimensions	Sections up to 680m long	0.5m wide	0.4–0.7m high
Description	<p>The drystone walls snaked along with the contour of the ridge along Woodhouse Creek and Nepean Creek. They appeared to be used to contain cattle, stopping them from falling into the gorge or crossing the creeks. The walls worked in conjunction with the natural bedrock ledges to create barriers that cattle could not cross.</p> <p>The walls were generally constructed from medium to large, uncut and semi-cut stones. The larger stones measured up to 1.05 x 0.77 x 0.41m. The wall generally measured 0.5m wide, and between 0.4 and 0.7m high.</p> <p>The walls were constructed haphazardly. The stones were not arranged into distinct courses. Many of the stone were laid vertically or diagonally. Large gaps between the stones were present, with no attempt to plug them with smaller stones.</p> <p>The wall was constructed on the natural earth or bedrock, with no foundation cut. In some places, the wall was constructed on exposed bedrock ledges. The bedrock already provided a height to the wall. In other locations, the bedrock ledge appears to have been a sufficient barrier for the cattle, and the walls abutted it.</p> <p>The walls also interacted with a number of quarry sites. Site 19 ran along the top of the Site 12 quarry and between the other quarries.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	Drystone walls associated with Site 19 were identified all along Woodhouse Creek and Nepean Creek. No foundation cuts have been noted to be associated with the feature. No artefacts were identified along the route of the wall.	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	The integrity of the drystone wall was generally considered good. Despite the irregular and haphazard construction of the wall, most sections remained standing to a reasonable height. Only a few small sections of wall had collapsed.	
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	The date of construction is unknown. Further research is required to understand the drystone walls significance. The drystone walls appear to be closely associated with the sandstone quarries. The stones were most likely obtained from the quarries of which most of them abut. Moreover, the stones were likely constructed to contain livestock belonging to the Mount Gilead Estate. The walls may add to the understanding of the overall use of the site for agricultural purposes and for the construction of the Upper Canal. If the walls were shown to be associated with the earliest phase of agricultural management of the Mount Gilead Estate then Site 19 may be considered of local significance under the NSW Heritage Criteria.	
Management	<input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> ARD	The drystone walls are only partially located within the proposed biobank area of the Mount Gilead Stage 2 site. The sections of wall within the biobank boundary are likely to be exposed to minor, nonintrusive impacts relating to vegetation management. A management plan should be	

Site Number	19—Drystone Walls
<input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input checked="" type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>prepared for these areas. Most of the walls have remained in good condition. However, the stones can be easily dislodged by people or animals.</p> <p>The sections of wall outside the biobank area may be impacted by future construction works. If construction works are undertaken at or in the direct vicinity of Site 19, a SoHI must be undertaken for the site. Moreover, as Site 19 requires further research, an ARD must be created prior to any impact to the site.</p>



Length of drystone wall, Site 19. (Source: GML 2020).



Length of drystone wall, Site 19. (Source: GML 2020).



Detail of drystone wall, Site 19. (Source: GML 2020).



Length of drystone wall, Site 19. (Source: GML 2020).





Length of drystone wall, Site 19, joining an exposed bedrock platform. (Source: GML 2020).



Length of drystone wall, Site 19, joining an exposed bedrock platform. (Source: GML 2020).



Length of drystone wall, built on exposed bedrock platform, Site 19. (Source: GML 2020).



Length of drystone wall, built on exposed bedrock platform, Site 19. (Source: GML 2020).



## Site 20—Chimneys

Site Number	20—Chimneys		
Site Type	Chimneys		
Location	Site 20 was located in a rock shelter on the upper bank and eastern side of Nepean Creek.		
	150.763443835693408 -34.139669706427767		
Date	1880s		
Dimensions	20m long	5m wide	1.5m high
Description	<p>Site 20 comprised two features—a 'hearth' and a chimney. The features likely relate to two separate temporary construction camp structures. The hearth was constructed on a bedrock platform located beneath a low-hanging rock shelf. The structure was built from cut and semi-cut medium-sized sandstone blocks. The three-sided structure opened on the southern side. A thick, larger sandstone block formed a platform. Two similar stones were noted collapsed beside the hearth. Despite being identified as a hearth by Navin Officer in 2006, no remnant evidence of burning on the stones or rock shelf roof were identified.</p> <p>The chimney was located 5m to the south of the potential hearth feature, outside the rock shelf. It comprised a square structure constructed from semi-cut medium-sized stones, which were larger and more angular than those used in the hearth. The structure abutted the exposed bedrock. It also potentially utilised the bedrock to form the back 'wall' of the chimney. A small opening at the base of the structure can be identified facing south.</p> <p>The structure continued to the west to form a wall that ran against the bedrock. This suggests the structure was orientated in an east–west orientation. However, the area immediately in front of the structure formed a relatively steep slope. The structure would have been very narrow or had a slanted floor.</p> <p>The site was located 280m northwest of the collection of four chimneys (Sites 21 to 24). The style of structure is different to the other identified construction camp buildings. The other chimneys were free-standing and built on an area of flat, levelled ground. It is unclear why the structures of Site 20 were built slightly downhill and utilising the exposed bedrock shelves, rather than on the flat ground directly to the east.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>Archaeological evidence of the site has been identified in the visible remains of the chimney and hearth location within and beside the rock shelf. The full extent and integrity of additional associated archaeological remains associated with the construction and occupation of the habitation site is unknown. As the hearth is constructed on a bedrock platform, there is no additional potential for subfloor deposits or features to be identified within the area of the rock shelter.</p> <p>Additional archaeological features are likely to be present in the vicinity of the habitation site, and especially associated with the chimney. Further structural elements of the building that once incorporated the chimney may be identified. Moreover, subsurface features, such as pits and cuts associated with rubbish disposal, cisterns, and cesspits, have a high potential for survival. While no surface isolated artefacts or artefact scatters were identified, there is a potential for these remains to be recovered in subsurface structures or deposits. As no later development has been undertaken in or around the site, any additional archaeological features are likely to be intact.</p>	
Integrity	<input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair	<p>The hearth and chimney structures were constructed from cut and semi-cut sandstone medium blocks and pieces. A fine-grained sandy</p>	

Site Number 20—Chimneys		
	<input type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>clay sand mortar was identified between the stones, but it had mostly eroded.</p> <p>The hearth had partially collapsed. The upper courses of stones could be seen directly beside and leaning against the standing remains of the hearth.</p> <p>The hearth and the chimney did not show signs of additional collapse between their identification by Navin Officer in 2006 and the GML inspection in 2020. The eroded mortar will cause the stones to become less stable over time. However, the rock shelf appears to successfully protect the hearth from the elements, and support the chimney and wall structure.</p>
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>The archaeological remains associated with Site 20 should be considered of local significance under the NSW Heritage Criteria. They may be associated with the construction of the Upper Canal. Moreover, these remains have the potential to contribute to a more in-depth understanding of the lives of workers participating in the construction of the state heritage listed Upper Canal. The site is especially unique as it is situated away from the other similar structures (Site 21 to Site 24).</p>
Management	<input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input checked="" type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>Site 20 is within the proposed biobank area. As such, the site is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. The full extent and archaeological potential of the site must be identified in an ARD and SoHI prior to works being undertaken at or in the vicinity of the site. The ARD may conclude that test excavations are required prior to ground disturbance works.</p> <p>The preparation of a management plan is also required to reduce any further collapse of the site. Mitigations might include stabilisation of the structure or partition of the site from human intrusion.</p> <p>The site may provide an interesting additional story of the lives of construction workers on the Upper Canal on a site located within the boundary of the larger Mount Gilead Development. There is an opportunity for heritage interpretation to bring to life the site and its inhabitants.</p>
References	Officer 2006, Sandstone Chimney and Hearth (MGH5)	



Hearth component of Site 20 located within rock shelf. Facing north. (Source: GML 2020).



Detail of hearth located within rock shelf, facing north. (Source: GML 2020).



Detail of hearth located within rock shelf, facing east. (Source: GML 2020).



Relationship between chimney and hearth components of Site 20. Photograph taken facing north. (Source: GML 2020).



Detail of chimney, facing southeast. (Source: GML 2020).



Detail of chimney, facing northeast. (Source: GML 2020).



## Site 21—Chimney (Former Cottage)

Site Number	21—Chimney (Former Cottage)		
Site Type	Chimney remains and archaeology associated with former cottage		
Location	Site 21 was located in a cluster with Site 22 and Site 24. It was situated on a flat, cleared area on the western side of the Upper Canal in the southern end of the Mount Gilead Stage 2 site.		
	150.766209712761508	-34.142109364790777	
Date	1880s		
Dimensions	1.4m wide	0.78-0.88m deep 0.3m thick	1.1m high
Description	<p>The chimney was part of a house structure occupied by workers during the construction or maintenance of the Upper Canal. The site is located within the SHR boundary of the Upper Nepean Scheme.</p> <p>the Site 21 chimney was the furthest from the cluster of three chimneys that also included sites 22 and 24. It was situated 68m to the northwest of the Site 22 chimney. The hearth/opening of the structure faced southwest to Nepean Creek. The house, therefore, appeared to face the cluster of other chimneys.</p> <p>The Site 21 chimney was five courses high, constructed from semi-cut medium-sized stones, with some smaller stones filling in gaps. A soft, mid-orange fine-grained sandy clay mortar was identified between the stones.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>Archaeological evidence of the site has been identified in the visible remains of the chimney and its mortar. The extent and integrity of additional associated archaeological remains associated with the construction and occupation of the habitation site is unknown.</p> <p>Additional archaeological features are likely to be present in the vicinity of the habitation site. Further structural elements of the building that once incorporated the chimney may be identified in posthole or foundation cut and fills. Moreover, subsurface features, such as pits associated with rubbish disposal, cisterns, and cesspits, have a high potential for survival. While no surface isolated artefacts or artefact scatters were identified, there is a potential for these remains to be recovered in subsurface structures or deposits. As no later development has been undertaken in or around the site, any additional archaeological features are likely to be intact.</p>	
Integrity	<input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The chimney structures were constructed from cut and semi-cut sandstone medium blocks and pieces. A fine-grained sandy clay sand mortar was identified between the stones, but it has mostly eroded. This will no doubt cause further collapse.</p> <p>Additional degradation between the identification of the site by Navin Officer in 2006 and the GML inspection in 2020 was identified. Some of the stones on the southern arms of the structure had collapsed.</p>	
Significance	<input checked="" type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	Site 21 has been identified and registered as being of state significance in accordance with the NSW Heritage Criteria. The site is presently located within the SHR curtilage for the Upper Nepean Scheme.	

Site Number	21—Chimney (Former Cottage)	
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	<p>As the site is located within the SHR curtilage for the Upper Nepean Scheme, the management of the archaeological remains should be undertaken in accordance with the SHR listing requirements.</p>

References      Officer 2006, Chimney Remains (MGH4-1)  
                      Higginbotham et al 1992, Item 17



Site 21 chimney, facing northeast. (Source: GML 2020).



Site 21 chimney, facing west. (Source: GML 2020).



Site 21 chimney, facing southeast. (Source: GML 2020).



Condition of Site 21 chimney in 2006. Photograph taken facing northeast. (Source: Officer 2006, p 53)

## Site 22—Chimney (Former Cottage)

Site Number	22—Chimney (Former Cottage)			
Site Type	Chimney remains and archaeology associated with former cottage			
Location	Site 22 was located in a cluster with Site 21, Site 23 and Site 24. It was situated on a flat, cleared area on the western side of the Upper Canal, in the southern end of the Mount Gilead Stage 2 site.			
	150.765656556304691 -34.141702583644978			
Date	1880s			
Dimensions	1.3m wide	0.9m deep	0.3m thick	1.4m high
Description	<p>The Site 22 chimney was part of a temporary house structure occupied by workers during the construction of the Upper Canal.</p> <p>It was part of a cluster of four chimneys (Site 21, Site 23 to Site 24). The Site 23 chimney was located 13.5m to the northwest, and the Site 21 chimney was located 68m to the southeast. The heath/opening of the structure faced northeast, with the structure fronting the road (Site 45).</p> <p>Chimney 2 was 10 courses high, constructed from semi-cut medium-sized stones. A soft, mid-orange fine-grained sandy clay mortar was identified between the stones.</p>			
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>Archaeological evidence of the site has been identified in the visible remains of the chimney and its mortar. The extent and integrity of additional associated archaeological remains associated with the construction and occupation of the habitation site is unknown.</p> <p>Additional archaeological features are likely to be present in the vicinity of the habitation site. Further structural elements of the building that once incorporated the chimney may be identified in posthole or foundation cuts and fills. Moreover, subsurface features, such as pits associated with rubbish disposal, cisterns, and cesspits, have a high potential for survival. While no surface isolated artefacts or artefact scatters were identified, there is a potential for these remains to be recovered subsurface structures or deposits. As no later development has been undertaken in or around the site, any additional archaeological features are likely to be intact.</p>		
Integrity	<input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The chimney structures were constructed from cut and semi-cut sandstone medium blocks and pieces. A fine-grained sandy clay sand mortar was identified between the stones, but it has mostly eroded. This will no doubt cause further collapse.</p> <p>The structure has heavily collapsed some time between being recorded by Navin Officer in 2006 and the GML inspection undertaken in 2020.</p>		
Significance	<input checked="" type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	<p>The site has been identified and registered as being of state significance in accordance with the NSW Heritage Criteria. The site is presently located within the SHR curtilage for the Upper Nepean Scheme.</p>		
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation	<p>As the site is located within the SHR curtilage for the Upper Nepean Scheme, the management of the archaeological remains should be undertaken in accordance with the SHR listing requirements.</p>		



**Site Number 22—Chimney (Former Cottage)**

- ☐ Salvage  
Excavation
- ☐ Preparation of  
Management  
Plan
- ☐ Statement of  
Heritage Impact
- ☐ Interpretation  
Plan

References      Officer 2006, Chimney Remains (MGH4-2)  
Higginbotham et al 1992, Item 17



Site 22 Chimney, facing north. (Source: GML 2020).



Site 22 chimney, facing west. (Source: GML 2020).



Site 22 chimney, facing south. (Source: GML 2020).



Condition of Site 22 chimney 2006. Photograph taken facing northeast. (Source: Officer 2006, p.53).

## Site 23—Chimney (Former Cottage)

Site Number	23—Chimney (Former Cottage)		
Site Type	Chimney remains and archaeology associated with former cottage		
Location	Site 23 was located in a cluster with Site 21, Site 22, and Site 24. It was situated on a flat, cleared area on the western side of the Upper Canal in the southern end of the Mount Gilead Stage 2 site.		
	150.765550308477202 -34.141619503711340		
Date	1880s		
Dimensions	1.1m wide	0.9m deep	0.4m thick 2.15m high
Description	<p>The Site 23 Chimney was part of a temporary house structure, wooden and fabric tents occupied by workers during the construction of the Upper Canal. As such is possible that additional archaeological elements such as postholes (cuts and fills) are associated with the structure.</p> <p>It was part of a cluster of four chimneys (Site 21, Site 22 and Site 24). The Site 24 chimney 4 was located 12.5m north-northwest and the Site 23 chimney was located 13.5m to the southeast. The heath/opening of the structure faced northwest. This possibly suggests that, if the structure fronted the road (Site 45), the chimney was located on the side of the house.</p> <p>The Site 23 chimney was 10 courses high, constructed from semi-cut medium-sized stones. A soft, mid-orange fine-grained sandy clay mortar was identified between the stones.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>Archaeological evidence of the site has been identified in the visible remains of the chimney and its mortar. The extent and integrity of additional associated archaeological remains associated with the construction and occupation of the habitation site is unknown.</p> <p>Additional archaeological features are likely to be present in the vicinity of the habitation site. Further structural elements of the building that once incorporated the chimney may be identified in posthole or foundation cuts and fills. Moreover, subsurface features, such as pits associated with rubbish disposal, cisterns, and cesspits, have a high potential for survival. While no surface isolated artefacts or artefact scatters were identified, there is a potential for these remains to be recovered in subsurface structures or deposits. As no later development has been undertaken in or around the site, any additional archaeological features are likely to be intact.</p>	
Integrity	<input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The chimney structures were constructed from cut and semi-cut medium-sized sandstone blocks and pieces. A fine-grained sandy clay sand mortar was identified between the stones, but it has mostly eroded. This will undoubtedly cause further collapse.</p> <p>The structure has heavily collapsed in the time between being recorded by Navin Officer in 2006 and the GML inspection undertaken in 2020. The dimensions in 2006 were 1.7m wide, 0.9m deep, and 3m high. At some point, a plastic band has been wrapped around the structure in an attempt to hold some stones together.</p>	
Significance	<input checked="" type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	<p>The site has been identified and registered as being of state significance in accordance with the NSW Heritage Criteria. The site is presently located within the SHR curtilage for the Upper Nepean Scheme.</p>	

**Site Number**      **23—Chimney (Former Cottage)**

Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan <input type="checkbox"/> Interpretation Plan	<p>As the site is located within the SHR curtilage for the Upper Nepean Scheme, the management of the archaeological remains should be undertaken in accordance with the SHR listing requirements.</p>
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**References**      Officer 2006, Chimney Remains (MGH4-23)  
 Higginbotham et al 1992, Item 17



Site 23 chimney, facing southwest. (Source: GML 2020).



Site 23 chimney, facing south. (Source: GML 2020).





Site 23 chimney, facing south. (Source: GML 2020).



Condition of Site 23 chimney in 2006. Photograph taken facing northwest. (Source: Officer 2006, p 53).

## Site 24—Chimney (Former Cottage)

Site Number	24—Chimney (Former Cottage)	
Site Type	Chimney remains and archaeology associated with former cottage	
Location	Site 24 was located in a cluster with Site 21 to Site 23. It was situated on a flat, cleared area on the western side of the Upper Canal, in the southern end of the Mount Gilead Stage 2 site.	
	150.765509803151190 -34.141510572317337	
Date	1880s	
Dimensions	2m long	1.3m wide
Description	The Site 24 chimney was a rectangular-shaped sandstone base for a chimney or hearth. The sandstone was laid on the ground. The long axis was aligned in a north–west to south–east direction. During a site visit, the area was covered with fallen tree branches. The site was unable to be identified.	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>Archaeological evidence of the site has been previously identified in the visible remains of the base of a chimney. The extent and integrity of additional associated archaeological remains associated with the construction and occupation of the habitation site is unknown.</p> <p>Additional archaeological features are likely to be present in the vicinity of the habitation site. Further structural elements of the building that once incorporated the chimney may be identified in posthole or foundation cuts and fills. Moreover, subsurface features, such as pits associated with rubbish disposal, cisterns, and cesspits, have a high potential for survival. While no surface isolated artefacts or artefact scatters were identified, there is a potential for these remains to be recovered subsurface structures or deposits. As no later development has been undertaken in or around the site, any additional archaeological features are likely to be intact.</p>
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Unknown	No standing structure was identified during the survey undertaken by GML in 2020. The present condition of the archaeological remains identified by Navin Officer in 2006 are unknown.
Significance	<input checked="" type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	The site has been identified and registered as being of state significance in accordance with the NSW Heritage Criteria. The site is presently located within the SHR curtilage for the Upper Nepean Scheme.
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact	As the site is located within the SHR curtilage for the Upper Nepean Scheme, the management of the archaeological remains should be undertaken in accordance with the SHR listing requirements.

**Site Number**      **24—Chimney (Former Cottage)**

☐ Interpretation  
Plan

**References**      Officer 2006, Chimney Remains (MGH4-4)  
Higginbotham et al 1992, Item 17



Site 24 chimney, facing west. (Source: GML 2020).



Condition of Site 24 chimney in 2006. Photograph taken facing east. (Source: Officer 2006, p 53).



## Site 25—Fence Post

Site Number	25—Fence Post			
Site Type	Fence Posts			
Location	Site 25 was located to the south of Site 24, on the western side of the Upper Canal.			
	150.766032026130290	-34.142268421029662		
Date	Unknown			
Dimensions	1.5m high	0.5m wide	0.1m thick	7.5m long
Description	Site 25 was a row of thin, rectangular, timber fence posts identified to the south of the chimney sites (Site 21–Site 24). Each of the five identified posts possessed four small round holes with barbed wire through them. The posts were the same size and style as those identified as Site 26. However, the posts were in a closer proximity to one another, range from 1 to 7.5 metres apart. The posts ran along the edge of a thin walking or cattle track running northeast to southeast along the ridgeline. The walking track likely joined the historical access route (Site 45) directly to the northwest. Directly to the west of the fence posts, the ridge cut steeply down to the Nepean Creek. As such, the fence likely acted as a barrier to contain and protect livestock.			
Potential	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low	The fence posts were identified along the edge of a thin track. No additional fenceposts were identified, although the area was overgrown. As the fenceposts were likely used to contain cattle, no additional archaeology is expected to be associated with the site.		
Integrity	<input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	Site 25 is of poor integrity. The posts were fallen over and decaying. The fence likely extended to the north and south along the track, but no further fence posts were identified.		
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input checked="" type="checkbox"/> Nil	The fenceposts of Site 25 do not meet the threshold of significant under the NSW Heritage Criteria. The posts were not able to be dated to any specific landowner or time period. They could also not be directly associated with the chimney sites to the east (Site 21– Site 24).		
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	The fence posts are not significant under the NSW Heritage Criteria. As a result, no further management is recommended.		

## Site 26—Fence Post

Site Number	26—Fence Post			
Site Type	Fence Posts			
Location	Site 26 was located on the northern side of the Upper Canal, to the west of the public accessway Site 42.			
Start	150.762987278105498	-34.142591633444717 to		
End	150.764039149940913	-34.143413241221261		
Date	Unknown.			
Dimensions	1.5m high (above ground level)	0.5m wide	0.1m thick	135m long
Description	<p>A row of thin, rectangular wooden fence posts was identified on the edge of the modern agricultural field.</p> <p>Each of the seven posts identified possessed four round holes with barbed wire through them. A gateway with metal gate was also identified in the row.</p> <p>The fence line ran northwest to southeast. The posts were separated at intervals averaging 20m.</p> <p>At its southern extent, the fence joined a newer concrete fence running along the border of the Upper Nepean Scheme SHR boundary. To the north, the fenceposts had been removed where the modern agricultural fields begin.</p> <p>The fence may have been constructed to border the eastern side of the Menangle to Appin access way (Site 42). It likely acted as a paddock border to contain cattle.</p>			
Potential	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low	The area around the site was only covered with low grass. No additional fenceposts were identified. As the fenceposts were likely used to contain cattle, no additional archaeology is expected to be associated with the site.		
Integrity	<input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	The wooden posts remain standing, but the wire and metal gate is rusted and broken. It is unclear how far north the fence originally extended. The posts were removed by modern agricultural activities.		
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input checked="" type="checkbox"/> Nil	The posts were not dated to any specific landowner or time period. As such, the fenceposts of Site 26 do not meet the threshold of significant under the NSW Heritage Criteria.		
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan	The fence posts are not significant under the NSW Heritage Criteria. As a result, no further management is recommended.		

**Site Number      26—Fence Post**

- ☐ Statement of Heritage Impact
- ☐ Interpretation Plan



Site 26 fence post, facing west. (Source: GML 2020).



Site 26 row of fenceposts, facing west. (Source: GML 2020).



Site 26 row of fenceposts, facing east. (Source: GML 2020).



Site 26 gate in row of fenceposts, facing east. (Source: GML 2020).



## Site 27—Cottage with Fence Posts

Site Number	27—Cottage with Fence Posts	
Site Type	Cottage with Fence Posts	
Location	The cottage site is located on the eastern side of Appin Road.	
	150.791039489395104 -34.138447433830578	
Date	Pre-1888	
Dimensions	Unknown	
Description	<p>The 1888 Dawson &amp; Dawson plan identified a 'cottage' fronting Appin Road. During investigation of the site, a fence post and gate was recorded facing the eastern side of Appin Road. The orientation indicated that a fence ran north to south along Appin Road. The fence was the same style as others identified around Mount Gilead Estate (Site 25 and Site 26). The fence and gate are no longer in use. No track into the site was identified. It had been truncated by a fire trail. Some of the area east of the gate appeared to have been cleared, but the present vegetation was heavily overgrown. There was low ground visibility and, as a result, no archaeological features were noted.</p>	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>While there are no visible archaeological remains at the site, there is a high potential for evidence of the cottage to exist, both beneath the overgrown vegetation and below the ground surface. The site has been demolished, but no further ground penetrating works appears to have been undertaken in the area.</p> <p>Archaeological evidence of the cottage structure and associated outbuildings may be identified in postholes, wall footings, paths, subfloor surfaces and water management structures. Yard surfaces and garden beds may also be associated with the site. These features are likely to be shallow and ephemeral, and therefore disturbed, truncated or removed during subsequent agricultural practices in the area. Deeper and more substantial subsurface features such as pits and cuts associated with rubbish disposal, wells, drains, cisterns, and cesspits, have a higher potential for survival. While no surface isolated artefacts or artefact scatters were identified, there is a potential for these remains to be recovered in fills, subfloor deposits, and, most likely, in the aforementioned subsurface features.</p>
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Unknown	<p>Most of the fence line has been removed. What remains is in good condition. The condition of archaeological evidence associated with the cottage, and associated outbuildings and features, is unknown. Further archaeological investigation is required to determine the type and extent of the archaeological remains associated with Site 27.</p>

Site Number 27—Cottage with Fence Posts		
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	The significance of Site 27 is unable to be determined without further research and investigation into archaeological potential and history of the site.
Management	<input type="checkbox"/> Monitoring <input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	The cottage site is located within a biobank area of the Mount Gilead Stage 2 site. As such, no developments are proposed within the site boundary. If either vegetation clearing or subsurface ground disturbance works are to be undertaken in the vicinity of Site 27, then an ARD will be required. Depending on the extent of proposed ground disturbance, a qualified archaeologist should be engaged to monitor the works or undertake test excavations.
References	1888, Survey Plan, Dawson & Dawson	



Gate leading to the Site 27 cottage. The cleared area can be seen in the background, interrupted by the fire trail. Photograph taken facing east. (Source: GML 2020).



Detail of gate leading to Site 27 cottage, facing east. (Source: GML 2020).

## Site 28—Timber Bridge

Site Number	28—Timber Bridge	
Site Type	Timber Bridge	
Location	Site 28 was located on the eastern bank of Woodhouse Creek.	
	150.777190999999988 -34.128701999999997	
Date	Prior to 1888 (although another assessment determines late nineteen – early twentieth century).	
Dimensions	Approx. 4.3m wide	6m long
Description	<p>The timber bridge once crossed Woodhouse Creek in a northeast to southwest direction. The bridge was constructed of felled tree trunks. All the trunks were rounded, none of them had been cut down to have flat sides. Large trunks were pushed vertically into the creek bed. These were abutted by diagonal trunks leaning inward to support the structure. The support trunks interlocked with the other trunks. Large bolts also joined the wood.</p> <p>The platform was constructed of three rows of support beams/runners (placed in a northeast to southwest direction). Smaller trunks (placed in a northwest to southeast direction) formed the surface. These pieces of wood were not joined to the runners with nails.</p> <p>In 2006, Navin Officer noted that the bridge was located approximately 500m southeast of the main Mount Gilead homestead and 50m southeast of the closest outbuilding (shed) on the property. Navin Officer further noted that the early parish maps did not indicate a bridge or road was located in the area. As such, he concluded that this bridge formed part of a secondary easterly access way to the sheds and main homestead across Woodhouse Creek. However, it seems more probable that the bridge was part of Reserved Road which is identified in the 1888 Dawson &amp; Dawson map of Mount Gilead Estate.</p>	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	Archaeological evidence of the site has been identified as the remains of a timber bridge. No additional evidence in the vicinity of the site was noted. The beams of the bridge were likely installed in the ground by being placed into cuts and fills. Evidence of this construction process is likely to remain, including in areas where the bridge is no longer standing.
Integrity	<input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	The majority of the structure has collapsed and only the eastern side of the bridge remains. The condition of the standing section has deteriorated substantially in the time between the site visit conducted by Navin Officer in 2006 and the GML site visit in 2020.
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 28 should be considered of local significance under the NSW Heritage Criteria for its connection with early transport routes.</p> <p>Navin Officer concluded that the bridge was of no significance due to the dilapidated condition and lack of a historical road/track linking it to either the homestead or construction of the Upper Canal. However, it is likely that the bridge was linked with Site 42, the road running east to west through the Mount Gilead Estate. As a result, the route was likely integral in connecting people with Appin Road.</p>
Management	<input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation	The significant collapse of the timber bridge necessitates the preparation of a management plan—the plan should include an archival recording. In 2015, GML determined the bridge was of moderate significance with a low tolerance for change. The degrading timber



Site Number	28—Timber Bridge	
	<input type="checkbox"/> Salvage Excavation	beams are vulnerable to further breakage. Without structural support and conservation, the bridge will be destroyed.
	<input checked="" type="checkbox"/> Preparation of Management Plan	The site is located within a biobank area in the Mount Gilead Stage 2 site. As such, the site is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. However, if construction works are undertaken at or in the direct vicinity of the site, an ARD and SoHI must be undertaken for the site.
	<input checked="" type="checkbox"/> Statement of Heritage Impact	
	<input type="checkbox"/> Interpretation Plan	

References      Officer 2006, Timber Bridge Remains (MGH2)  
GML, 2015, p 60, table 5.3



Condition of Site 28 timber bridge in 2020. Photograph taken facing northeast. (Source: GML 2020)



Condition of Site 28 timber bridge in 2020. Photograph taken facing north. (Source: GML 2020)



Condition of Site 28 timber bridge in 2006. Photograph taken facing west. (Source: Officer 2006, p.51)



Condition of Site 28 timber bridge in 2006. Photograph taken facing northeast. (Source: Office 2006, p.51)

## Site 29—Sandstone Bridge

Site Number	29—Sandstone Bridge		
Site Type	Sandstone Bridge		
Location	Site 29 crossed an unnamed creek that flowed northward into Woodhouse Creek. The site was downstream from Site 30.		
	150.7717179995096	-34.13221057094719	
Date	Prior to 1888		
Dimensions	36m long	11–20m wide	2.1m high
Description	<p>The Site 29 sandstone bridge was constructed from large and extra-large rectangular and well-cut sandstone blocks. They measured 2m long by 0.8m–1m high. A large, deformed metal pipe was wedged into the opening beneath the bridge. This is likely a later addition to the structure.</p> <p>The track to the bridge was constructed of a three-course high stepped wall built from less well-cut large sandstone blocks.</p> <p>The Site 29 sandstone bridge was located 56m northeast of the sandstone weir. The bridge runs north to south, crossing the unnamed first order creek that feeds Woodhouse Creek to the north. The bridge was part of Reserved Road which is drawn in the 1888 Dawson map of Mount Gilead Estate, although the bridge itself is not identified.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	The structure of the Site 29 sandstone bridge was easily identifiable in the landscape. The cut sandstone forming a solid bridge remains fully functional. Additional evidence of landscaping to create the bridge may be identified.	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	The integrity of Site 29 is high. The bridge remains functional and not at risk of collapse. Low grasses cover the fabric but this is not likely to affect the integrity of the site.	
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 29 should be considered of local significance under the NSW Heritage Criteria for its connection with early transport routes.</p> <p>It is likely that the bridge was linked with Site 42, the road running east to west through the Mount Gilead Estate. As a result, the route was likely integral in connecting people with Appin Road.</p>	
Management	<input type="checkbox"/> Monitoring <input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>Site 29 is located within the proposed biobank area in the Mount Gilead Stage 2 site. As such, it is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. In addition, the bridge remains in use and will likely continued to be utilised as an accessway across the creek line. As a result, the preparation of a management plan should be undertaken for the site.</p> <p>If construction or upgrading works are undertaken at or in the direct vicinity of the site, a SoHI must be undertaken for the site.</p>	



Site Number    29—Sandstone Bridge

Heritage interpretation might be beneficial to improve public understanding the site and its relationship to the larger landscape.



Site 29 sandstone bridge running east to west across an unnamed first order creek that feeds Woodhouse Creek. Photograph taken facing north. (Source: GML 2020)



Detail of Site 29 sandstone bridge running east to west across an unnamed first order creek that feeds Woodhouse Creek. Photograph taken facing south. (Source: GML 2020)



The road leading to the Site 29 sandstone bridge. The wall here is stepped and constructed from smaller and less well-cut sandstone blocks. Photograph taken facing southwest. (Source: GML 2020)



The road leading to the Site 29 sandstone bridge. The wall here is less well constructed. Photograph taken facing northeast. (Source: GML 2020)



## Site 30— Sandstone Weir, Walls, and Pools

Site Number	30—Sandstone Weir, Walls, and Pools	
Site Type	Sandstone Weir, Walls, and Pools	
Location	The site was located along the unnamed waterway running south to north and connecting to Woodhouse Creek.	
Weir	150.7714029616118	-34.13264664365374
Terraces	150.7713925490886	-34.13304316645939
	150.7714528401935	-34.13322458481311
Date	The construction date is unknown. However, the size and type of sandstone blocks used are similar to those used in the construction of the Upper Canal. The weir was possibly constructed at the same time as the Upper Canal, in the 1880s.	
Dimensions	84m (north to south)	20.5m (east to west)
Description	<p>Weir: The sandstone weir (or overshot dam) crossed an unnamed first order creek that feeds Woodhouse Creek from the north. The weir sits east to west in orientation. It is approximately 20.5m long, 9m wide, and 1.1m high. A depressed spillway was constructed in its centre, to allow excess water to overflow.</p> <p>The southern face of the weir was flat. On the other hand, a revetment embankment was located on the northern face of the weir. It comprised a 10-course high stepped wall. The river is deeper and wider on the northern side, a result of the area being quarried out. Pick marks were clearly visible.</p> <p>The weir structure was predominantly constructed of rectangular-shaped, dressed sandstone blocks (80cm long by 40cm wide and 40cm deep). A modern concrete mortar has been applied between the stones at the surface of the structure. This was likely added at a later date for conservation purposes.</p> <p>Walls: A semi-intact drystone wall connected to the northwestern corner of the weir. A second drystone wall was identified on the southern side of the weir, running along the eastern riverbank. It was constructed of uncut and semi-cut medium-sized sandstone pieces, laid on a bedrock platform. The wall is heavily collapsed. Similar walls appear to have been located on the northern side of the weir and western bank. Although, they too were heavily collapsed.</p> <p>Terracing/pools: Two drystone walls were identified south of the weir, running east to west across the river channel itself. The first wall was 44m south of the weir, and the second was 20m south of the first. The walls comprised medium to large uncut and semi-cut sandstone blocks, with some smaller stones used as packing. They formed two terraces, which may have functioned to pool the water before it reached the weir.</p>	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	Evidence of water management and associated landscape modification around Site 30 was clearly identifiable. The weir remains functional. The walls and pools, on the other hand, require more investigation to fully understand their extent and any additional features.
Integrity	<input checked="" type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input checked="" type="checkbox"/> Good	The integrity of Site 30 ranges from poor to good. The northwestern side of the spillway has collapsed, but the weir remains relatively intact. The drystone walls running along the banks of the creek have completely collapsed. The drystone

Site Number	30—Sandstone Weir, Walls, and Pools	
	<input type="checkbox"/> Unknown	walls forming terracing within the creek remain relatively intact. Although, there is some clear collapse on the lower terrace.
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>The site of the weir should be considered of local significance according to the NSW Heritage Criteria.</p> <p>Due to its early construction date and intact nature, the site presents an important component of water management practices at the Mount Gilead Estate.</p>
Management	<input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>Site 30 is located within the proposed biobank area of the Mount Gilead Stage 2 site. As such, it is likely to be exposed to minor, nonintrusive impacts relating to vegetation management. The preparation of a management plan should be undertaken for the site. Due to the location within a very accessible area of the Mount Gilead Stage 2 site, the plan should manage the indirect impacts that result from access to the weir and associated features. The plan should also investigate whether the modern concrete mortar applied to the weir has affected the structural integrity or intactness of the original fabric.</p> <p>If construction works are undertaken at or in the direct vicinity of the site, a SoHI and associated ARD must be undertaken for the site. This is required to fully understand the extent of the additional features at the site.</p> <p>Due to the unique nature of the weir within the Mount Gilead Stage 2 site, Site 30 would benefit from heritage interpretation.</p>
References	Officer 2006, Item Stone Weir (MGH1) Higginbotham et al 1992, Item 29	



Southern face of the Site 30 sandstone weir, with no water in the creek. Facing north-west. (Source: GML 2020).



Northern face of the Site 30 sandstone weir showing the stepped wall. Photograph taken facing west. (Source: GML 2020).





Spillway of the Site 30 sandstone weir, showing the structure is still functioning. The collapsed side of the spillway is visible. Photograph taken facing west. (Source: GML 2020).



Collapsed drystone wall (medium-sized stones on a bedrock platform) to the south of the sandstone weir. The wall is on the eastern bank of the creek. Photograph taken facing northeast. (Source: GML 2020).



Drystone wall on the northern side of the weir, on the western bank of the creek. The wall physically connects to the weir itself. Photograph taken facing south. (Source: GML 2020).



Area of quarried bedrock on the northern side of the weir, on the eastern bank. Photograph taken facing southeast. (Source: GML 2020).



Detail of pick marks on the quarried bedrock located on the northern side of the weir. Photograph taken facing south. (Source: GML 2020).



Two drystone sandstone walls creating terraces that potentially form pools in the creek. Photograph taken facing south. (Source: GML 2020).



## Site 31—Ford

Site Number	31—Ford	
Site Type	Ford	
Location	The ford is located within the northwestern corner of the site. It crosses the Nepean River, just south of the intersection with Menangle Creek. A cleared track to the ford, Site 43, was identified on both the eastern and western sides of the river at this point.	
	150.756671 -34.12224	
Date	Early nineteenth century	
Dimensions	NA	
Description	<p>The ford and connecting road were depicted on the 1861 Allen &amp; Wigley's subdivision map of the Mount Gilead Estate. The ford was marked as 'crossing place'. The 1917 Commonwealth Section Imperial General Staff's Map of Liverpool-Menangle Manoeuvre Area also labelled the crossing as a 'ford when riv. is low'. An article from the <i>Camden News</i> of 11 August 1910 describes residents' request that the Menangle Weir—on the Nepean River, abutting the Mount Gilead Estate—be lowered by two feet to enable an easier crossing between the Camden Park and Mount Gilead Estate properties. No evidence of a sandstone paving or wooden structures were identified. If crossings were undertaken when there were low water levels, evidence may be submerged. Alternatively, it may be obscured by the heavy vegetation directly along the riverbank.</p> <p>Earlier crossing of the ford may have also been undertaken by ferry. In 1837, a notice on the gate of Mount Gilead Estate suggested the road ran 'to mill and ferry'. With no bridge across the Nepean River at Menangle prior to 1856, the Main Southern Road (surveyed by James Meehan in 1817) extended through the Mount Gilead Estate. The accessway led to Bird's Eye Corner, at the junction of the Nepean River and Menangle Creek—where a ferry transmitted travellers over the river. The river was forded at this location by Hume and Hovell in 1824.</p> <p>Accessways (see Site 43) to the crossing are identifiable on both sides of the river. On the western side of the Nepean River, the land is flat and heavily cleared. Pathways can be seen extending to both the east and west.</p>	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The location of the ford identified in the 1861, 1917 and 1888 maps has been verified by the cleared accessways on both sides of the Nepean River. However, no remnants of structures associated with the ford have been identified. The river appears to have been crossed by ferry at one point, suggesting a potential for pier or jetty structures. A low sandstone road at the base of the river may also be identified. Evidence of these features may be present beneath heavy vegetation at the riverbank, or only visible during low tide when crossing was easier.</p>
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Unknown	<p>No evidence of structures associated with the ford have been identified. Remains may exist below the vegetation or within the riverbed. However, the integrity of these remains cannot be assessed without the identification of related structures or features.</p>
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>The site meets the threshold of local significance under the NSW Heritage Criteria.</p> <p>At present, no archaeological remains associated with the site have been identified. However, evidence of a jetty or pier associated with the ferry or a submerged sandstone road may be found. In addition, the site was forded by Hume and Hovel in 1824.</p>

**Site Number 31—Ford**

Management	<input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>Site 31 will remain within the biobank area of the Mount Gilead Stage 2 development. The site is heavily overgrown with invasive weeds. As such, the site is likely to be exposed to vegetation management. The preparation of a management plan should be undertaken for the site. As the full archaeological potential for the site is unknown, an ARD and SoHI must be undertaken for the site prior to works being completed in its vicinity.</p> <p>Due to the unique nature of the ford within the Mount Gilead study area, Site 31 would benefit from heritage interpretation.</p>
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References	<p>1861, Plan of the Mount Gilead Estate, Allen &amp; Wigley</p> <p>1917, Map of Liverpool-Menangle Manoeuvre Area, Commonwealth Section Imperial General Staff</p> <p>1888, Survey Plan, Dawson &amp; Dawson</p>
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Entrance of accessway from field to the Nepean River. Photograph taken facing west. (Source: GML 2020).



View of the Nepean River from the bottom of the accessway. Accessway on other side of bank visible (arrow). Photograph taken facing west. (Source: GML 2020).

## Site 32

Record not used.

## Site 33—Former Cattle or Hay Shed

Site Number	33—Former Cattle or Hay Shed	
Site Type	Former cattle or hay shed (?)	
Location	Site 33 was located on the western side of the unnamed waterway running north to south through the Mount Gilead Stage 2 site. It was located south of a creek crossing.	
	150.7703521028 -34.1351644459	
Date	Prior to 1888.	
Dimensions	Three areas of discoloured grass were identified. The westernmost area was 17m by 17m. The middle area was 17m long by 12m wide. Both areas were in a northeast to southwest alignment. The third and easternmost area was 10m by 10m, in a north-northeast to south-southwest alignment.	
Description	<p>Three patches of discoloured grass were identified in the vicinity of a structure identified on the 1888 Dawson &amp; Dawson plan of Mount Gilead Estate. The discoloured areas were also identifiable on modern aerials of the site. No surface features were identified.</p> <p>While a date is unknown, the site was likely associated with Woodhouse as the land was not cleared until the 1880s.</p> <p>In modern times, the location has been used to place feed for cattle. A recent aerial shows remnants of circular haybales. It is possible that the discoloured grass is related to modern agricultural activities. However, that this is an appropriate location for such activities supports the interpretation that the structure was potentially a cattle or hay shed.</p>	
Potential	<input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The archaeological potential of the structure is unable to be determined without further investigation. Structural remains may be identified in postholes, wall footings, paths, subfloor surfaces and water management structures. Yard surfaces may also be associated with the site. These features are likely to be shallow and ephemeral, and therefore disturbed, truncated or removed during subsequent agricultural practices in the area. Deeper and more substantial subsurface features, such as pits and cuts associated with rubbish disposal, have a higher potential for survival. While no surface isolated artefacts or artefact scatters were identified, there is a potential for these remains to be recovered in fills, subfloor deposits, and, most likely, in the aforementioned subsurface features.</p>
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Unknown	<p>No standing archaeological features associated with the homestead have been identified. In addition, no archaeological investigation of this site has been undertaken. As a result, the integrity of any subsurface archaeological remains is unknown.</p>
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	<p>The significance of Site 33 is unable to be determined without further research and investigation into archaeological potential and history of the site.</p>
Management	<input checked="" type="checkbox"/> Monitoring	<p>To investigate archaeology associated with Site 33, an ARD is required. It is likely that archaeological monitoring of this area during</p>



Site Number	33—Former Cattle or Hay Shed	
	<input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	<p>construction works will be the best method to determine the extent of any archaeological remains. If archaeological features are uncovered, further testing and salvage excavation may be required.</p>

References      1888, Survey Plan, Dawson & Dawson



Area of potential Site 33 unknown structure, facing north. (Source: GML 2020).



Area of potential Site 33 unknown structure, facing north. (Source: GML 2020).

## Site 34—Agricultural Land

Site Number	34—Agricultural Land	
Site Type	Agricultural Land	
Location	The site is located to the south of the Woodhouse Aqueduct.	
Date	Mid-nineteenth century	
Dimensions	700m (north to south) 600m (east–west)	
Description	Site 34 is the lot of land that was likely the first zone south of Woodhouse Creek to be cultivated. At present, the field holds cattle. A dam has been constructed in the centre.	
Potential	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low	The land has been continuously ploughed and use to keep cattle and other animals since the mid-nineteenth century. As a result, the potential to identify shallow evidence of land clearing and early plough and furrow marks is low. This is also true for drainage channels and other water management features. Isolated or scattered artefacts from this phase and relating to agricultural activities may be identified.
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input checked="" type="checkbox"/> Unknown	No clear archaeological evidence of the early agricultural use of Site 34 has been identified. As such, the integrity of any remains is unknown.
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 34 is considered of local significance under the NSW Heritage Criteria.</p> <p>The site marks the beginning of early agricultural activities on the southern side of Woodhouse Creek, and, as a result, is a fundamental part of the narrative of land use across the Mount Gilead Estate.</p>
Management	<input type="checkbox"/> Monitoring <input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input checked="" type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	Site 34 is not located within the proposed biobank areas of the Mount Gilead Stage 2 site. As a result, the site will be subject to impacts as a result of the proposed development. A SoHI is required for the site prior to works being undertaken in its vicinity. Further evidence to assess the extent of the archaeological potential of the site should be defined by an ARD.

## Site 35—Wheel Ruts

Site Number	35—Wheel Ruts	
Site Type	Wheel Ruts	
Location	The site is located along the road running east to west through the site (Site 42). It is on the eastern side of Nepean Creek, near the approach to the crossing.	
	150.763547946075590 -34.132016886162013	
Date	Late nineteenth century	
Dimensions	12m long (east–west) 10m wide (north–south)	
Description	Site 35 comprised a potential series of wheel ruts created by carriages and/or carts travelling from west to east across the Mount Gilead Estate. The ruts were carved into a flat area of exposed bedrock. The bedrock formed part of the road running east to west across the site and crossing Nepean Creek. The wheel ruts also run east to west, in the direction of the road. The ruts are 10cm wide. One prominent channel was 12m long.	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>The depressions carved into the bedrock were easily identifiable on the exposed bedrock. There is also a high potential for additional features to be present on the bedrock located directly west of Site 35. This area is presently capped by a modern gravel fill.</p> <p>No artefacts were identified during the survey of Site 35. It is possible, but unlikely, that isolated artefacts and artefact scatters will be recovered in the area to the west of the wheel ruts. This is because the bedrock slopes downward to the creek. Rain and the movement of soil likely removed any associated artefacts away from the site.</p>
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	Some weathering of the bedrock may have slightly eroded the channels associated with the wheel ruts. However, the ruts remain prominent and deeply incised into the bedrock.
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 35 has been considered of local significance under the NSW Heritage Criteria.</p> <p>The incision of the wheel ruts into bedrock indicates a long, and potentially continuous, use of the accessway. The associated road, Site 42, running east to west through the Mount Gilead Estate was a public roadway. It connected Appin Road to Menangle. The wheel ruts belonging to Site 42 are a unique archaeological marker of this connectivity and the ways people moved through the landscape.</p>
Management	<input checked="" type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input checked="" type="checkbox"/> SoHI	<p>The wheel ruts belonging to Site 42 have been exposed, with a potential for further ruts to be identified below the modern gravel fill directly west of the site. Further exposure of the bedrock surface may be valuable to understanding the full extent of the site and evidence of transportation across the Mount Gilead Estate. Moreover, further research needs to be undertaken to fully determine the interpretation of the site. As a result, an ARD is required.</p> <p>Site 35 is not located within the proposed biobank area of the Mount Gilead Stage 2 site. As a result, it may be impacted by future construction or maintenance works. If construction works are undertaken at or in the direct vicinity of the site, a SoHI must be undertaken for the site.</p>



**Site Number 35—Wheel Ruts**

☐ Interpretation  
Plan

Given the site is bedrock an located in a zone likely to require future development actions, it is likely to be impacted by future works.



Site 35 wheel ruts, facing west. (Source: GML 2020).



Site 35 wheel ruts, facing west. (Source: GML 2020).

## Site 36—Construction Camp

Site Number	36—Construction Camp	
Site Type	Construction Camp	
Location	The site is located to the southeast of the Woodhouse Aqueduct.	
	-34.131149    150.771167	
Date	1880s	
Dimensions	Unknown	
Description	<p>Site 36 is potentially the location of a large construction camp that housed workers who built the Upper Canal. The proposed location of the site is on the periphery of the Mount Gilead Estate agricultural fields. Notably, the site cannot see or be seen from the Mount Gilead homestead—it is hidden behind the vegetation beside Woodhouse Creek.</p> <p>No archaeological evidence of the site was identified by GML. Large areas of exposed bedrock was noted in the vicinity, suggesting the soil landscape in the area was skeletal.</p>	
Potential	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low	<p>No archaeological evidence of the site was identified by GML. Large areas of exposed bedrock were noted in the area, suggesting the soil landscape in the area was skeletal—further investigation is required. As such, evidence of sub-surface archaeological features is likely to be limited. If found, it might include tree boles associated with land clearing, posthole cuts and fills, wall footings/foundations, paths, yard surfaces, floor surfaces, isolated artefacts and artefact scatters,</p> <p>Evidence of deeper features, such as pits for rubbish or cesspits, may be identified away from the side where the soil landscape is deeper.</p>
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The condition of archaeological evidence associated with the construction camp is unknown. Further archaeological investigation is required to determine the type and extent of the archaeological remains associated with Site 36.</p>
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 36 has been considered of local significance under the NSW Heritage Criteria.</p> <p>The quarry was directly associated with the construction of the Upper Canal. Similar camp sites are known on the Upper Canal but none have been investigated in detail.<sup>2</sup></p>
Management	<input checked="" type="checkbox"/> Monitoring <input checked="" type="checkbox"/> ARD <input checked="" type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact	<p>Site 36 is located within a biobank area of the Mount Gilead Stage 2 site. As such, no developments are proposed within the site boundary. If either vegetation clearing or subsurface ground disturbance works are to be undertaken in the vicinity of the site, then an ARD will be required. Depending on the extent of proposed ground disturbance, a qualified archaeologist should be engaged to monitor the works or undertake test excavations.</p>

**Site Number 36—Construction Camp**

☐ Interpretation Plan



Location of Site 36 construction camp, facing west. (Source: GML 2020).



Location of Site 36 construction camp showing exposed bedrock, facing south. (Source: GML 2020).



## Site 37—Sandstone Blocks

Site Number	37—Sandstone blocks		
Site Type	Sandstone blocks		
Location	South of the Mount Gilead homestead and on the northern side of Woodhouse Creek. The site is within the Mount Gilead Estate SHR boundary and outside the Mount Gilead Stage 2 site.		
	150.776692	-34.12819	
Date	Unknown		
Dimensions	7m long	8m wide	1.5m high
Description	<p>Site 37 comprised a large pile of well-cut sandstone blocks. The stone blocks averaged 45cm by 45cm by 30cm. Architectural features were amongst the stones. A lintel was identified. It measured 1m long by 50cm wide and 15cm high.</p> <p>The origin of the stones is unknown. There is no indication that the stones belonged to a structure that was dismantled in the location. It is more likely that they belonged to a building located outside the Mount Gilead Estate which was dismantled and brought to the site.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	Site 37 is a known site. No additional associated archaeology was identified in the direct vicinity of the pile of stones. If the stones were transported to the site from another location, there is not likely to be any additional features associated with the site.	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	The integrity of the site is good. The stones are located on the periphery of the property. The stones do not appear to have been broken or degraded.	
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	The pile sandstone blocks (Site 37) were located within the SHR boundary of Mount Gilead Estate, and not within Mount Gilead Stage 2 site. As a result, the significance of the site will not be assessed. The site has not been identified as a specific element within the SHR listing.	
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan	The site is located within the SHR boundary of the Mount Gilead Estate. As a result, no archaeological management plan has been proposed.	

**Site Number**      **37—Sandstone blocks**

- ☐ Statement of  
Heritage Impact
- ☐ Interpretation  
Plan



Overview of Site 37 showing a collection of well-cut sandstone. Photograph taken facing northeast. (Source: GML 2020).



Detail of Site 37 showing a lintel within the pile of stones. Photograph taken facing southwest. (Source: GML 2020).

## Site 38—Rubbish Dump

Site Number	38—Rubbish Dump	
Site Type	Rubbish Dump	
Location	South of the Mount Gilead homestead and on the northern side of Woodhouse Creek. The site is within the Mount Gilead Estate SHR boundary and outside the Mount Gilead Stage 2 site.	
	150.776661 -34.12853	
Date	Twentieth century	
Dimensions	20m long 5–6m high	
Description	Site 38 comprised a rubbish dump that included scrap metal, barbed wire, a washing machine, bed frames, breezeblocks, tires, and a fridge. The scrap metal was likely associated with the sheds located directly to the north. These sheds also possessed similar pieces of metal in the adjoining yard space. The rubbish was not dumped within a refuse cut but thrown over the edge of the bank leading down to Woodhouse Creek.	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	Site 37 is a known site. Due to the overgrowth of vegetation around the rubbish dump, the full extent of the scatter was unable to be confirmed. Based on the site type, there are not likely to be any additional archaeological features, such as structural features, associated with it.
Integrity	<input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	The integrity of the site is poor. The site is overgrown with low vegetation. The material, predominantly metal, is rusted.
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	The rubbish dump (Site 38) was located within the SHR boundary of Mount Gilead Estate, and not within the Mount Gilead Stage 2 site. As a result, the significance of the site will not be assessed. The site has not been identified as a specific element within the SHR listing.
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	The site is located within the SHR boundary of the Mount Gilead Estate. As a result, no archaeological management plan has been proposed.





Scrap metal and other rubbish in the Site 38 rubbish dump. Photograph taken facing northeast. (Source: GML 2020).



Detail of the scrap metal within Site 38 rubbish dump. Photograph taken facing northwest. (Source: GML 2020).

## Site 39—Sandstone Columns

Site Number	39—Sandstone Columns		
Site Type	Sandstone Columns		
Location	South of the Mount Gilead homestead and on the northern side of Woodhouse Creek. The site is within the Mount Gilead Estate SHR boundary and outside the Mount Gilead Stage 2 site.		
	150.775532 -34.12942		
Date	Unknown		
Dimensions	8m long	10m wide	0.6m high
Description	<p>Site 39 comprised several pieces of sandstone, worked into architectural elements belonging to a building. The collection of pieces included:</p> <ul style="list-style-type: none"> <li>two square columns, four associated square column bases and/or capitols;</li> <li>six round columns and nine associated column bases and/or capitols, two of which were smaller than the others; and</li> <li>one lintel.</li> </ul> <p>The stones may have been those identified by Ecological in 2015, thought to have come from demolished buildings in the Sydney CBD.<sup>3</sup> There is no indication that the stones belonged to a structure that was dismantled in the location.</p>		
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	Site 39 is a known site. No additional associated archaeology was identified in the direct vicinity of the pile of stones. If the stones were transported to the site from Sydney, there are not likely to be any additional features associated with the site.	
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input checked="" type="checkbox"/> Good <input type="checkbox"/> Unknown	The integrity of the site is good. The stones are located on the periphery of the property. The stones do not appear to have been broken or degraded.	
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	The collection of architectural sandstone pieces (Site 39) was located within the SHR boundary of Mount Gilead Estate, and not within the Mount Gilead Stage 2 site. As a result, the significance of the site will not be assessed. The site has not been identified as a specific element within the SHR listing.	
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	The site is located within the SHR boundary of the Mount Gilead Estate. As a result, no archaeological management plan has been proposed.	



Site 39 columns, facing south. (Source: GML 2020).



Detail of square column bases, facing west. (Source: GML 2020).



Detail of round column bases, facing east. (Source: GML 2020).



Detail of lintel, facing west. (Source: GML 2020).



## Site 40—Morris Car

Site Number	40—Morris Car	
Site Type	Morris Car	
Location	South of the Mount Gilead homestead and on the northern side of Woodhouse Creek. The site is within the Mount Gilead Estate SHR boundary and outside the Mount Gilead Stage 2 site.	
	150.775358	-34.129842
Date	Post-1935	
Dimensions	NA	
Description	Site 40 comprised the body of a Morris 8 car, a small family-sized car produced between 1935 and 1948. The car was heavily rusted. The motor elements have been removed.	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	The car (Site 40) is a known site. Based on the site type, there are not likely to be any additional archaeological features associated with it.
Integrity	<input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	The remains of the car are skeletal and heavily rusted. The site will continue to degrade as it is exposed to the elements.
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	The Morris car (Site 40) was located within the SHR boundary of Mount Gilead Estate, and not within the Mount Gilead Stage 2 site. As a result, the significance of the site will not be assessed. The site has not been identified as a specific element within the SHR listing.
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	The site is located within the SHR boundary of the Mount Gilead Estate. As a result, no archaeological management plan has been proposed.



Site 40 car, facing southwest. (Source: GML 2020).



Site 40 car, facing north. (Source: GML 2020).

## Site 41—Rubbish Dump

Site Number	41—Rubbish Dump	
Site Type	Rubbish Dump	
Location	South of the Mount Gilead homestead and on the northern side of Woodhouse Creek. The site is within the Mount Gilead Estate SHR boundary and outside the Mount Gilead Stage 2 site.	
	150.774732 -34.13	
Date	Late nineteenth to early twentieth century	
Dimensions	5m long	5m wide
Description	<p>Site 41 comprised a dump of glass and ceramic located beneath a rock shelf. The approximately 30 bottles were comprised of dark-green glass and stoneware ceramic. Some were flat-bottomed torpedo bottles. They were likely ginger beer bottles from the late-nineteenth to early twentieth century.</p> <p>The site was slightly downhill from the path around the edge of the agricultural fields, in the creek line of Woodhouse Creek. The site was tucked away. It is likely that the site was a place for people to drink. It does not appear to be a deliberate rubbish dump.</p>	
Potential	<input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low	<p>Site 41 is a known site. Due to low coverage of leaves and bark, the full extent of the scatter was unable to be confirmed. However, it did not appear to be more extensive than the area identified. Based on the site type, there are not likely to be any additional features associated with it.</p>
Integrity	<input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The bottles in Site 41 were all broken. As the full extent of the site has not been confirmed, the integrity of additional archaeological remains are unknown.</p>
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input type="checkbox"/> Nil	<p>The bottle dump (Site 41) was located within the SHR boundary of Mount Gilead Estate, and not within the Mount Gilead Stage 2 site. As a result, the significance of the site will not be assessed. The site has not been identified as a specific element within the SHR listing.</p>
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input type="checkbox"/> Interpretation Plan	<p>The site is located within the SHR boundary of the Mount Gilead Estate. As a result, no archaeological management plan has been proposed.</p>





Rubbish dump, facing north. (Source: GML 2020).



Detail of the ceramic and glass bottles in Site 41.  
Photograph taken facing north. (Source: GML 2020).

## Site 42—Reserved Road

Site Number	42—Reserved Road	
Site Type	Road	
Location	The road ran east to west through the Mount Gilead Estate. It joined Appin Road in the east and crossed the Nepean River via the Site 31 ford in the est.	
Date	Early nineteenth century	
Dimensions	The map 1888 Dawson & Dawson map marked the road as originally being 'one chain wide'.	
Description	<p>Reserved Road was originally identified in the 1861 Allen &amp; Wigley plan of the Mount Gilead Estate. The road crossed the site in an east to west direction, beginning at Appin Road and crossing the Upper Canal. The road joined the Site 43 road, which ran north to south, connecting Menangle to Wollongong via the Site 31 ford on the Nepean River.</p> <p>The Site 42 road marked the interface between the original lots of land. The 1888 Dawson &amp; Dawson plan of Mount Gilead Estate shows Reserved Road in roughly the same alignment. It is unclear whether this was a later iteration or more accurate representation of the same road. Reserved Road is not identified on the 1917 Department of Defence plan, which only marked more major roads.</p> <p>Limited evidence of the road is visible on the site. Evidence of associated crossings, such as the timber and sandstone bridges (Site 28 and Site 29), remain in situ. Cleared land in the forested area along the route are also present.</p>	
Potential	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low	<p>Most of the road has been removed as a result of agricultural activities. Archaeological evidence of its presence remains in the form of bridges (Site 28 and Site 29), one of which remains in use. There is a low potential for identifying evidence of original road fabrics as most are likely to have been removed or disturbed by modern agricultural activities and road grading.</p>
Integrity	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>A small area of cleared land associated with the road was identified. However, no evidence of original road fabric has been identified. Associated features, such as the ford, have been identified separately to the road.</p>
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 42 is considered of local significance under the Heritage NSW criteria.</p> <p>Reserved Road is an early nineteenth century accessway connecting Menangle to Appin Road, Campbelltown, Wollongong and beyond. The road was an important feature in the overall landscape of the Mount Gilead Estate.</p>
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>While limited archaeological evidence of the road has been identified, the location of the road is considered an important feature in the landscape. Portions of the road run through areas outside the proposed biobank boundary of the Mount Gilead Stage 2 site. No original fabric or evidence of the road has been identified in these areas. However, the overall line of the road should be appreciated as a landscape feature. As a result, a management plan should be created to assist in the preservation of this throughway.</p> <p>Site 42 will also benefit from additional research and heritage interpretation.</p>

**Site Number      42—Reserved Road**

References      1861, Plan of the Mount Gilead Estate, Allen & Wigley  
1917, Map of Liverpool-Menangle Manoeuvre Area, Commonwealth Section Imperial  
General Staff



## Site 43—Public Access Road

Site Number	43—Public Access Road	
Site Type	Road	
Location	<p>The Site 42 public access road ran northwest to southeast through the western portion of the Mount Gilead Estate. In its southern extent, within the Mount Gilead Stage 2 site boundary, the road crossed the Upper Canal via a small bridge. In its northern extent, the road joined the Site 31 ford. It then crossed the Nepean River and ran west to Menangle.</p>	
	150.75712 -34.12191	
Date	Early nineteenth century	
Dimensions	The cleared track on the eastern side of the river beside the Site 31 ford was approximately 170m long (northwest to southeast)	
Description	<p>Site 43 comprised a public access road that ran from northwest to southeast across the western agricultural lands of the Mount Gilead Estate. At the south of the site, a crossing at the Upper Canal was constructed to accommodate the route. In the northern end of the site, the road joined the Site 31 ford. Prior to a bridge being built at Menangle, the ford was only means of access across the watercourse.</p> <p>The road connected Menangle in the west. It did not meet the Mount Gilead homestead. The road also acted as an internal division of the fields for the Mount Gilead Estate. The road appeared to be utilised until 1910, around the time William Henry Harris purchased Mount Gilead Estate and stopped public access.</p> <p>At the northern extent of the road, two paths leading down to the eastern bank of the Nepean River were identified. Trees had been cleared to form a path, approximately 10m wide. The slope of the path was relatively shallow, becoming steeper within 15m of the bank. A ford was located at the bank.</p> <p>On the western bank of the Nepean River (beyond the Mount Gilead Stage 2 site boundary), the accessway remains visible. A heavily cleared area slopes very shallowly to the waterside. The wide path swings to the south, following the route identified in the 1861 plan.</p>	
Potential	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low	<p>Most of the road has been removed as a result of modern agricultural activities. Evidence of the original road location is primarily notable where land in the forested area to the east of the Site 31 ford has been cleared. There is a low potential for identifying evidence of original road fabrics as most are likely to have been removed or disturbed by modern agricultural activities.</p>
Integrity	<input checked="" type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>A small area of cleared land associated with the road was identified. However, no evidence of original road fabric has been identified. Associated features, such as the ford, have been identified separately to the road.</p>
Significance	<input type="checkbox"/> State <input checked="" type="checkbox"/> Local <input type="checkbox"/> Nil	<p>Site 43 is considered of local significance under the Heritage NSW criteria.</p> <p>The public accessway is an early nineteenth century accessway connecting Menangle to Wollongong and beyond. The road was an important feature in the overall landscape of the Mount Gilead Estate.</p>
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation	<p>While limited archaeological evidence of the road has been identified, the location of the road is considered an important feature in the landscape. Portions of the road run through areas outside the proposed biobank boundary of the Mount Gilead Stage 2 site. No original fabric or evidence</p>

Site Number	43—Public Access Road	
	<input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>of the road has been identified in these areas. However, the overall line of the road should be appreciated as a landscape feature. As a result, a management plan should be created to assist in the preservation of this thoroughway.</p> <p>Site 42 will also benefit from additional research and heritage interpretation.</p>

References	<p>1861, Plan of the Mount Gilead Estate, Allen &amp; Wigley</p> <p>1917, Map of Liverpool-Menangle Manoeuvre Area, Commonwealth Section Imperial General Staff</p>
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Cleared land showing the path of the Site 42 road towards the Site 31 ford. Photograph taken facing west. (Source: GML 2020).



Cleared land showing the path of the Site 42 road leading to the Site 31 ford. Photograph taken facing west. (Source: GML 2020).

## Site 44—Minor Road

Site Number	44—Minor Road	
Site Type	Road	
Location	The Site 44 road (Minor Road 1) was located on the eastern side of Nepean Creek, to the north of the junction with Woodhouse Creek. The site was located on the upper slope of the bank.	
Date	1880s	
Dimensions	30.5m long (northwest–southeast) 4m wide	
Description	An accessway was identified on the upper bank of the Nepean Creek. It had been cleared of trees and rock tumble had been moved to the edge of the track. A possible section of cut bedrock was also identified. The pathway was similar in size and appearance to those associated with the quarries identified along Woodhouse Creek and Nepean Creek. However, no quarry was located in the direct vicinity of the site. The nearest quarry was Site 2, located 70m to the southeast.	
Potential	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low	Evidence of the road was primarily visible in landscape modifications, including the clearing of trees and rocks, and the cutting of bedrock. No road fabric was identified. No artefacts associated with the roadway were identified. There is a low potential for such artefacts to be identified beneath the overgrowth and leaf litter.
Integrity	<input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The road remains visible and cleared. Evidence of the cut sandstone bedrock to form the path is also observable. These features have a high integrity due to their durability.</p> <p>The road is presently covered with leaf litter, fallen trees and branches. Trees have begun to grow in the cleared path.</p>
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input checked="" type="checkbox"/> Nil	<p>Site 44 is of local significance under the NSW Heritage Criteria.</p> <p>Site 44 is part of a network of connectivity across both the Mount Gilead Estate and wider communities.</p>
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	The site is located within the proposed biobank boundary of the Mount Gilead Stage 2 site. As a result, it will be subject to minor impacts. A management plan should be prepared. The site would also benefit from heritage interpretation.





Cleared land belonging to the Site 44 road. An area of cut bedrock is identified by an arrow. Photograph taken facing northwest. (Source: GML 2020).



Cleared land showing the route of the Site 44 road. Photograph taken facing southeast. (Source: GML 2020).

## Site 45—Minor Road 2

Site Number	45—Minor Road 2	
Site Type	Road	
Location	The Site 45 road was primarily located on the eastern side of Nepean Creek but also crossed over the creek. The road began at the chimney sites (Site 21–Site 24) and ended at the Site 33 unknown structure.	
Date	1880s	
Dimensions	620m 3–4m wide long	
Description	<p>The Site 45 road provided access across Nepean Creek. It appears to have connected the Upper Canal and temporary construction workers' camp (Site 21–Site 24) to the western side of the creek. It likely connected to the public access way running northwest to southeast through the Mount Gilead Estate (Site 43).</p> <p>The road began at the construction workers' camp and ran to the northwest. It returned to the south and crossed the creek. Vegetation had been cleared. Sandstone bedrock had also been cut. This was especially visible on the eastern side of Nepean Creek where the road sloped down.</p>	
Potential	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low	<p>Most of the road has been removed as a result of agricultural activities. The original road was evident in landscape modifications, such as clearing and the cutting of the bedrock. There is a low potential for identifying evidence of original road fabrics—most are likely to have been removed as the accessway has continued to be maintained and graded.</p>
Integrity	<input type="checkbox"/> Poor <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Unknown	<p>The road remains visible and cleared. Evidence of the cut sandstone bedrock to form the route is also observable. These features have a high integrity due their durability. However, the site has been continuously maintained and graded, which has removed any original fabrics.</p>
Significance	<input type="checkbox"/> State <input type="checkbox"/> Local <input checked="" type="checkbox"/> Nil	<p>Site 45 is does not meet the threshold of significance under the NSW Heritage Criteria.</p> <p>Site 45 is part of a network of connectivity across both the Mount Gilead Estate and wider communities.</p>
Management	<input type="checkbox"/> ARD <input type="checkbox"/> Test Excavation <input type="checkbox"/> Salvage Excavation <input checked="" type="checkbox"/> Preparation of Management Plan <input type="checkbox"/> Statement of Heritage Impact <input checked="" type="checkbox"/> Interpretation Plan	<p>The site is located within the proposed biobank boundary of the Mount Gilead Stage 2 site. As a result, it will be subject to minor impacts. A management plan should be prepared. The site would also benefit from heritage interpretation.</p>



Start of Site 45 road, which runs from the temporary workers' camp (Site 21–Site 24). Photograph taken facing northwest. (Source: GML 2020).



Site 45 road, which runs from the temporary workers' camp (Site 21–Site 24). Photograph taken facing northeast. (Source: GML 2020).



Site 45 road leading to Nepean Creek crossing (eastern side of creek). Photograph taken facing northeast. (Source: GML 2020).



Site 45 road leading to Nepean Creek crossing (eastern side of creek). Photograph taken facing southwest. (Source: GML 2020).



- <sup>1</sup> Govannon Consultancy, Stone Quarrying Landscapes as World Heritage Sites, report prepared for Gwynedd County Council, October 2014, p 5.
- <sup>2</sup> Higginbotham, E, Historical and Archaeological Assessment of Proposed Cycle Way, Near Thornleigh Quarry, Via de Saxe Close, Thornleigh (Berowra Valley Regional Park), N.S.W., report prepared for Hornsby Council, March 2002, p 19.
- <sup>3</sup> EcoLogical Australia, Mount Gilead Urban Investigation Area Aboriginal and Historic Heritage Due Diligence Assessment, report prepared for Lend Lease, April 2015, p 25; Higginbotham, E, Conservation Management Plan for the Upper Canal, Pheasant's Nest to Prospect Reservoir, NSW: History, Survey and Significance, vol. 1, report prepared for The Sydney Catchment Authority, August 2002.