

Historical Archaeological Assessment and Heritage Management Strategy: Oakdale Concept Plan Kemps Creek, NSW

Prepared by Australian Museum Business Services for Goodman International Limited

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Executive Summary

Australian Museum Business Services (AMBS) has been commissioned by Goodman International Limited (Goodman) to undertake a Historical Archaeological Assessment and Heritage Management Strategy for the proposed Oakdale Concept Plan project. Goodman is preparing a 'concept plan' for the Oakdale Concept Plan project, in accordance with the provisions of Part 3A of the *Environmental Planning and Assessment Act 1979*.

The Oakdale study area is to be developed by Goodman for industrial/commercial purposes in a staged manner. The development will primarily involve the construction of warehouses and other facilities; the installation of large hardstand areas to allow for heavy vehicle access associated with the installation, and operations of essential infrastructure associated with the proposed development. The proposal also includes the potential provision of regional rainwater harvesting infrastructure from the site to feed into Prospect Reservoir via two trunk main pipelines located within the Warragamba–Prospect pipeline corridor. Details concerning the proposed development are yet to be finalised; however it is understood that the proposal includes excavation and may destroy all the archaeological resources of the Oakdale study area.

This study has identified three significant archaeological resources within the Oakdale study area, which need to be managed appropriately, to ensure that the contribution they can make to an understanding of the historic development of the local area is not lost. The archaeological resources contained in the Oakdale study area are identified as:

- The site of the timber slab cottage has been assessed as having high archaeological research potential and high significance.
- The Lockwood outbuildings site, within the Oakdale study area, has been assessed as having moderate to low archaeological research potential and moderate significance.
- Archaeological resources associated with the part of the Kables estate that is within the study area may have some potential to make a contribution to an understanding of the historical development of the local area.

This report has identified research questions and proposed archaeological excavation options designed to mitigate the destruction of the archaeological resources by extracting the maximum research value from the archaeological resources of the Oakdale study area.





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1 Introduction

1.1 Preamble

Australian Museum Business Services (AMBS) has been commissioned by Goodman International Limited (Goodman) to undertake a Historical Archaeological Assessment for the proposed Oakdale Concept Plan project, and associated infrastructure.

The Oakdale Concept Plan project comprises development of a 421 hectare portion of the Western Sydney Employment Hub for employment purposes (predominately warehousing and distribution). The Western Sydney Employment Hub is identified in the Metropolitan Strategy as a key centre of employment growth for Sydney over the next 25 years.

Goodman is preparing a 'concept plan' for the Oakdale Concept Plan project, in accordance with the provisions of Part 3A of the *Environmental Planning and* Assessment Act 1979.

Concurrent with the concept plan application, Goodman is also proposing to seek approval for certain infrastructure works outside the Oakdale site, including:

- upgrading a section of Old Wallgrove Road to facilitate efficient access to the Oakdale site; and
- regional infrastructure associated with a rainwater harvesting scheme for the Western Sydney Employment Hub.

The aim of this report is to assess the potential impacts of the project (and associated infrastructure) on historical archaeology, and to recommend measures to mitigate these impacts where required.

1.2 Study Area

The study area comprises the Oakdale Concept Plan site itself, as well as sections of the Old Wallgrove Road corridor and the Warragamba-Prospect pipeline corridor.

The Oakdale project site is located within the suburbs of Kemps Creek and Horsley Park, and straddles the boundary of Penrith and Fairfield local government areas (LGAs) (see *Figure 1.1*). The 421 hectare site comprises Lots 1 and 2 in DP 120673 (127ha and 62ha), Lots 82 and 87 in DP 752041 (141ha and 3ha), and Lot 1 DP 843901 (88ha), owned by Austral Bricks Pty Ltd.

Austral Bricks operates a quarry and brickmaking plant on Lot 1 DP 843901, which is planned to continue operating for the foreseeable future (at least 20 years). As such, this assessment has not considered this lot in any detail.

The site is surrounded by 'employment' land to the north, existing quarries and 'employment' land to the east (with rural residential landuse beyond), rural and rural residential land to the south and west, and a catholic primary/college to the west.

The section of the Warragamba–Prospect pipeline corridor that is included in the study area is approximately 8.5 kilometres in length, extending between Mamre Road to the west and Ferrers Road to the east. The western portion of the pipeline corridor is located within the Penrith LGA, while the eastern portion lies on the boundary of the Fairfield and Blacktown LGAs.

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The section of Old Wallgrove Road included within the study area is approximately 2 kilometres in length, and is located within the Blacktown and Fairfield LGAs.



Figure 1.1 The location of the Oakdale study area in western Sydney is arrowed (Source: travelmate.com)

1.3 Statutory Context

The *Environmental Planning and Assessment Act (EP&A Act)* requires consideration to be given to environmental impacts as part of the land use planning process. In NSW, environmental impacts include cultural heritage impacts.

Part 3A of the EP&A Act concerns the approvals process for major infrastructure development and other projects which classify as 'major projects'.

As the Oakdale Concept Plan project is classified as a major project under Part 3A of the EP&A Act, Goodman is not required to apply for approvals or permits under the *NSW Heritage Act 1977*. However, the Department of Planning is still required to fully assess the heritage impacts of any proposal under Part 3A in accordance with established guidelines. To this end, the Department of Planning generally provides the NSW Heritage Council the opportunity to review Part 3A applications for the appropriateness of the proposal to the heritage significance of items identified. The Heritage Council then considers and advises the Department of Planning with regard to appropriate conditions of approval.

The statutory heritage requirements are outlined below to provide a background to current heritage best practice.

1.4 NSW Heritage Act, 1977

The State Heritage Register (SHR) is a list of places and objects of particular importance to the people of NSW made under the *NSW Heritage Act 1977* (the Act).

Prospect Reservoir, and surrounding area, is identified on the State Heritage Register; however, the current proposal does not include works within the curtilage of this item or its vicinity (see Appendix B for SHR Inventory sheet).

The *NSW Heritage Act 1977* provides statutory protection to relics, archaeological artefacts, features or deposits. Sections 139 to 146 of the Act require that excavation or disturbance of land that is likely to contain, or is believed may contain, archaeological relics is undertaken in accordance with an excavation permit issued by the Heritage Council (or in accordance with a gazetted exception to this Section of the Act). The Act defines an archaeological relic as:

any deposit, object or material evidence: (a) which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and (b) which is 50 or more years old.

1.4.1 Heritage and Conservation Register (Section 170 Register)

Under Section 170 of the Heritage Act, government instrumentalities are required to maintain a register of heritage assets; a Heritage and Conservation Register, also known as a Section 170 Register. The Sydney Catchment Authority (SCA) Section 170 Register has not yet been finalised and is in draft form.

The Warragamba–Prospect Pipelines 1 and 2 [Blacktown City] are listed on the SCA draft Section 170 Register (see Appendix B for Inventory sheet). Under Section 170A(2) the SCA is responsible for managing items entered on its register and the SHR in accordance with State Owned Heritage Management Principles.

It should be noted that most activities, other than maintenance and cleaning, that impact on items listed on the SCA Section 170 Register, require the approval of the Heritage Council.

1.5 Methodology

This report is consistent with the principles and guidelines of the Burra Charter (*The Australia ICOMOS charter for the conservation of places of cultural significance*). The report has been prepared in accordance with current heritage best practice guidelines as identified in the Heritage Office, Department of Planning, publications; *NSW Heritage Manual, Archaeological Assessment Guidelines, Assessing Heritage Significance*,.

The aim of this report is to assess the potential impacts of the Oakdale Concept Plan project (and associated infrastructure) on historical archaeology, and to recommend measures to mitigate these impacts where required.

1.6 Authorship and Acknowledgements

The research and writing undertaken within this report was conducted by AMBS archaeologists, Felicity Barry, Amanda Dusting and Christopher Langeluddecke and, field investigations were undertaken by Christopher Langeluddecke and Felicity Barry. Jennie Lindbergh, AMBS Senior Project Manager, provided technical advice and reviewed the report.

The project team would like to thank Phil Jones of Goodman International Limited and Kate Lenertz, Environmental Officer, Sydney Catchment Authority for their assistance with the project.

The project team would also like to thank the Penrith and Fairfield Local Studies librarians, staff at the Fairfield City Museum and Gallery, as well as historians Tricia Mack and Alan Roberts.

2 Historical Overview

2.1 The Context of the Oakdale Study Area

The Oakdale study area is within the area known as Kemps Creek and is surrounded by Badgery's Creek, Eastern Creek, Horsley Park, Mount Vernon and Erskine Park. The historical development of these areas has been generally well documented whereas the history of the Oakdale study area specifically, is less well documented.

The majority of the land grants in the Kemps Creek and Horsley Park areas were large acreages issued to free settlers. Casey and Lowe noted in their study of land in nearby Eastern Creek that smaller allotments of land tended to be granted to emancipated convicts. A cursory examination of information available for the current study appears to support this statement for the Kemps Creek area (see Appendix 1 and Casey & Lowe 2002: 9).

Large and well known estates within the wider context of the study area include: Bayly Park (Nicholas Bayly); King's Gift or Horsley Park (George Johnston Snr); Lockwood (George Johnston Junior); Exeter Farm (James Badgery); Mt. Vernon (Anthony Fenn Kemp); Erskine Park (James Erskine); Minchinbury (William Minchin) and Regentville (James Jamison). Many of these estates and other large grants of land were issued after 1810, by Macquarie for grazing and pastoral purposes.

In addition to grazing and pastoralism, timber getting is identified early as an activity in this area.¹ Timber getting generally preceded settlement as an activity in the process of land clearance for establishing pasturage and agriculture. However, timber getting in this area continued into the mid and late 19th century in order to supply sawn ironbark for railway girders and sleepers (Thorp 1986:115).

Early farming ventures met with varying degrees of success, which may have been due to the differences in climate between England and Australia. This is supported by instructions issued by Governor King in 1804 regarding the protection of riverbanks from erosion and later, by scientific articles about farming in the Sydney Gazette under Governor Bligh (Rosen 1996:25). Following the 1809 floods in the Hawkesbury, Acting Governor Colonel Patterson began to 'encourage settlers to occupy the Cumberland Plain forest lands,' it is likely that settlers tended to move their houses and other domestic and commercial structures onto higher ground to avoid inundation (Rosen 1996:28).

The type of farming undertaken is likely to have been, in part, dependant on the resources of the early land holders. Land use practices appear to be dominated by the pasturing of cattle, horses, sheep and goats. Agriculture included crops such as maize, wheat, vegetables and fruits supplemented with poultry and pigs (Rosen 1996: 25). Orchard farming (particularly stone fruits), dairying, horse breeding and quarrying have been undertaken within the Kemps Creek and surrounding areas.

¹ Reference to the Crown requiring timber for ship building purposes is noted in the Register Book 8, p94 for Lockwood (see Grants Index 1792-1826 Vol. 1).

The study area comprises the following allotments: the western portion of the Lockwood estate granted to George Johnston Junior; most of the Razeville estate granted to Nicholas Bayly and the southern section of the grant to Henry Kable (*Figure 2.1*). A very small part of the south east corner of the "Erskine Park" estate, 3000 acres granted to John Erskine in 1818, is also included in the study area. This; however, has been excluded from the body of this history as there is little likelihood for archaeological potential within the area. For further information with regards to this property see HLA 2004.

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Figure 2.1 The study area in relation to the original land grant boundaries, Parish of Melville, Co. Cumberland Parish Map ID 14060501, LPI Parish Map Preservation Project, undated

2.2 The Lockwood Estate

The Lockwood property, a grant of 600 acres, was originally granted to George Johnston Junior on 10 June 1815 by Governor Lachlan Macquarie.² With the advent of George Johnston Junior's death in 1820 ownership of the property was transferred to his father George Johnston Senior. The Lockwood estate, sometimes spelt Lochwood, may have been 'named after the ancient stronghold of the Johnston clan in Scotland, Lochwood Tower' (Lemcke 1998:179).

George Johnston Senior (b. 1764) arrived as a marine (First Lieutenant) on the Lady Penrhyn, with the First Fleet in January 1788. On board, Johnston met his future wife the convict Esther Abrahams (or Julian), by whom he had six surviving children including George (Junior) (1790-1820), Robert (1792-1882), Julia (1796-1879),

² HRA Series 1, Vol. X : 563; Grant Index 1792-1826 Vol. 1, Serial 8, p94

David (1797-1866), (Maria 1801-1827) and Blanche (1806-1904).³ Johnston had been promoted to First Lieutenant for his services in New York and Halifax between 1777 and 1778 (Yarwood 1967: 22). In 1800, Johnston was promoted to brevet major and held a number of positions of responsibility within the company assisting Governors Philip and Hunter. Johnston was also a commanding officer of the NSW Corps during Lieutenant-Colonel William Paterson's absences from Sydney.⁴

Johnston participated in the suppression of the Irish convicts uprising at Castle Hill, Toongabbie, the Hawkesbury and Parramatta. Johnston's participation involved the defeat of Irish convicts at the Battle of Vinegar Hill (in the vicinity of Rouse Hill) in March 1804, which resolved one part of the overall scheme planned by the Irish insurgents (Symes 1990: 7-9). In 1805, Governor Philip Gidley King granted 2000 acres (King's Gift) in the district of Cabramatta to Major George Johnston for his assistance in quelling the Irish uprising of the previous year (Vance 1991:103).⁵ King's Gift is located immediately east of the study area (see *Figure 2.1*).

In 1806, Johnston played a key role in the rum rebellion as the arresting officer of the Governor, Captain William Bligh RN. Following the subsequent trial and court martial in June 1811, Johnston was found guilty of mutiny, for which he was cashiered out of the army (McMahon 2006:126). From 1813, Johnston concentrated on his Annandale estate by seeking to make it a 'model farm.' Although Johnston's relations with Governor Macquarie are likely to have been strained at the onset, Roberts asserts that 'in time this relationship changed to one of close friendship' (Roberts 1972:23). This may also be evidenced by the regret Macquarie expressed at the death of Johnston Junior (Yarwood 1967: 22).

In April 1814, Johnston Junior was commissioned as a clerk in the Commissariat Department, which he held until June 1818, when the Commissary-general in London refused to confirm it.⁶ In 1819, Macquarie appointed Johnston Junior to 'the more lucrative posts of deputy provost-marshal and superintendent of government flocks and herds' (Yarwood 1967: 22).⁷

In 1820, George Johnston Junior died intestate, shortly after his death Johnston Senior was granted administration of his estates, including Lockwood. The management of which was delegated to another son, David.⁸

³ Esther Johnston (1767 – 1846) was convicted of stealing lace and sentenced to transportation for seven years. In Newgate prison she gave birth to a daughter Rosanna (b.1787). Esther was transported under the surname Abrahams but began using the surname Julian (possibly after a Judeo- Spanish family) after 1800 (Bergman 1967: 23, Anon. undated *Johnston and Weston Family Tree*).

⁴ It is possible that Johnston quarrelled with both Governor's King and Bligh at times when their administration of the colony impinged on military matters (Yarwood 1967: 22).

⁵ '18 December 1805'. *Bigge, J. T. Report, Appendix p129*. ML Manuscript card catalogue Johnston Geo. Lieut. Col.

⁶ '28 April 1814'. *G. D. vol 1*, p210-211. 'Appointment to Commissariat'. ML Manuscript card catalogue Entry for 'George Johnston (Jnr)', A. T. Yarwood, 1967: 22.

⁷ '17 July 1819'NSW Government and General Orders, 72 – Proclamations. ML Manuscript card catalogue CY 986 microfilm

⁸ Johnston Papers, ML MSQ22, item 42 (dated 25 February 1820) and Johnston Papers, ML MSQ22, item 63 (dated 3 March 1820).

George Johnston Senior died in 1823, entailing his estate to his wife and children, although complications of that will are likely to have caused difficulties within the family not formally resolved till 1842 (Roberts 1972: 24). Lockwood was divided equally between Johnston's surviving daughters; Maria Brotheridge, Blanche Weston and Julia Johnston.

On the death of both Maria and her husband in 1827, her share in Lockwood reverted to Robert Johnston. In 1833, an exchange was made between Julia and Robert, whereby 200 acres of Lockwood were exchanged for 250 acres of Kings Gift.⁹ Robert, therefore, held two thirds of the property and his sister Blanche one third. Over time, portions of the property were leased; including one hundred acres, leased to Charles Shewell in October 1826.¹⁰

In 1888, Robert Johnston's widow Fanny (1811-1896), applied to convert the property to Torrens Title.¹¹ The Torrens Title application included 1023 acres 3r. 21p. comprising: 600 acres of the original Lockwood grant, the 200 acres granted to Henry Kable and part of the 2000 acres granted to George Johnston Senior or King's Gift (*Figure 2.2*).



Figure 2.2 Plan of Lockwood, the Kable grant and part of Kings Gift in the Primary Application 6378 dated 1888 made by Fanny Johnston. It should be noted that there are no structures shown.

⁹ Deed of Exchange No. 6378, January 3rd 1833, Robert Johnston to Julia Johnston with Deed of Confirmation endorsed, 21st October 1842.

¹⁰ 'Indenture between Robert Johnston Esquire and Others to Mr. Charles Shewell dated 13 October 1826'. Norton Smith and Co. Documents Misc. Deeds J-K, No. 66. A5320.

¹¹ Primary Application No. 6378. Register book Vol. 872 Folio 16, February 1888

The property eventually passed out of the Johnston family in 1905, when land ownership was transferred to Andrew Thompson. Thompson was also the owner of Lenore (part of Erskine Park), a dairy farm immediately to the northeast of Lockwood and adjacent to the Kable estate (see *Figure 2.1*) (HLA 2004:7).

On the 29th of April 1920, the property was transferred to "His Majesty King George VI under the Closer Settlement Acts and Settlement," for the purpose of purchases by discharged soldiers.¹²

2.2.1 Structures on Lockwood

References to structures provide tangible evidence to confirm the presence of buildings within the Lockwood property from at least the 1820's onwards. These include the following: a visit recorded by Governor Lachlan Macquarie on 11 and 12 October 1821;

Left Sir John's and came to Lochwood, calling on the way thither on William Minchin – staid all this day with the Johnstons at Lochwood, 13

and an indenture to lease land to a Charles Shewell in October 1826 which states;

...and containing by estimation one hundred acres more or less together with the cottage and tenement barn stables and buildings there upon erected and built and which said piece or parcels of land or ground is part and parcel of a certain farm called or known by the name of Lockwood containing six hundred acres more or less granted by the Crown to George Johnston Esquire deceased and which said piece or parcel of land hereby demised is divided into six allotments or parcels of ground and is fenced off and divided from the remainder of the land comprised in the said grant together with all houses edifices buildings woods hedges ditches fences ways watered watercourses profits privileges advantages rights members and appurtenances whatsoever to the said cottage and tenement piece or parcel of land or ground and premises...¹⁴

These accounts indicate that there are likely to have been substantial structures within the Lockwood estate to support grazing and pastoral activities, as well as housing the family at various times, and suitable for an overnight stay by the Governor. It is likely that the cottage, tenement barn stables and buildings referred to in the 1826 indenture indicate farm buildings, including perhaps the farm manager's cottage, rather the main house of Lockwood.

The 1888 plan associated with the conversion to Torrens Title of Lockwood does not include any details as to habitation within the estate and there are no structures shown (*Figure 2.2*). However, as this was a Primary Application for conversion to Torrens Title, and not a deed of purchase, it is unlikely that a survey of extant structures was needed. It is likely that some structures were standing in 1906 when a reference is made to Lockwood and Rose Vale, in an article describing the nearby farm of Lenore as a 'model homestead'.¹⁵ Crown Plan 3299 2030 for Portion 82 and Portion 81, surveyed 16 October 1919; however, indicates the position of several structures within the Lockwood property (*Figure 2.3*).

¹² Register Book Vol. 872 Folio 16

 ¹³ 'October 11-12 1821'. p174. *Macquarie's Memoranda*, p174. ML Manuscript card catalogue A772
¹⁴ 'Indenture between Robert Johnston Esquire and Others to Mr. Charles Shewell dated 13 October

^{1826&#}x27;. Norton Smith and Co. Documents Misc. Deeds J-K, No. 66. A5320

¹⁵ Moira, *A Model Homestead*, Sydney Mail June 6 1906: 1486- 1487 (HLA 2004: 7).



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Figure 2.3 Detail of Crown Plan 3299-2030 showing structures on the Lockwood estate. The structures within the study area are circled in red. The building shown on allotment 81 is likely to be the Lockwood homestead, whereas those shown on allotment 82 are likely to be farm buildings, sheds and possibly a cottage.

The 1919 Crown Plan, when overlayed on the Google earth satellite map, indicates that the surveyed buildings, extant at this time, are located in the northeast corner of allotment 82 and the northwest corner of allotment 81 (see *Figure 4.1*). A road, which can be seen in the Google earth map, is an extension of the Old Wallgrove Road to the northeast and was known as "*the Road leading to Lockwood, a large dairy farm and horse breeding grounds*" (Nicholaidis 2000:33).

The size and plan of the structure shown on allotment 81, suggests that it may be a large dwelling of some sort. Allotment 81 lies to the east of the study area; therefore the dwelling is not part of this study. However, the group of structures indicated on the other side of the hill in allotment 82, is within the study area. It is possible that these structures may be interpreted as farm buildings, sheds and outhouses; they may also include a small cottage. There is certainly a cottage extant on allotment 82 when the property is valued in 1935.¹⁶

¹⁶ Rates Books. Penrith City Council Valuation List, (1935) Valuation numbers 1210-1624.

While it is not possible to definitively link these pre-1919 structures directly to occupation within the Lockwood Estate, it is arguable that these structures may be the same, albeit modified by later occupants.

2.3 The Razeville Estate

On 10 June 1815, Governor Lachlan Macquarie granted 330 acres, identified in the Grants Index by the name of Razeville, to Nicholas Bayly.¹⁷ Razeville appears to also have been variously known as Rozeville or Rose Vale. Bayly was the recipient of a number of land grants including 1070 acres adjacent to Razeville (Macquaries Place), 660 acres to the southwest (Kings Down) and his first grant of 550 acres (Bayly Park) (see *Figure 2.4*).

Nicholas Bayly (1770–1823) was a free settler and soldier from Angelsea, Wales. A nephew to the Earl of Uxbridge, he obtained a commission without purchase in the New South Wales Corps, in 1797. In 1803, Bayly was charged with slander against Governor King and was court martialled for conduct unbecoming an officer (Stickley 1979:59).

Bayly participated in the rum rebellion and the subsequent deposition of Bligh and was considered as part of a "rebel junta." Bayly was also accused of undue severity towards his convict servants. Macquarie referred to Bayly, Marsden and Blaxland as;

"three gentlemen settlers who are notorious throughout the colony for being very severe, arbitrary masters and embroiled constantly in quarrels with their servants whom they were constantly dismissing on the most frivolous pretences."¹⁸

Macquarie was generally dissatisfied with Bayly, and he was removed from public office and retired to tend his estates.

Bayly is known to have lived at Bayly Park; located on the grant of the same name (*Figure 2.4*). The house at Bayly Park was built in the early 1800's, probably before 1811, when Nicholas and his wife were said to be "staying at their farm" (Stickley 1979:58). The house was described by William Crook in 1814 or 1817 as "a noble mansion with gardens and cultivated grounds" (Stickley 1979: 59). The Bayly Park house is listed as inventory item KC-3 by the Penrith City Council (see Appendix 2). Given the existence of such a house it is unlikely that Bayly would have used Razeville as a residence (see Appendix 1 for the heritage inventory sheet for Bayly Park).

¹⁷ Grants Index 1792-1826 vol 1, Serial 8, p94

¹⁸ Government Despatch No. 32, 1st December 1817.

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Figure 2.4 Map showing Fleurs Estate to the west of the study area. Parish of Melville, Co. Cumberland Parish Map ID 14066901, LPI Parish Map Preservation Project, undated

Nicholas Bayly died in 1823, and the Bayly Park estate was put up for sale in 1824. Bayly Park, as advertised, comprised about 2500 acres of land with a substantial brick built dwelling and suitable offices and outhouses.¹⁹ Given that the original land grant of Bayly Park was 550 acres, it is probable that at this time Razeville was included in the Bayly Park Estate together with the adjoining properties granted to Bayly of Macquarie Place and Kings Down.

Richard Jones (1786-1852) purchased Bayly Park in 1824 and renamed the property Fleurs. Jones was a magistrate, director of the Bank of Australia and a Member of the Legislative Council from 1829-1843. Jones first arrived in the colony in 1809, setting up as a merchant involved in steamship companies and whaling. In 1825, Jones became a pastoralist importing a flock of pure-bred Saxon sheep, introducing this strain into the wool industry of the colony. Fleurs was used by Jones to keep a dairy herd, pigs, poultry and a vineyard (Shineberg 1967:24). The 1842-44 depression saw Jones declared insolvent and all his estates were sold.

The Fleurs Estate changed hands several times from 1844 - 1909.²⁰ It is possible that Razeville was not included in the Fleurs Estate by 1912, as mention of it is made in the Liverpool Herald (Freame 1912). There is also mention of Rose Vale (Razeville?)

¹⁹ Sydney Gazette, 11 March 1824

²⁰ In 1844 Fleurs was offered for sale (Sydney Morning Herald May 15 1844: 3) then in 1883 Fleurs sold again "in one lot" to Mr Smith (17/3/1883 Nepean Times). The Nepean Times May 7, 1887 states that "Fleurs, dear old spot of happy memory was sold by Mr Watters to a company of land developers" and then in 1890, the owner of Fleurs is listed as Captain Morse in an article titled *Model Homestead*, Nepean Times October 25 1890. By 1909 Mr Alfred Bollenhagen had sold Fleurs to Mr McEntyre, and then in the Nepean Times 11 October 1930, Fleurs is listed for sale comprising 2311 acres.

and Lockwood in an article in the Sydney Mail, 1906, when describing the adjacent property of Erskine Park (HLA 2004:7). These references, and the varying acreage of Fleurs when sold, suggest that the property was independent and no longer linked with Fleurs or the Bayly Estate. By 1920, Razeville was resumed by the Crown for the purposes of the Closer Settlement Acts and Settlement purchases by discharged soldiers.

2.3.1 Structures on Razeville

The Crown Plan 3296-2030 of 1919 does not indicate the presence of any structures on allotment 79 (Razeville); however, there is currently a ruined cottage in the southwest corner of the property (see *Figure 2.7* and *Photographs 3.2 and 3.8*). This ruin appears to date to around the mid nineteenth century and may represent a small cottage built to house an estate manager or caretaker for the property.

2.4 The Kable Estate

Henry Kable (1763-1846) was born in England, convicted of burglary in 1783, and transported to the colony of New South Wales on board the First Fleet vessel the *Friendship* (Hainsworth 1967: 31). Kable married Susannah Holmes, a fellow convict from the same village, by whom he had eleven children.²¹ Kable's property of 200 acres in the Parish of Melville, County Cumberland was granted by Governor Macquarie on 17 August 1819.²²

Governor Philip appointed Kable to the position of an overseer, and within three years Kable had been appointed to the position of constable and nightwatchman. However, in 1802, Kable was dismissed from service for breaching port regulations with the illegal purchase and sale of pigs (Hainsworth 1967: 31). Kable was involved, with fellow emancipists James Underwood and Simeon Lord, in a wide range of commercial activities including; whaling, sealing, the sandalwood trade and wholesale and retail trading. Kable accumulated a large amount of land, including both land he had been granted and land that he had purchased. He owned livestock and stores which were based in Sydney where he also resided.

Kable does not appear to have had a good relationship with Governors King or Bligh. Bligh fined and imprisoned Lord, Kable and Underwood for one month on receipt of a letter from them which he perceived as 'being couched in improper terms (Hainsworth 1967:31). Kable did not reach the notoriety of Lord or Underwood and, a year after the company dissolved in 1809, Kable handed over the management of his Sydney affairs to his son. In 1811, he moved to Windsor and continued to trade from a store. A report by Commissioner Bigge in 1820, indicates that although Kable had once owned 700 acres of land through grants and an additional 250 acres, through purchases of land, by 1820, Kable owned only 90 acres and 30 acres as a tenant (Hainsworth 1967: 32).²³

²¹ C. J. Smee and J. S. Provis. 1981. *The 1788 – 1820 Association's Pioneer Register* (2nd Ed), Vol 1. The 1788-1820 Association : Sydney (Entry on Henry Kable).

²² Historical Records of Australia Series 1, Vol. X, p563

²³ In supporting documents for PA 6378 a transfer of property by Henry Kable to William Gaundry in order to 'liquidate debts' is dated 17 August 1809. This may have been a marriage settlement, as Gaundry married Kable's eldest daughter Diana in September of that year. This cannot be referring to the Kable estate within the study area as the transfer occurred before the date of the original grant in 1819.

Henry Kable leased and re-leased his 200 acre grant in the district of Melville to G. R. Nichols on 4 December 1834.²⁴ This same piece of land appears to have been transferred from George Robert Nichols to G.E.N Weston (husband of Blanche Johnston) on 12 August 1836.²⁵ George Nichols was the son of Isaac Nichols and Rosanna Abrahams (daughter of George Johnston's wife Esther). Indeed, the original grant by Macquarie does not appear as part of Kable's holdings by the time of Bigge's report in 1820.

The 1888 Primary Application for Lockwood includes Kable's 200 acre grant in the overall property, which was transferred to Torrens Title (*Figure 2.2*).²⁶ The subsequent transfer of ownership for Kable's grant, therefore, is linked with the Lockwood property until Kable's grant was resumed by the Crown on the 29th of April 1920 for the purposes of the Closer Settlement Acts and Settlement purchases by discharged soldiers.

2.4.1 Structures on the Kable grant

Ownership of Kable's properties in Sydney and later Windsor (after 1811), indicates that Kable is unlikely to have lived on the 200 acre grant. It is likely, therefore, that the property, within the study area, was being used for pasturing by neighbouring properties and not for longer term habitation. The Crown Plan (3297 2030) dated to a survey undertaken on 16 October 1919 shows no structures present within this property (*Figure 2.6*).

2.5 Lenore Estate Closer Settlement

By 1920, the Lockwood estate, the Kable grant and Razeville were resumed by the Crown for the Closer Settlement scheme.

The Closer Settlement program was a government scheme whereby land was resumed, subdivided into small holdings then sold back to selectors or returned soldiers who were able to purchase the land on generous terms.²⁷ The study area and portions of Erskine Park were surveyed in 1919 by F.R Stevenson in preparation for the resumption of 1920, resumed by 1920 and became the Lenore Estate (no. 806) Closer Settlement Program (*Figure 2.5*). The Lenore Estate was subdivided into seven lots of roughly equal size, titled Farms A-G. The subdivisions were designed to enable the settlers to quickly establish themselves as mixed or dairy farmers utilizing existing infrastructure.²⁸ The subdivisions on the Lenore Estate did not strictly adhere to the pre-existing boundaries; rather they were configured to incorporate extant outbuildings and dwellings etc, which seems to account for the odd shape of some of the allotments (*Figure 2.6*).

²⁴ Old System Serial Book G No. 693

²⁵ Old System Serial Book K No. 380.

²⁶ P.A. Search Books Case No. 6378 dated 23 February 1888. 1788- 1820 Association's Pioneer Register 1981, Second Edition Vol. 1.

²⁷ HLA 2004:8

²⁸ HLA 2004: 9 - see Report dated 14th Nov 1919 by Closer Settlement Board SR 10/37119



Figure 2.5: Outlined area showing the extent of the Lenore Estate Closer Settlement in brown and the study area outlined in blue. Parish of Melville, Co. Cumberland Parish Map ID 14016301 LPI Parish Map Preservation Project, Charted November 1939.

The study area includes parts of Farms D and E and all of Farm G (*Figure 2.6*). Farm D (Portion 79) comprises parts of freehold portions 44 and 58, Farm E (Portion 80) comprises parts of freehold portions 2, 46 and 60 and Farm G (Portion 82 and 87) comprises parts of freehold portions 58 and $60.^{29}$ Although it is believed that there were no structures on the Kable grant, it is possible that there may have been some farm buildings present when the Lenore Estate subdivision occurred. Farm E included a portion of Lockwood that was less likely to have had any structures on it (this portion of Farm E is now the site of the CSR Quarry). It is also likely that the ruined cottage on Razeville was extant and functional, as farm D incorporates a portion of Erskine Park that is unlikely to have contained suitable infrastructure.



Figure 2.6 Details of Crown plans 3296-2030 and 3297-2030, showing the boundaries of farms D and E and the area resumed for the Warragamba to Prospect pipeline traversing diagonally.

²⁹ Portion 87, an area of 6ac 3r 9p, was added to Farm G in 1928, this portion comprised a roadway on the southern boundary of portion 82.

From 1920 onwards, several returned soldiers applied for farms on the Lenore Estate. Some were refused, some having gained the properties then forfeited their claims, whilst others farmed the properties. This subdivision represents the first major change in the pattern of land ownership within the study area.

The Penrith Council valuation list from 1935, includes references to the Lenore Estate: Valuation No. 1233 lists the owner of Farm D (Portion 79) as Arthur Renwick Poolman and includes a cottage on the property; Valuation No. 1237 lists the owner of Farm E (Portion 80) also as Arthur Renwick Poolman (Poolman was also listed as the owner of Farm B on the Lenore Estate) and Valuation No. 1234 lists the owner of Farm G (Portions 82 and 87) as Andrew Doonside Fleming and includes in the valuation a cottage on the east side. By 1939, Farms D and E were transferred from Poolman to Arthur Stockman and by 1950 Farm E was purchased by Harrie Davis.³⁰

In 1940 sections of the study area were gazetted and resumed for the Warragamba to Prospect pipeline.³¹ In 1953, Harrie Davis sold Farm G to Colin Henry Stockman of St Mary's. This suggests that the whole of the study area was owned by the Stockman family in the 1950s. The properties were then sold to the Austral Brick Company in the early 1960s.

2.6 The Warragamba–Prospect Pipeline

Construction of Prospect Reservoir was completed in 1888 to store water fed from the Upper Nepean Scheme via the Upper Canal. From Prospect, water was fed to Pipehead at Guildford, via the Lower Canal, from whence it was piped to the Potts Hill and Crown Street reservoirs. By the 1930s, it was recognised that the Upper Nepean Scheme was inadequate to Sydney's water needs, particularly when a severe drought lasting from 1934 until 1942 saw the water supply almost depleted. The construction of Warragamba Dam began in 1946, and was officially opened on 14 October, 1960.

Water from Warragamba Dam is fed to Prospect Reservoir via two pipelines. The original pipeline, constructed in 1938, had a diameter of 48 inches, which was replaced in 1957 by a new 84 inch cement-lined steel pipeline. This increased capacity resulted in an increase in the pumping rate such that 97 million gallons per day was pumped from Warragamba. The second 84 inch pipeline was constructed in 1959, and the Warragamba Dam infrastructure was complete. The two pipelines are parallel with an access road running between, and travel for 27km from Warragamba to Prospect Reservoir with three cross-connections; adjacent to Mulgoa Road, Luddenham Road and Main Road. The curtilage includes all associated infrastructure; cross-connections, valve houses, flow meters and pumping stations and is generally within a fenced off area.

³⁰ For details of purchases see Vol. 6116 Folio 211 (Portion 82 & 87) and Vol. 7967 folio 201 (Portion 79 & 80).

³¹ Crown Plan 3295-2030

3 Assessment of Archaeological Potential

3.1 Preamble

The history of the study area, and its vicinity, indicates that it has a rich and diverse history of settlement. The survey of the study area was undertaken on 30 March 2007 by AMBS archaeologists Felicity Barry and Christopher Langeluddecke and was designed to assess the potential for extant physical evidence of this diverse history. The results of the survey and features described in this section are indicated in *Figure 3.1*.

The study area is characterised by low, grassed undulating hills and ridgeline formations with Ropes Creek flowing north–south through the centre of the area. The study area is currently used for cattle and horse grazing, and is otherwise unoccupied apart from a caretaker's cottage to the west of Ropes Creek. For convenience and clarity, this report refers to the area within the study area and east of Ropes Creek as the Eastern Sector, and the area west of Ropes Creek as the Western Sector.



Figure 3.1 The Oakdale Study Area indicating the location of features identified during the survey (see also Figure 2.4)





Photograph 3.1 General view of the Oakdale study area demonstrating its pastoral nature

3.2 The Warragamba–Prospect Pipeline Corridor

The Warragamba–Prospect pipeline corridor, within the study area, is approximately 14.5 kilometres long and 40 metres wide. The two pipelines are elevated to approximately 1 metre from the ground and are approximately 30 metres apart with a sealed access road running between. No other structures or items are present within this part of the study area. Where the pipeline encounters a rise, or is near a creekline, a trench has been excavated which has been lined with concrete to ensure that the pipeline is level and unencumbered. The route is interspersed by the occasional valve houses set into the line (*Photograph* 3.2 - 3.4).

Two creeks cross the Warragamba–Prospect pipeline corridor; Reedy Creek, to the east of the study area, and Ropes Creek, to the west. The area within the Warragamba–Prospect pipeline corridor is, for the most part, well maintained with grasses and, in the vicinity of the creek crossings, some invasive vegetation.



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Photograph 3.2 View to the west along the Warragamba Pipeline and valve house



Photograph 3.3 Detail view of the Warragamba–Prospect pipeline





Photograph 3.4 Looking east along the Warragamba–Prospect pipeline access road

3.3 The Eastern Sector

Within the southern portion of the Eastern Sector of the study area is a large, low lying flood plain, associated with Ropes Creek and its tributaries. There are two weir crossings comprising loosely deposited, largely fragmentary, Austral branded bricks, which appear to be of recent manufacture.

The dominant landform in the northern part of the area is a large hill overlooking the Ropes Creek floodplain, the crown of which is outside the study area boundary adjacent. The western slope has been excavated to create five terraces, approximately 8 metres in depth, cut into the side of the hill facing the Ropes Creek (*Photograph 3.5*).



Photograph 3.5 View to the east of the terracing of the hill in the Eastern Sector

Approximately half way up the hill, a roughly constructed concrete-lined trough had been excavated into one of the terraces (*Photographs 3.6 and 3.7*). The trough is approximately 3 metres wide by 5 metres long and 1.5 metres deep. A quantity of rubbish, including wire fencing mesh, corrugated iron and metal pipes, has been deposited in the trough. A pipe, with a diameter of 5cm, protrudes from the south western corner, and a small metal bolt is visible embedded in the concrete wall of the trough. It is likely that the trough has served as a water reservoir.

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Photograph 3.6 Concrete trough in Oakdale study area



Photograph 3.7 View south of the vicinity of the concrete trough

A small empty dam is located approximately 150 metres south east of the trough, and associated with a drainage line running from the ridgeline in the east (*Photograph 3.8*). This dam has apparently also been used as a dump for rubbish associated with

agricultural use, including large fragments of concrete, wooden fence posts, fencing wire, crushed metal chemical drums and fragments of farm machinery.

This dam is in the vicinity of the buildings discussed in Section 2.2.1 as being associated with Lockwood. Although there is no visible evidence of remains that could be attributed to these buildings, the grass cover is also such that it is difficult to determine the possible extent of any modifications to the landscape in this area.



Photograph 3.8 View to the dam site with the study area boundary fenceline in eastern background

The remains of a post-and-rail fence, comprising four extant timber posts, is located adjacent to an established Ropes Creek crossing, approximately 600 metres to the north of the study area border. The timber posts are approximately 1 metre high and have the rectangular slots for rails (*Photograph 3.9*). The fenceline may represent an internal boundary associated with the Lenore Soldier Settlement, Farm G property (see *Figure 2.3*).





Photograph 3.9 View to the east of the timber fence posts

3.4 The Western Sector

The Western Sector of the study area is occupied by a caretaker, who lives permanently on-site. To the west the area is dominated by a series of high, undulating hills falling away to the east to the Ropes Creek flood plain. The area, like the Eastern Sector, is largely unoccupied, other than grazing cattle and horses. There is however, a cottage ruin and the caretaker's house, mentioned above, which was not inspected in detail during the survey and appears to be relatively modern.

The cottage ruin is located approximately 130 metres south-west of the caretaker's residence on the western slope of a hill. There are several exotic trees, including callitris and elm trees, around the cottage site (*Photograph 3.9*).





Photograph 3.9 Looking west to the Western Sector cottage ruin

The corrugated iron roof of the cottage sits above the collapsed walls and is relatively intact. The cottage had been clad in vertical timber slabs, which have also collapsed and slump down the western slope of the hill. Centrally located within the north wall is a door which may indicate a central entry. A concrete pad adjacent to the west east wall is of uncertain function but which may mark the location of a laundry or bathroom. The collapsed remains of what was presumably the chimney is at the south-east corner (*Photograph 3.10*).



Photograph 3.10 The collapsed chimney. Note rectangular frogs and sandy lime cement

A quantity of rubbish, including metal bed and furniture frames, a trampoline and a modern car engine, is scattered around the front of the cottage. This may represent discarded possessions of the last occupant, or indicate that this area has also served as a dump site.

Examination of the GoogleEarth image, made within the last three years, shows the cottage as still standing indicating that the collapse is relatively recent (*Figure 3.2*).



Figure 3.2 Detail of Google Earth image showing the cottage as standing (11.05.2007)

The remains of the cottage show evidence of maintenance and modification subsequent to its construction, such as electrical connection (*Photograph 3.11*). The use of timber slabs for the walls, the line of the roof and the frogs in the bricks, as well as the use of a lime mortar, is indicative of a possible date of 1840s–1860s for the cottage.





Photograph 3.11 Detail view of a fuse box and conduit attached to the wall slabs

Timber slab hut construction has been attributed as post-dating the Macquarie period, although Lewis suggests that it may appear earlier and becoming common by the 1820s (Lewis n.d.). Timber slab cottages were being built into the early twentieth century, and are relatively common across Australia, with known examples at Hill End in NSW, Yarra Glen in Victoria and Hahndorf in South Australia (Moore et. al. 2000:24-27). The timber for the slabs was cut and used while still green so that they tended to shrink, leaving gaps needing to be sealed, usually with rags or a mud plaster. Walls were often finished with plaster and lathe; however, calico sheets were also used as a finish to walls which were then either painted or papered. Hessian was a common material as the coarse weave was good base for wallpaper (Lewis n.d.). No evidence of an internal wall finish for the cottage ruin was noted during the survey.

As mentioned above, the roof form of the cottage is consistent with a date of 1840s– 1860s. The line and angle of the roof is consistent with the Victorian Georgian architectural style (c.1840-1890) (Apperley et. al. 1994:42–45). Stylistically the cottage form, which is likely to comprise two rooms on each side of a central hallway leading from the main entry, appears to have Georgian features rather than Victorian, which is consistent with an earlier date.

Although likely to have been present, no physical evidence of associated outbuildings was identified during the survey.

3.5 Old Wallgrove Road

The historical evidence indicates that Old Wallgrove Road was established to provide access to the Lockwood Estate in the early nineteenth century. However, the road does not appear to be mapped until the establishment of the Lenore Estate Closer Settlement where it is indicated as 'not confirmed' (see Figure 2.6 above).



The road currently branches off Wallgrove Road to the west where it travels through lands that appear largely rural. Despite the rural appearance this region is dominated by brickworks; Austral Bricks and CSR (PGH), and the Sydney West Substation. Despite this level of industrial activity, Old Wallgrove Road does not appear to have been modified to any extent in recent years.

There is little evidence for the original method of construction, though it is reasonable to assume that it was an unsurfaced dirt track leading to the Lockwood Estate until later in the nineteenth century. It was not until the end of the nineteenth century that road construction techniques became standardised; however it is unlikely the Old Wallgrove was constructed until the establishment of the Lenore Estate Closer Settlement in 1919.

The current road surface leading into the study area is in a generally poor condition. There is evidence of some 'repairs as needed' in the form of filling pot holes and possible firming of verges (*Photograph 3.12*). Within the study area the road is still little more than an unsurfaced dirt track (*Photograph 3.13*).



Photograph 3.12 View along the road to the electrical substation to the north. The Warragamba–Prospect pipeline is beyond the rise on the left



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Photograph 3.13 The road into the study area

The local environment has been modified to allow for the construction of the road by building up and cutting back sections of the land. No other evidence of roadmaking techniques apart from the laying a thin layer of asphalt, possibly over a foundation of crushed bricks, was identified. There is an indication that the asphalt surface has been upgraded within the vicinity of the electrical substation.

The Warragamba–Prospect pipeline dives under the road adjacent to the entry into the Austral Bricks quarry site (*Photograph 3.14*).



Photograph 3.14 the Warragamba-Prospect pipeline adjacent to the road

The evidence of modifications to the immediate environment, the proximity to the Warragamba–Prospect pipeline and the lack of historical evidence indicating buildings within the near vicinity of the road indicate that Old Wallgrove Road has little, if any, archaeological potential.

3.6 Conclusion

The results of the survey of the Eastern Sector indicate that there is little evidence of physical remains that can be associated with Lockwood outbuildings. Although the hillside adjacent to the site of these outbuildings has been terraced, the grass cover within this area is such that it is difficult to identify evidence of past activities, such as landscaping or the possible remains of structures. The integrity of any archaeological relics associated with Lockwood and later activities in this area is uncertain.

The survey of the Western Sector does indicate; however, that there may be archaeological remains associated with the ruined cottage site. Any relics that may be contained at this site and its immediate vicinity are likely to be relatively intact and have a high degree of integrity. This is due to the fact that, although the cottage has collapsed within the last three years, the site appears to have been left largely untouched. That the cottage appears to have been continuously occupied since its construction indicates that archaeological relics have the potential to demonstrate the history of the cottage, from the time of its construction, through its use as part of the Lenore Soldier Settlement until the recent past.

4 Archaeological Research Potential

4.1 Preamble

The archaeological resources of a site have the potential to enhance the documented history of European settlement in NSW. Archaeological resources may include stratified deposits, features and artefacts which, when analysed, can yield information about the people who lived and worked in a local area that is not available from other sources. Where the documentary resources for an area or region are scarce, the archaeological resources may be the only source of information, and as such are a valuable resource. Archaeological resources are finite and irreplaceable, it is therefore desirable that they are adequately investigated and recorded. This is particularly the case where proposed activities will remove or impact upon significant archaeological deposits and features.

An assessment of the historical documentation and physical evidence indicates that within the Oakdale study area there are areas of archaeological potential; in particular part of Johnston's Lockwood and Bayly's Razeville.

In accordance with current heritage 'best practice' guidelines the research potential of the archaeological resources within the study area is assessed here to determine the contribution that may be made by the resource to the major research questions.

4.2 Evaluation of Archaeological Research Potential

In 1984, an influential paper was published by Bickford and Sullivan, which examined the concept and assessment of archaeological research potential. The potential for archaeological resources to address Australian historical research questions was defined as a means of identifying archaeological research potential. This paper identified three questions, each of which is devised to address the ability of the archaeological resources of any site to investigate the scientific potential of the site, and how that potential can further current knowledge. The archaeological research potential of the two sites within the Oakdale study area; Lockwood and Razeville, is assessed below against the questions proposed by Bickford and Sullivan.

Can the site contribute knowledge that no other resource can?

The history of the Oakdale study area indicates that there is potential for the archaeological resources to contribute detail to the documentary resources for the history of the local area. The historical research undertaken for the study area indicates that the archaeological resources have potential to contribute to an understanding of the land management practices of the early large estates in the local area. Although the study area appears to have been relatively unchanged throughout its history, with a continuity of pastoral use, evidence of the transition from the large estates to the smaller Lenore Soldier Settlement farms may be contained in the archaeological resources.
The archaeological resources associated with Lockwood that may be contained within the study area are likely to be associated with the three structures identified on the 1919 plan, believed to be Lockwood outbuildings and possibly including a cottage.

The early history of the cottage ruin in the Western Sector of the study area is unknown, but it has been identified as having high archaeological integrity. Although timber slab cottages are not unknown in rural areas of NSW, they are rare, and any information concerning their use and method of construction would make a valuable contribution to available information. Analysis of the building itself would provide information concerning slab hut construction and, analysis of its associated archaeological resources, would provide an insight into the daily life and activities of the people who lived in the cottage. There is potential that the transition of ownership to a returned soldier may be reflected in the archaeological resources of the cottage and its environment.

This information is not available from the documentary resources for the local area.

Can the site contribute knowledge which no other site can?

The archaeological resources of other sites in the area may have the potential to provide similar information. However, excavations of comparable sites in the area are rare indicating that the archaeological resources associated with the cottage ruin and the site of the Lockwood outbuildings, in particular, have the potential to contribute information that may not be available from other sites in the local area.

The information that is likely to be provided by the archaeological resources concerns the early settlement, beginnings of pastoralism and everyday life in the area. Artefacts, deposits and features have the potential to provide insights into the minutiae of everyday life and conditions of the people who have lived and worked within the study area; how the land was modified to create a less alien environment, trade and exchange mechanisms, the constraints of living in an isolated rural environment, are aspects of life within the study area that may be answered by the associated archaeological resource.

The information provided would enhance the documentary records concerning the lifestyles and people who established pastoral settlements in the area. This site, while not unique, has the potential to contribute significantly to current knowledge concerning rural settlement in the local area, which in turn provides information concerning the early history of colonialism in general.

Is this knowledge relevant:

- to general questions about human history
- to other substantive questions relating to Australian history
- to other major research questions?

The archaeological resources associated with the study area, and the environment of the Lockwood outbuildings site and the cottage ruin, have the potential to contribute to questions concerning early settlement and land use patterns of rural Australia. The archaeological resources also have the potential to contribute to information concerning lifestyles and the transmission of goods and ideas from urban centres to isolated rural areas.

The cottage ruin may have elements of construction technology that are distinctive to the local area and that, through further investigation, would enhance knowledge concerning the development of technologies of the local area. Archaeological investigation of the study area and the cottage ruin, in particular, has the potential to reveal information concerning the lifestyle of early European settlers in the area and their interactions with the land.

The areas of archaeological sensitivity are identified in Figure 4.1



Figure 4.1 Crown Plan 3299-2030 overlay on Google Earth satellite map showing the Lockwood structures (circled in blue), three of which in allotment 82, are within the study area, in relation to the dam site. Also circled, is the timber slab cottage on Razeville.

4.3 Assessment of the Research Potential of the Study Area

The integrity of the archaeological resources contained within the Oakdale study area are likely to be variable.

Archaeological features and relics associated with Lockwood and the development the site as a part of a large estate belonging to the Johnston family, and later incorporated into the Lenore Soldier Settlement as Farm G, would be a valuable resource; however, the integrity of the archaeological resource is uncertain. This uncertainty is due to the unknown extent of landscape modifications in this area, either associated with Farm G, or with subsequent land management practices. Due to the uncertain integrity of

the archaeological resources, the research potential of the part of Lockwood within the Oakdale study area is assessed as being **moderate to low**.

The integrity of the ruined timber slab cottage, and its environment, is likely to be high, as the area appears to have remained largely unmodified. There is therefore, potential for physical evidence concerning the possible configuration and use of outbuildings associated with the cottage, which would make an important contribution to an understanding of the local land use practices. Archaeological relics within the cottage site have the potential to make a contribution to an understanding of interactions, the constraints and demands of life within the local rural area. The artefact assemblage has the potential to reflect changes in land use practices with the transition from a large estate to its association with Farm D, and occupation to the present day.

The archaeological research potential associated with the cottage ruin, within its local environment, is assessed as being **high** for the contribution that can be made to our understanding of colonial settlement patterns within a rural environment, the mechanisms of trade in response to domestic and social requirements and how adaptations to the new environment were achieved.

It is unlikely that archaeological relics, features or deposits associated with the Kable estate, or the Warragamba–Prospect Pipeline, where present, would contribute to information not already available. It is also unlikely that any archaeological resources associated with the Kable estate would contribute information that is not available from the two areas of identified archaeological sensitivity; the environments of the Lockwood outbuildings and the timber slab cottage.

5 Assessment of Significance

5.1 Preamble

The physical evidence of past activities is a valuable resource that is embodied in the fabric, setting, history and broader environment of an item, place or archaeological sites and, the response that it evokes in the community. The value of this resource to the community can be evaluated by assessing its cultural heritage values. 'Cultural significance' and 'heritage value' are terms used to express the intangible values of a place to the community. Assessment provides a tool for identifying and understanding the tangible and intangible values that are embodied in that item or place. Assessment will also provide the framework on which the development of management strategies to protect the item or place for future generations is based.

Seven criteria developed by the NSW Heritage Office (now Heritage Office, Department of Planning) were designed to assess and identify the heritage significance of items, places and archaeological sites in NSW. An item will be considered to be of State (or local) significance if, in the opinion of the Heritage Council, it meets one or more of the following criteria.

5.2 Assessment against Criteria

Criterion a) an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)

The archaeological resources of the Oakdale study area; the site of the Lockwood outbuildings and the ruined cottage, are demonstrative of the early settlement and land use patterns in the local area. The historical development of the study area, from large estates to subdivisions associated with the Lenore Soldier Settlement, has importance to the development and history of the local region.

Criterion b) an item has 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 cultural or natural history of the local area)

Part of the Oakdale study area has an association with the Johnston's of Lockwood, one of the first families to develop the area for agricultural and pastoral use.

The study area has a more tenuous association with Henry Kable, of Underwood Lord and Kable, and Richard Jones, merchant, magistrate, bank director and member of the Legislative Council.

The post WWI subdivisions of the Oakdale study area, and establishment of small farm holdings for returned soldiers, is an important part of the development of the local area.

The requirements of this criterion are not fulfilled.

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 Oakdale study area is not considered to demonstrate outstanding design or aesthetic qualities. The archaeological resources of the Oakdale study area are demonstrative of the characteristics of early and pastoral settlement and land use patterns.

The requirements of this criterion are not fulfilled.

Criterion d) an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons

The archaeological resources of the Oakdale study area are not considered to have social, spiritual or cultural associations that are likely to be highly valued by the local community.

The requirements of this criterion are not fulfilled.

Criterion e) an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)

The archaeological resources associated with the site of the Lockwood outbuildings have the potential to make a contribution to the available documentation for the area, as they relate to the land use practices of the early large estates, and the development of these estates as small farms for use by returned soldiers. However, these archaeological resources are believed to be of uncertain integrity.

The archaeological resources associated with the site of the timber slab cottage are likely to have a high degree of integrity and as such, have the potential to make an important contribution to an understanding of the historical development of the local area. The artefact assemblage associated with the cottage has the potential to provide information concerning the lives of the people who lived and worked on the Razeville estate, and the Lenore Soldier Settlement. Information concerning the constraints of life in an isolated rural environment and the mechanisms of trade in response to domestic and social requirements has the potential to be provided by an investigation of the archaeological resources of this site.

Criterion f) an item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)

The archaeological resources, and the evidence of modifications to the landscape of the Oakdale study area, are representative of similar landscapes in rural environments and do not demonstrate rare or endangered aspect of Australia's natural or cultural history.

The requirements of this criterion are not fulfilled.

Criterion g) an item is important in demonstrating the principal characteristics of a class of NSW's Cultural or natural places or environments (or in the local area)

The archaeological resources of the Oakdale study area are demonstrative of a modified landscape type that characterises early settlement and land use patterns in NSW and the desire to create a tame 'European' environment.

The requirements of this criterion are not fulfilled.

5.3 Historic Themes

In addition to the evaluation criteria, the national and state government authorities have developed a series of Historic Themes to provide a framework for understanding the significance of a place. The major historic themes that are identified as applying to the Oakdale area are provided in *Table 5.1* below:

 Table 5.1
 Oakdale study area historic themes

Australian Theme	NSW Theme	Local Theme
3. Developing local and	Agriculture and Pastoralism	Land management practices of the
regional economies	-	large estates and the Lenore Soldier
		Settlement
4. Building settlements,	Land tenure	Adapting to and modifying a new and
towns and cities		alien environment
		Subdivision patterns and land use
		practices associated with the Lenore
		Soldier Settlement
8. Developing	Domestic life	Adapting to the constraints of life and
Australia's cultural life		work on the outskirts of the primary
		settlement areas of Sydney and
		Parramatta

5.4 Summary Statement of Significance

The archaeological resources of the Oakdale study area; associated with the site of the Lockwood outbuildings and the site of the timber slab cottage, have potential to make an important contribution to the available documentation for the local area.

The archaeological resources associated with the site of the Lockwood outbuildings are believed to be of uncertain integrity, and as such have **moderate** significance for their potential to make a contribution to an understanding of the land use practices of the early large estates and the development of these estates as small farms for use by returned soldiers.

The archaeological resources of the site of the timber slab cottage have **high** significance for their integrity and potential to make an important contribution to information concerning the lives of the people who lived and worked on the Razeville estate, and the Lenore Soldier Settlement. Information concerning the constraints of daily life in an isolated rural environment and the mechanisms of trade in response to domestic and social requirements has the potential to be answered by an investigation of the archaeological resources of this site.

6 Warragamba–Prospect Pipeline Heritage Impact Assessment

6.1 The Current Proposal

The Oakdale Concept Plan includes the potential provision of regional rainwater harvesting infrastructure from the site to feed into Prospect Reservoir. The infrastructure would comprise two trunk main pipelines located within the Warragamba–Prospect pipeline corridor. The proposed pipelines would feed directly into the Prospect Reservoir infrastructure. The 675 mm pipelines are to be located between the existing Warragamba–Prospect pipeline, adjacent to the extant service access road, on previously cleared ground. The design for the pipeline has not yet been finalised, and it has yet to be determined whether it will be above- or below-ground.

The proposed pipeline will extend between Mamre Road to the west and Ferrers Road to the east. Prospect Reservoir is included on the State Heritage Register (SHR) and, as indicated in *Figure 6.1*, Ferrers Road forms the western edge of the SHR curtilage.



Figure 6.1 The Prospect Reservoir SHR curtilage as indicated on the Sydney Water Inventory for the reservoir

6.2 Assessment of Heritage Impact

This Section of the report assesses the impact of both options on the heritage significance of the Warragamba–Prospect pipeline.

The following aspects of the proposal respect or enhance the heritage significance and environmental values of the Warragamba–Prospect Pipeline for the following reasons:

- Construction of two water pipelines, in association with the proposed Oakdale Concept Plan and whether above- or below-ground, to carry rainwater additional to the extant pipeline will extend the water carrying function within the Warragamba–Prospect pipeline curtilage. The technical and historic significance of the pipeline is enhanced, maintained and continued unimpeded.
- Construction of an additional pipeline, whether above- or below-ground, to carry rainwater in parallel with the extant Warragamba–Prospect pipeline is consistent with the environmental values and respects the heritage significance of the operational pipeline and its curtilage.

The following aspects of the proposal could detrimentally impact on the heritage significance of the Warragamba–Prospect Pipeline for the following reasons:

- Construction activities associated with the new pipeline adjacent to the extant Warragamba–Prospect Pipeline, whether above- or below-ground, have the potential to detrimentally impact the extant pipeline. Excavations for stanchions or for trenches will impact the aesthetic values of the Warragamba– Prospect pipeline environment; however, this would be a short term impact. Landscape rehabilitation would follow finalisation of the new pipeline construction.
- Construction activities associated with the new pipeline adjacent to the extant Warragamba–Prospect pipeline, whether above- or below-ground, have the potential to expose relics associated with earlier occupation and activity in the area. However, it is unlikely that archaeological relics, features or deposits associated with the Warragamba–Prospect Pipeline or earlier occupation and activity in the area, where present, would contribute to information not already available from other sources.
- Construction of an additional pipeline to carry harvested rainwater has the potential to have an adverse impact on the state significance of Prospect Reservoir. However, the proposed water harvesting infrastructure and associated pipeline is to be constructed outside the Prospect Reservoir SHR curtilage. The proposal is also consistent with the water storage function of the reservoir.

The following sympathetic solutions have been considered and discounted for the following reasons:

The Oakdale Concept Plan is at an early phase, and the preferred option has not yet been determined. Consultation with the Sydney Catchment Authority during the design phase will ensure that there are no adverse impacts on the fabric of the extant pipeline. There should be no long-term adverse impacts arising from the construction of either option for the new pipeline adjacent to the extant Warragamba–Prospect pipeline.

6.3 Statement of Heritage Impact

The Warragamba–Prospect pipeline is included on the SCA Draft Heritage and Conservation Register (Section 170 Register). The pipeline has an association with both Warragamba Dam and Prospect Reservoir and, as such is a vital part of the Sydney water supply system. Prospect Reservoir has identified heritage value to the people of NSW.

The current proposal associated with the Oakdale Concept Plan for the construction of a new pipeline to carry rainwater, will not impact on the essential function of the Warragamba–Prospect pipeline or Prospect Reservoir. The proposal to construct a new pipeline adjacent to the extant pipeline will enhance this essential function by adding the parallel carriage of harvested rainwater. This adds to and enhances the historic heritage values of the Warragamba–Prospect pipeline and the water storage function of the Prospect Reservoir.

7 Heritage Management Strategy

7.1 The Current Proposal

The Oakdale study area is to be developed by Goodman for industrial/commercial purposes. The development will primarily involve the construction of warehouses and other facilities; the installation of large hardstand areas to allow for heavy vehicle access associated with the installation, and operations of essential infrastructure associated with the proposed development. As discussed above, the proposal includes the potential provision of regional rainwater harvesting infrastructure from the site to feed into Prospect Reservoir via two trunk main pipelines located within the Warragamba–Prospect pipeline corridor.

It is proposed that the site is developed in a staged manner, with the areas to the east of Ropes Creek likely to be developed first. The existing Austral quarry site to the east would be developed only following the cessation of quarrying and rehabilitation of the site (as discussed in Section 1.2, the quarry site has not been assessed in any detail in this report).

Although details concerning the proposed development are yet to be finalised, it is believed that modifications to the local environment will include excavation, which has the potential to have an adverse impact on the archaeological resources of the study area and may destroy all the archaeological resources of the Oakdale study area.

7.2 Managing the Archaeological Resources

Although Prospect Reservoir is included on the SHR, the Warragamba–Prospect pipeline is the only previously identified heritage item within the Oakdale study area.

However, identification of significant archaeological resources, within the Oakdale study area, in this report means that these should be managed to ensure that they are protected and conserved appropriately, and that the contribution they can make to an understanding of the historic development of the local area is not lost. The archaeological resources contained in the Oakdale study area are identified as:

- The site of the timber slab cottage has been assessed as having high archaeological research potential and high significance.
- The Lockwood outbuildings site, within the Oakdale study area, has been assessed as having moderate to low archaeological research potential and moderate significance.
- Archaeological resources associated with the part of the Kables estate that is within the study area may have some potential to make a contribution to an understanding of the historical development of the local area.
- The curtilage of the Warragamba–Prospect pipeline is unlikely to contain archaeological resources that would contribute to the available information concerning the prevailing pre- construction environment or associated with its construction.

Construction activities associated with the proposed development of the Oakdale study area is likely to include extensive excavation and modification of the local environment. Such activities have the potential to cause the loss of its archaeological resources.

This section of the report outlines the management strategy for the archaeological resources of the Oakdale study area; an archaeological Research Design.

A Research Design proposes questions that have been developed to extract the maximum research value from the archaeological resource. In this way the destruction of the archaeological resources is mitigated, in part, by the information gained, and which can make a contribution to the historical record of the Oakdale study area.

7.2.1 Archaeological Research Themes

The aim of the research questions that have been developed for the Oakdale study area is to focus on the potential ability of the archaeological resources to make a contribution to an understanding of the history of the local area. The questions are derived from the historic themes identified as applying to the Oakdale study area, and have been developed to provide a local focus for an archaeological investigation of the site that can be translated to the broader thematic questions concerning the history of settlement and everyday life in NSW (see *Table 5.1*):

Historic Theme 1: Developing local, regional and national economies — Agriculture and Pastoralism – Land management practices of the large Estates and the Lenore Soldier Settlement

Research Question 1: Questions regarding the nature of evidence for the development of the study area, from the early nineteenth century into the twentieth century, may be answered by investigation of the archaeological resources of the study area. Changes in land use practices on the large pastoral estates, and how land management practices may have changed with the establishment of the Lenore Soldier Settlement, have the potential to be answered by the archaeological resources of the site.

The information provided by the archaeological resources of the Oakdale study area, has the potential to make a contribution to an understanding of the early historic development and land use patterns of the local area.

Historic Theme 2: Building settlements, towns and cities — Land tenure – Adapting to and modifying a new and alien environment. Subdivision patterns and land use practices associated with the Lenore Soldier Settlement.

Research Question 2: Questions regarding adaptations and modifications of the landscape may be answered through investigation of the archaeological resources of the Oakdale study area.

Technical modifications and construction techniques, in response to the constraints of living and working in an isolated rural environment, may be reflected in the artefact

assemblage of the study area. Such evidence would provide an insight into the mechanisms of adaptation to the alien environment of the colonial landscape.

The archaeological resources associated with the Lockwood outbuildings site, within the Oakdale study area, have the potential to contribute to an understanding of the early land use practices, and changes in practice, following the establishment of the Lenore Soldier Settlement. Investigation of the remains of the timber slab cottage also has the potential to provide information concerning construction technologies that may be specific to the local area.

Contemporary variations in land use practices may be reflected in comparisons between the artefact assemblage associated with the Lockwood and Razeville estates. Questions that may be answered would be associated with differences between the assemblages associated with use of the estate as the primary residence (Lockwood) and where the estate may have been leased, as at Razeville.

Historic Theme 3: Developing Australia's cultural life — Domestic life – Adapting to the constraints of life and work on the outskirts of the primary settlement areas of Sydney and Parramatta

Research Question 3:

Questions concerning the constraints of living and working beyond the major urban centres would be answered by the archaeological resources of the sites of the Lockwood outbuildings and the timber slab cottage. The mechanisms of life in rural areas, how the artefacts of everyday life differ from those in the major urban centres, changes in social status and gender differentiation, are issues that could be answered by the archaeological resources of the Oakdale study area.

Changes in domestic organisation following the establishment of the Lenore Soldier Settlement are likely to be reflected in the artefact assemblages associated with the different areas of archaeological sensitivity within the Oakdale study area.

7.3 Managing Impact

7.3.1 Preamble

The archaeological resources of the Oakdale study area have been assessed as having the potential to make an important contribution to an understanding of the development of the local area from the establishment of the large estates to its development as part of the Lenore Soldier Settlement following WWI. The research potential, and the heritage significance, of the potential archaeological resources have been assessed to have local significance.

The primary heritage values of the Oakdale study area are embodied in the ability of the associated archaeological resources to enhance what is known concerning the development and history of this local area. Excavation of the archaeological resources and conservation of the extant original fabric of the cottage ruin may be a preferred heritage outcome; however, these are not the only means by which the heritage values of the study area can be identified and conserved. The management of the archaeological resources of the Oakdale study area need to take into consideration the future requirements of a large industrial development, while at the same time conserving the heritage values of the archaeological resource. Until the design and layout of the infrastructure for the proposed development have been finalised, an appropriate archaeological strategy cannot be developed. However, the following management options have been developed to inform and provide guidance to the future direction of the proposed development.

7.4 Management Options

Option 1: Do Nothing

Should the preferred option be to 'do nothing'; to leave the archaeological resources buried, the two identified archaeological sites; the Lockwood outbuildings site and the site of the timber slab cottage ruin, the minimum heritage requirement would be that the sites are excised from the development proposal, and enclosed within permanent protective fencing.

However, as this option places constraints on the proposed development, and does not allow for use of the site as a whole for industrial uses, it is unlikely to be feasible. This option also raises questions as to the appropriate treatment, management and conservation of the timber slab cottage ruin.

This option would not result in a good heritage outcome and is not recommended.

Option 2: In situ Conservation

During site preparation, associated activities within the Lockwood outbuildings site and the timber slab cottage site should be supervised by an archaeologist. The nature, integrity and significance of any exposed archaeological structures, deposits and/or relics associated with these structures should be assessed by the archaeologist, to determine their potential for in situ conservation, interpretation and protection. The in situ conservation of structural remains, and other archaeological features would provide an opportunity for ensuring that the historical development of the local area is understood with appropriate interpretation.

A detailed approach for in situ conservation and interpretation of the archaeological sites, and a conservation strategy for the timber slab cottage, should be developed in conjunction with the final design for the proposed development.

Option 3: Open-area Excavation

Prior to activities associated with the proposed development of the Oakdale study area, the Lockwood outbuildings site should be the subject of archaeological testing. This would entail excavation of one or more strategically located test trenches to determine the extent and integrity of the archaeological resources associated with these structures.

Should the archaeological test trenches expose intact archaeological features, deposits and relics with the potential to make a substantive contribution to knowledge of the

historical development of the local area, and the site is assessed as having the potential to contain extensive remains, consideration should be given to archaeological excavation of the site in its entirety.

The site of the timber slab cottage should be addressed in the same way. However, excavation of the site should be preceded by the supervised dismantling, and recording, of the timber slab cottage. Analysis of the information provided by the dismantling process would contribute to an understanding of the date of construction, construction techniques and modifications to the cottage in response to changing technologies and the introduction of new services (such as electricity, water etc). An archaeological excavation of the cottage site, following its dismantling, has the potential to make an important contribution to our understanding of the conditions and daily lives of the people who lived in the house from its construction to abandonment.

Interpretation of the site and its history, incorporating the information and artefacts, should be a consideration for the final design of the proposed development.

8 Conclusion and Recommendations

8.1 Preamble

This section provides recommendations on the way that the options presented in the preceding section may be implemented. In undertaking these actions Goodman will ensure that the archaeological research potential of the Oakdale study area is recognised and conserved.

Recommendation 1

That this report is submitted to the Department of Planning as supporting documentation to the application under Part 3A of the Act for the proposed Oakdale development.

Recommendation 2

That Goodman should determine the preferred approach for the proposed pipeline to be constructed within the curtilage of the Warragamba–Prospect pipeline in consultation with the Sydney Catchment Authority, to ensure that there are no adverse impacts on the fabric of the pipeline.

Recommendation 3

That should the final design for the proposed pipeline determine that it is to be buried, it is understood that there are no constraints with regard to potential historical archaeological relics.

Recommendation 4

That the important contribution that can be made to current available information by the archaeological research potential of the Lockwood outbuildings site, and the site of the timber slab cottage, should be recognised and appropriately managed as part of the Project Concept Plan for the Oakdale study area.

Recommendation 5

That the timber slab cottage ruin should be recorded and dismantled under the supervision of an archaeologist, or appropriately trained heritage consultant, during the design stage of the proposed development. The information gained from this work would make an important contribution to current information concerning timber slab construction techniques.



Recommendation 6

That a strategy for the protection and interpretation of the archaeological resources of the Oakdale study area should be integrated into the final Project design. Such a strategy should consider:

- Archaeological test excavation of the Lockwood outbuildings site to precede open area excavation, where intact and significant archaeological resources are exposed and identified;
- Excavation of the archaeological resources associated with the site of the timber slab cottage, subsequent to its staged removal; and
- In situ conservation of relics where this is identified as an appropriate heritage strategy, for exposed archaeological relics associated with the Lockwood outbuildings site and/or the timber slab cottage site.

The archaeological resources are integral to the heritage values of each of these sites and must be conserved and protected. The aim of an archaeological investigation of the Oakdale study area is to recover and record archaeological features, deposits and relics that will be impacted by the proposed development. The proposed archaeological strategy should be undertaken in accordance with and to address the research questions identified above.

Recommendation 7

That an interpretation strategy should be developed for the Oakdale study area archaeological resources to ensure that the developmental history of the site, from the period of large estates to the subdivisions of the Lenore Soldier Settlement, is acknowledged.

9 References

9.1.1 Primary Sources

'October 11-12 1821'. Macquarie's Memoranda, p174. ML Manuscript card catalogue A772

'28 March 1814'. Bigge, J. T. Report, App. p1318-1321. ML Manuscript card catalogue under George Johnston (Jnr).

'1 March 1819'. Wentworth Papers, p1a-1h. 'Letter from Geo. Johnston Jnr to W. C. Wentworth'. ML Manuscript card catalogue, Wentworth Papers: A757.

'28 April 1814'. G. D. vol 1, p210-211. Appointment to Commissariat. ML Manuscript card catalogue George Johnston (Jnr).

'17 July 1819'. NSW Government and General Orders, 72 – Proclamations original transferred to archives. Superintendent to Government Herd and Flocks. ML Manuscript card catalogue George Johnston (Jnr). Mitchell Library Ref #CY 986 microfilm

'19 February 1820'. Governor Macquarie's Diary, p104-105. Death of George Johnston Junior. ML Manuscript card catalogue George Johnston (Jnr). Mitchell Library Ref#A774.

'22 February 1820'. Governor Macquarie's Diary, p105. Burial of George Johnston Junior. ML Manuscript card catalogue George Johnston (Jnr). Mitchell Library Ref#A774.

'28 February 1820'. Macarthur Papers, vol 3, p29. George Johnston Junior died at Cow pastures while taming wild cattle. ML Manuscript card catalogue George Johnston (Jnr). Mitchell Library Ref#A2899.

Indenture to lease 100 acres of land, Robert Johnston, David Johnston and Thomas Raine to Charles Shewell, dated 14 October 1826. Norton Smith & Co. Documents Miscellaneous Deeds J-K, No. 66. ML Manuscript card catalogue.

Penrith City Council Rates books, (1935) Valuation List. Valuation numbers 1210-1624

Smee, C. J and Provis, J. S. 1981. The 1788 – 1820 Association's Pioneer Register (2nd Ed), vol 1. The 1788-1820 Association : Sydney

Watson, F. 1914-1925. Historical Records of Australia (HRA). Series 1, Volume X. Library Committee of the Commonwealth Parliament : Sydney

9.1.2 Secondary Sources

Anon. undated. Johnston and Weston Family Tree. Johnston George (see also Weston and Perry) and Horsley Homestead vertical file, Fairfield City Museum and Gallery.

Apperley, R., Irving, R. and Reynolds, P. 1994. A Pictorial Guide to Identifying Australian Architecture. Styles and Terms from 1788 to the Present. Angus & Robertson, Sydney.

Bickford, A. and Sullivan, S. 1984. "Assessing the significance of historic sites". In S. Sullivan and S. Bowdler Site Surveys and Significance Assessment in Australian Archaeology, pp.19-26.

Casey & Lowe, 2002. Non-Indigenous Heritage Study: SEPP 59 Lands, Eastern Creek, Strategic land Use Study.

Hainsworth, D. R. 1967. 'Kable, Henry (1763-1846)', Australian Dictionary of Biography, vol 2, Melbourne University Press: Melbourne pp31-32

HLA-Envirosciences Pty Ltd. 2004 Non-Indigenous Heritage Assessment: Erskine Park Development Lands.

Lewis, M. n.d. Australian Building – a cultural investigation Available at http://www.abp.unimelb.edu.au/staff/milesbl/australian%20building/pdfs/1.00.pdf

McMahon, J. 2006. 'Not a rum rebellion but a military insurrection', in Journal Royal Australian Historical Society (JRAHS) volume 92, part 2: pp125-144

Moore, R., Burke, S. and Joyce, R. 2000. Australian Cottages. Hamlyn Australia, Port Melbourne.

Nicholaidis, G. 2000. Eastern Creek and Land Settlers. Blacktown City Council: Blacktown

NSW Heritage Office & DUAP. 1996. NSW Heritage Manual. NSW Heritage Office and Department of Urban Affairs and Planning: Sydney

NSW Heritage Office. 2001. Assessing Heritage Significance. NSW Heritage Office: Sydney

NSW Heritage Office & DUAP. 1996. Archaeological Assessment Guidelines. Heritage Office and Department of Urban Affairs and Planning: Sydney

Roberts, A. 1972 (reprinted 1993). Annandale's Johnston Era. LHJ No 2, Pp 20-34

Rosen, S. 1996. Bankstown: A Sense of Identity. Hale and Iremonger: Sydney

Symes, J. G. 1990. The Castle Hill Rebellion of 1804 (revised edition with supplement). Hills District Historical Society Inc: Belrose

Thorp, W. 1986. 'Historical Archaeological Component' in Fox and Associates. 1991. Heritage Study of the city of Penrith, Volume 2, Appendix D. Unpublished report to Penrith City Council.

Vance. G. 1991 (2nd Ed). Fairfield: A history of the District. Council of the City of Fairfield: Sydney

Yarwood, A.T. 1967. 'Johnston, George (1764-1823)', Australian Dictionary of Biography, vol 2. Melbourne University Press: Melbourne, p20-22

Yarwood, A. T. 1967. 'Johnston, George (1790-1820)'. Australian Dictionary of Biography, vol 2. Melbourne University Press: Melbourne, p22