

ARCHAEOLOGICAL ASSESSMENT
CENTRAL PRECINCT
ST MARYS DEVELOPMENT
ST MARYS, N.S.W



for

Maryland Development Company

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Report Register

The following report register documents the development of the report *Archaeological Assessment, Central Precinct, St Marys Development, St Marys*.

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EXECUTIVE SUMMARY

BACKGROUND AND AIMS OF REPORT

This report presents a archaeological assessment of non-indigenous heritage issues associated with the Central Precinct, St Marys Development. The focus of the assessment is Site 3, the only heritage site within the Central Precinct. It is a subsidiary site to Site 1, Dunheved Homestead Site, the main archaeological site identified as part of the original 1994 survey work and now part of the Regional Park. This report is designed to comply with requirements of the Heritage Branch, Department of Planning and requirements under SREP 30.

RESULTS

- Site 3 is a brickmaking area associated with the building and development of Dunheved homestead.
- Site 3 appears to be in use intermittently from c1807 to the 1860s for brickmaking.
- Site 3 has the potential to contain remains of two or more brick clamp kilns and associated evidence for brickmaking activities.
- Site 3 is a rare type of archaeological surviving on the Cumberland Plain and has been identified as being part of the State significance of Dunheved.
- These remains are protected by the relics' provision of the NSW *Heritage Act* and any works in this area will require approval under the relics' provisions and SREP 30.

RECOMMENDATIONS

The following recommendations are based on the analysis of heritage significance outlined above, the statement of significance and the *Burra Charter* of Australia ICOMOS.

1. Any disturbance of archaeological remains will require an approval from the NSW Heritage Office and relevant council under SREP 30.
2. The management of the archaeological resource as part of the design process for the Proposed open space requires a detailed GIS survey as a basic requirement. This needs to be undertaken in consultation with Casey & Lowe. Identification of other brickmaking activities may be made during the survey.
3. The design for the open space area proposed to incorporate Site 3 may require a Statement of Heritage Impact to be written identifying the proposed impacts and any archaeological and statutory requirements.
4. It may be necessary to record and remove some remains at the site so that the main concentration of brickmaking activity can be left relatively undisturbed. Any such proposals would require a Statement of Heritage Impact and then an application to the Heritage Branch, Department of Planning.
5. The brickmaking activity should be interpreted within the proposed open space area. It should discuss the various stages of brickmaking, the role it played in the Dunheved estate, how brickmaking on site was once part of most colonial estates and interpret the site within its landscape context.
6. The results from any recording program should be incorporated into an overall interpretation strategy for the Central Precinct and the Regional Park (subject to PoM).

EXECUTIVE SUMMARY

| | |
|---|-----------|
| 1.0 Introduction | 1 |
| 1.1 Background | 1 |
| 1.2 Central Precinct | 2 |
| 1.3 Purpose of this report | 3 |
| 1.4 Previous Reports | 5 |
| 1.5 Structure of Report | 5 |
| 1.6 Statutory Constraints | 5 |
| 1.7 Study Area..... | 9 |
| 1.8 Methodology | 9 |
| 1.9 Limitations | 9 |
| 1.10 Authorship..... | 9 |
| 1.11 Acknowledgements | 9 |
| 1.12 Abbreviations | 9 |
| 1.13 List of Illustrations | 10 |
| 2.0 Historical Background | 12 |
| 2.1 Background | 12 |
| 2.2 Introduction to the King family farms..... | 12 |
| 2.3 ‘Elizabeth Farm’ and its relation to the rest of ‘Dunheved’ | 20 |
| 2.4 Need for brickmakers by the ‘Dunheved’ Concern..... | 26 |
| 2.5 Brickmaking on Nineteenth-Century ‘Dunheved’ | 34 |
| 3.0 Site 3 – Archaeological Evidence | 40 |
| 3.1 Site 3 – Elizabeth Farm | 40 |
| 3.2 Possible Uses for Bricks Manufactured on Elizabeth Farm | 47 |
| 3.3 Layout of Brickmaking at Site 3 | 47 |
| 3.4 Heritage Significance | 47 |
| 4.0 Development Impacts within the Central Precinct | 52 |
| 4.1 Proposed Impacts on Site 3 | 52 |
| 4.2 Preliminary Management of Impacts on Site 3 | 52 |
| 5.0 Results and Recommendations | 53 |
| 5.1 Results | 53 |
| 5.2 Recommendations | 53 |
| 6.0 Bibliography | 54 |
| 6.1 Bibliography..... | 54 |

Appendix

Appendix 1: Brickmaking and its Historical Development in NSW

Central Precinct St Marys Development

1.0 Introduction

1.1 Background

The former Australian Defence Industries (ADI) site at St Marys was endorsed by the NSW Government for inclusion on the Urban Development Program (UDP) in 1993. The site is presently owned by Maryland Development and is being jointly developed by ComLand Limited and Delfin Lend Lease Development Pty Limited through their joint venture company, Maryland Development Company.

The site is located approximately 45 km west of the Sydney CBD, 5 km northeast of the Penrith City Centre and 12 km west of the Blacktown City Centre. The main western railway line is located approximately 2.5km south of the site. The Great Western Highway is located another 1 km south and the M4 Motorway a further 1.5 km south.

The overall site, which has been rezoned for a variety of uses, comprises six development ‘precincts’, namely the Western Precinct, Central Precinct, North and South Dunheved Precincts, Ropes Creek Precinct and Eastern Precinct. The boundaries of the precincts within the site that are available for development are shown on **Figure 1.1**.



Figure 1.1: St Marys Development precincts.

Because the St Marys site straddles the boundary between two local government areas (i.e. Blacktown and Penrith), the State Government decided that a regional environmental plan should be prepared to guide and control future development of the land. Technical investigations into the environmental values and development capability of the land were commenced in 1994, and Sydney Regional Environmental Plan No. 30 – St Marys (SREP 30) was subsequently gazetted in January 2001.

SREP 30 is the main statutory planning framework document for the St Marys site. It contains planning principles, objectives and provisions to control development. The overarching aim of SREP 30 is to provide a framework for the sustainable development and management of the site. It is supported by a “Structure Plan” which identifies indicative locations for retail centres, drainage basins, designated road corridors through regional park areas, and areas in which land filling is potentially permitted.

SREP 30 is accompanied by the St Marys EPS which identifies the aims for the future use and management of the site and sets out specific performance objectives and strategies to address key planning issues, including: conservation, cultural heritage, water and soils, transport, urban form, energy and waste, human services, employment and remnant contamination risk.

The St Marys EPS identifies actions to be undertaken by local and State governments, as well as the obligations of developers. A Deed of Agreement was entered into in December 2002 between the joint venture developer and the NSW Government setting out the developer’s and State Government’s responsibilities in providing services and infrastructure.

SREP 30 requires the development control strategies contained within the St Marys EPS to be taken into account in any development proposals for the St Marys site.

It also requires that a Precinct Plan be adopted by Council prior to any development taking place. Planning for any precinct is to address all of the relevant issues in SREP 30 and the St Marys EPS, including preparation of management plans for a range of key issues.

On 29 September 2006 the Minister for Planning declared the Western, Central and Ropes Creek Precinct Plans to be release areas, paving the way for the preparation of a ‘Precinct Plan’ for these areas. This report has been prepared in support of the Central Precinct Plan.

1.2 Central Precinct

Central Precinct is bounded on three sides by the Regional Park and the suburbs of Werrington Downs and Werrington County (Fig. 1.1). The land within the Central Precinct is currently zoned part Urban and part Employment. Under a current draft amendment to SREP 30, this zoning will remain although the size of the Employment zone will be increased and located in the northern part of the precinct. In accordance with this zoning, it is proposed to develop the Central Precinct for a range of uses including residential, employment, commercial/retail, community uses and open space (Fig. 1.2).

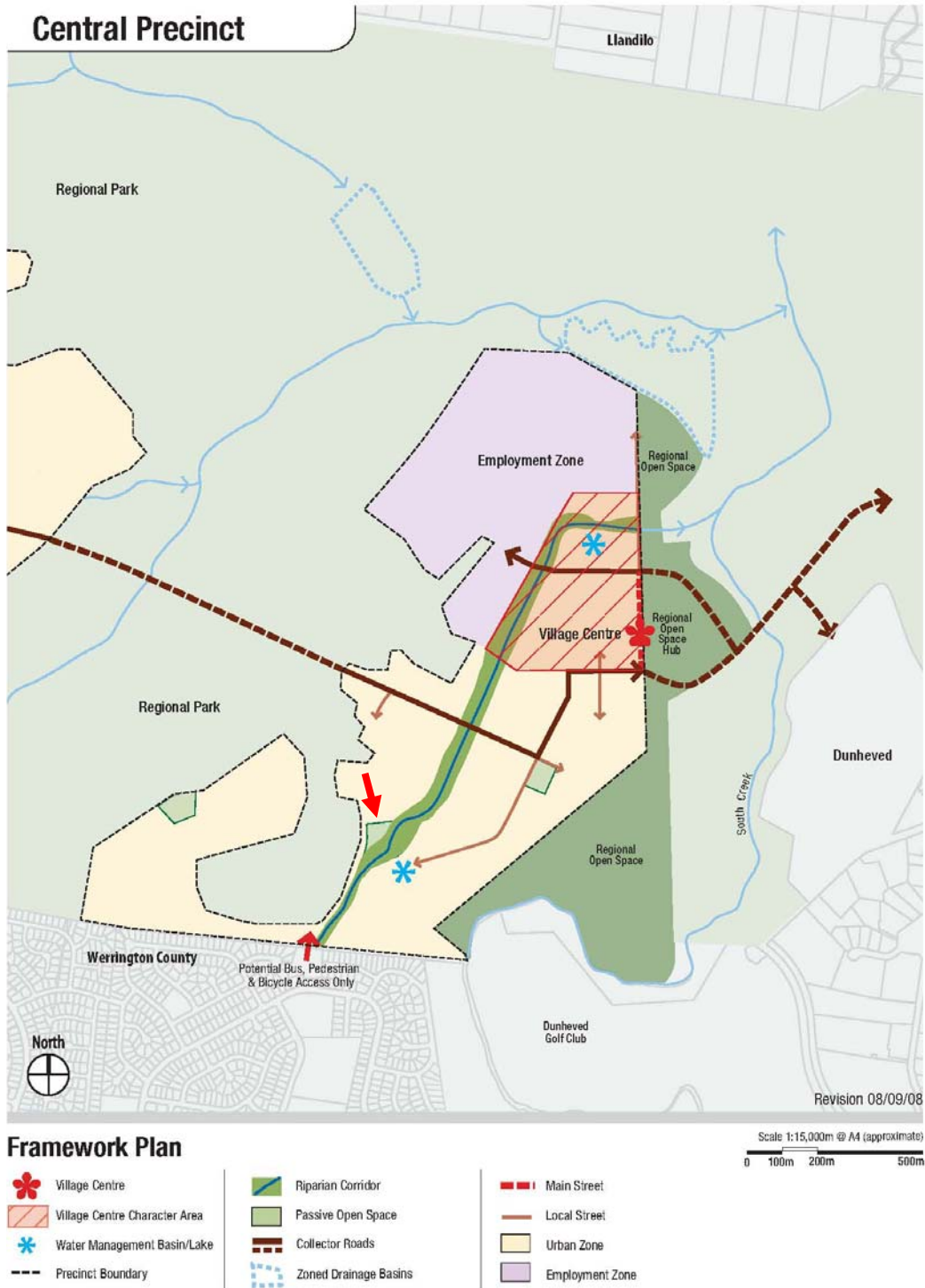


Figure 1.2: Central Precinct Framework Plan. Site 3 is located within the proposed open space (red arrow).

1.3 Purpose of this report

This report has been prepared in accordance with the requirements of SREP 30 and the St Marys EPS, and addresses all relevant legislation.

It supports the draft Precinct Plan for the Central Precinct and has been prepared to assist in determining the proposals for, and the planning principles, strategies and development controls that will guide the future development of all land within the Central Precinct in an integrated manner.

While the focus of the report is on the Central Precinct, the investigations carried out have taken into account the following:

- Relationship of the future development within the Precinct to the adjoining Regional Park.
- Future integration with the balance of the site and the existing surrounding neighbourhoods.

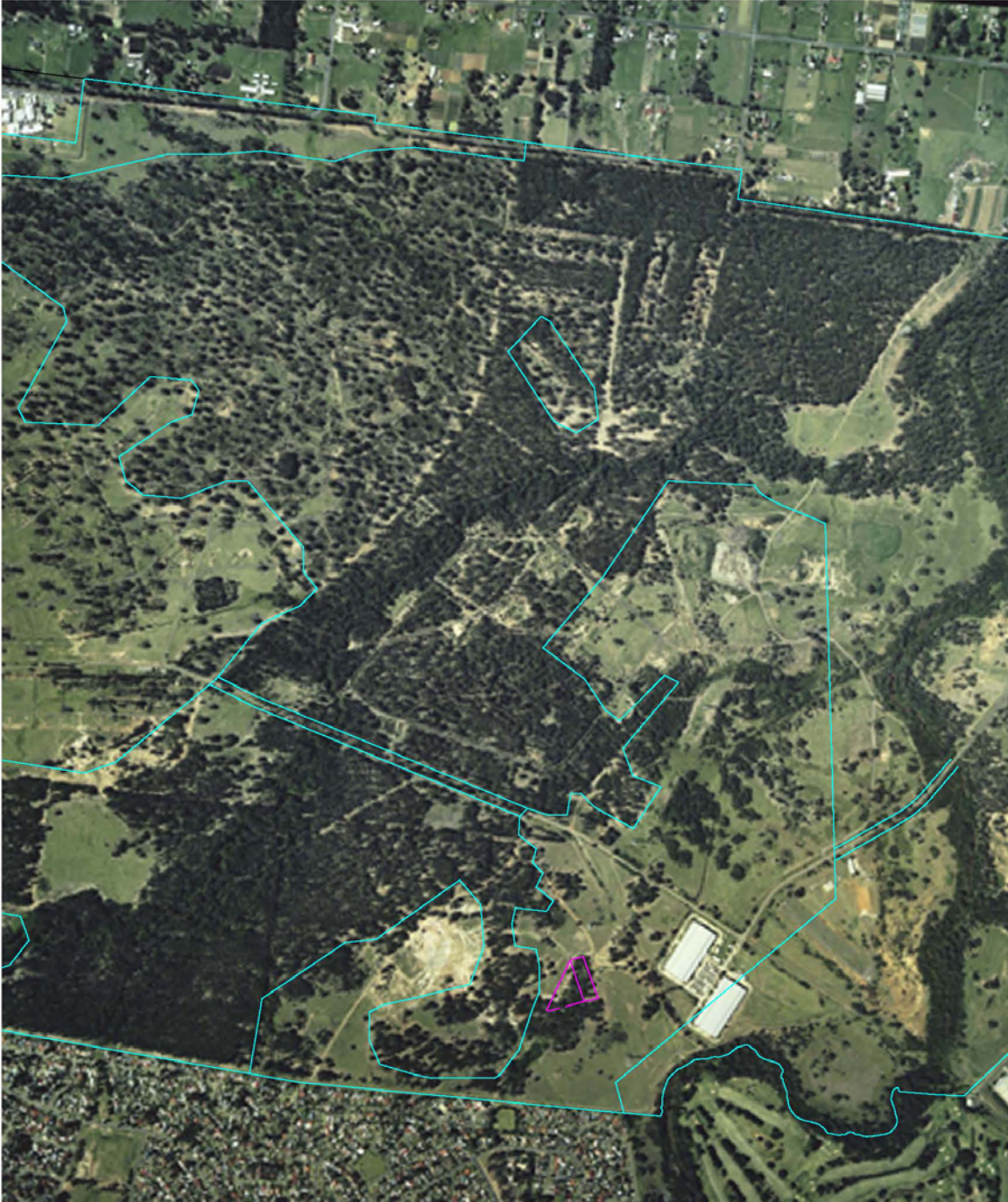


Figure 1.3: Aerial photo showing the location of the Central Precinct and Site 3 outlined in pink.

1.4 Previous Reports

The current report is one of a series of reports written on the heritage of the St Marys development site. The first was by Glenda Gartrell and Peter Spearritt for Masterplan (1992) *History, Heritage and Archaeology of Proposal to Redevelop ADI's Site at St Marys NSW*. This report provided historical background on the history of the munitions factory as well as some background on the pre-munitions subdivision and land use. The archaeological component of the report mostly dealt with the potential for Aboriginal sites. In respect to historic sites it did identify the potential for Dunheved (Site 1) and Site 4, a munitions-period building.

In 1994 Casey & Lowe wrote the *Historical Archaeological Survey St Marys Munitions Factory*. The brief for this report was to identify pre-munitions period sites and structures. At the same time a report was written by Allom Lovell on the St Marys Munitions Factory which addressed the significance of the munitions-period remains and made recommendations. Since then many of munitions-period buildings have been demolished.

Casey & Lowe's 1994 report identified seventeen sites, including standing structures. In 1998/99 a further study for Sydney Regional Environmental Plan No. 30 (SREP 30) which included the study area was undertaken. All heritage sites were identified in SREP 30. As a result of the SREP component the important site of Dunheved Homestead Site (Site 1), the home of Governor King's descendants, was excluded from the development area and will be retained *in situ* in the new regional park to be managed and owned by NPWS/DEC. Casey & Lowe have since written two further reports on heritage issues associated with the Western and Eastern Precincts.

In addition, a number of heritage reports, a mixture of Heritage and Archaeological Assessments and Statements of Heritage Impact, have been produced for the various precincts within the St Marys Development: Eastern, Ropes Creek, Western, North and South Dunheved and now Central.

1.5 Structure of Report

The aim of this report is to review and assess heritage issues associated with the Central Precinct and identify any requirements in light of proposed development impacts (Figs 1.1, 1.2). It is proposed to incorporate Site 3 into an open space area which provides opportunities for the conservation and interpretation of the site. The main heritage site within the St Marys Development, Dunheved Site (Site 1), is just across South Creek. Site 3 is part of 'Elizabeth Farm', one of the four original grants by Governor Bligh to Governor King's children. Therefore to understand 'Elizabeth Farm' it is essential to review the historical development of Dunheved on 'Phillip's Farm'. This report assesses the nature of the potential archaeological resource within Site 3, identifies constraints and opportunities arising from the adjacent heritage values and makes recommendations to manage the identified heritage issues.

1.6 Statutory Constraints

The main statutory constraints are the relics' provisions of the NSW *Heritage Act 1977* and the provisions of Sydney REP No. 30, sections 10-11, 25 and 53-55.

1.6.1 Heritage Act 1977 (amended)

Division 9: Section 139, 140-146 - Relics Provisions - Excavation Permit

The main legislative constraint on archaeological remains is the relics' provisions of the *Heritage Act 1977*.

According to Section 139:

1. *A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being*

discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.

A relic as further defined by the Act is:

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

Any item identified as an historical archaeological site or relic cannot be impacted upon without an **excavation permit**. An excavation permit forms an approval from the Heritage Council for permission to ‘disturb’ a relic.

An application for an excavation permit must be made to the Heritage Council of NSW. This will usually take at least six weeks to be processed. The application for a permit must nominate a qualified archaeologist to manage the disturbance of the relics. There is a processing fee attached to

| TYPE OF EXCEPTION | SUBMISSION REQUIREMENTS |
|---|---|
| <p>(a) <i>“where an archaeological assessment has been prepared in accordance with Guidelines published by the Heritage Council of NSW which indicates that there is little likelihood of there being any relics in the land or that any relics in the land are unlikely to have State or local heritage significance;”</i></p> <p>Please tick if appropriate: <input type="checkbox"/> →</p> | <p>2 copies of the archaeological assessment (prepared in accordance with the Heritage Office’s guideline, <i>Archaeological Assessments</i>).</p> <p>2 copies of a schematic plan or drawing of the site and/or other documents necessary to clearly describe the proposal.</p> |
| <p>(b) <i>“where the excavation or disturbance of land will have a minor impact on the archaeological resource;”</i></p> <p>Please tick if appropriate: <input type="checkbox"/> →</p> | <p>2 copies of a brief statement documenting the expected level of impact on the archaeological resource.</p> <p>2 copies of a schematic plan or drawing of the site and/or other documents necessary to clearly describe the proposal.</p> |
| <p>(c) <i>“where the excavation or disturbance of land involves only the removal of fill which has been deposited on the land.”</i></p> <p>Please tick if appropriate: <input type="checkbox"/> →</p> | <p>2 copies of a brief statement documenting that the proposed excavation or disturbance will only involve the removal of unstratified fill material of low to little heritage significance.</p> <p>2 copies of a schematic plan or drawing of the site and/or other documents necessary to clearly describe the proposal</p> |

each excavation permit application. A fee calculator can be found at: http://www.heritage.nsw.gov.au/03_subnav_01_1.htm. The fee is based on the cost of the development.

Exception to S139(4)

If a site and identified proposed impacts meets certain conditions the impacts may be managed under an Exception to the relics’ provisions. Appropriate documentation needs to accompany such an application. An Exception typically takes 10 days to process and there is no processing fee. The types of exceptions and submission requirements are listed below:

1.6.2 Sydney Regional Environmental Plan No. 30 – St Marys

The requirements of the REP in no way impinge on the statutory requirements of Sections 139, and 140-146 of the NSW *Heritage Act* 1977 (amended). They are additional to the Heritage Council requirements.

Specific requirements identified in SREP 30 which apply to the Central Precinct are:

Part 3 - Precinct Plan

Section 10 – Content of draft precinct plans

Draft precinct plan is to include proposals for, and information about:

- (k) any items of non-Aboriginal heritage significance or of archaeological significance on land to which this plan applies and any potential impacts on these,

Section 11 - Matters to be considered in assessing precinct plans

(d) has considered any potential impacts on...land of archaeological significance to which this plan applies...

Part 5 – Performance Objectives

Section 25 - Heritage

1. Regard for, and education and understanding of, the identified items of environmental heritage...
2. Development is not to adversely affect the heritage significance of items of environmental heritage and their settings.

Part 7 - Development Controls

Section 53

Identifies 'items of environmental heritage on Heritage Map'. This is based on actual surveys undertaken in 1999 in which we were involved.

Section 54

Refers to the requirement to assess proposed impacts on 'items of environmental heritage' by the consent authority where impacts will affect the heritage significance of the item and its setting.

Section 55

Any proposed impacts on 'items of environmental heritage' – including building, place, work or relic - require the consent of the DA authority, i.e. Council. Impacts include: demolition, renovation or extension of buildings, damage or despoiling of a relic, excavation of land containing relics, erection of a building on or subdivision of land containing work or relic.

The lodging of a DA to affect an item of environmental heritage must include:

- significance assessment of the item,
- extent to which the item will be impacted by development,
- whether aspects of the item should be retained, including horticultural and archaeological elements,
- whether the item constitutes a danger to the public.

The consent authority needs to consider a statement of heritage impact or a conservation plan prior to granting of development.

Development consent may be granted on items of non-Aboriginal heritage by the consent authority only if it has considered a statement of heritage impact or a conservation plan relating to the item and the proposed development.

Section 56

This section specifically refers to additional requirements for Site 3 which is within the Central Precinct and is the subject of this report (Fig.1.4) . Section 56 refers to the requirement for the consent authority (Penrith Council) not to grant 'demolition, defacing or damaging' of Site 3 without sending notice of this intention to the Heritage Council. Council needs to wait 28 days for a

response from the Heritage Council prior to issuing consent on such action. Council can grant consent on partial ‘demolition’ of this item.

It is noted that this item is a relic and falls under S139 and S140 of the *Heritage Act* and its relics provisions.

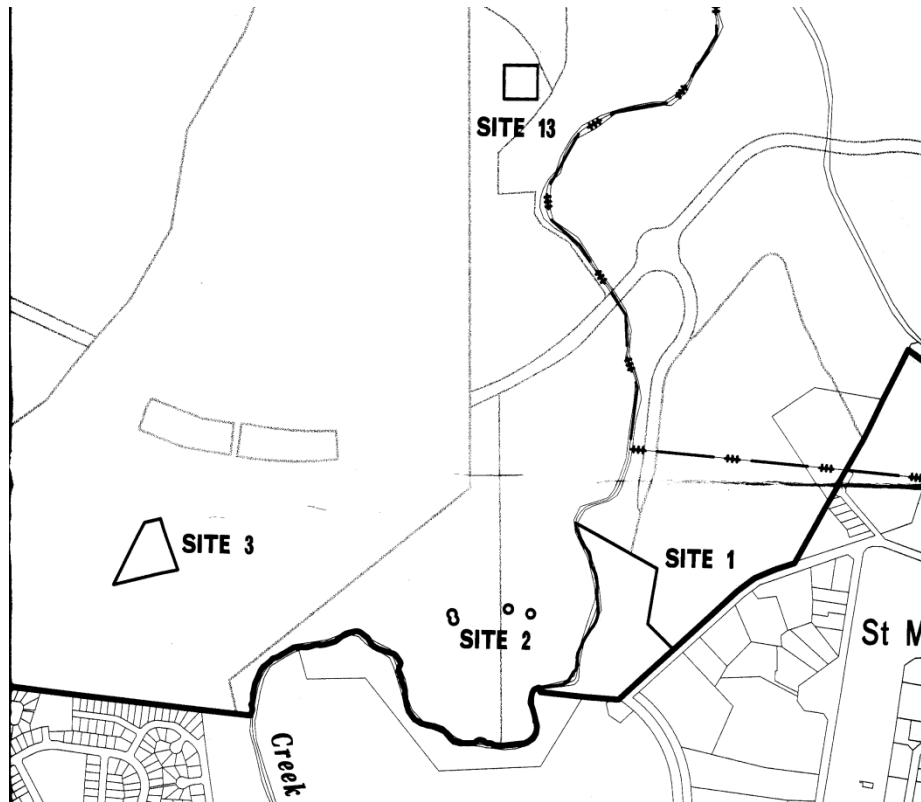


Figure 1.4: Plan showing the location of listed heritage sites within the Western Precinct, SREP 30.

1.6.3 Penrith City Council Sustainability Blueprint for Urban Release Areas

Penrith City Council Strategic Plan (2005-2009): ‘outlined an approach to new release areas which seeks to form cohesive communities based on sustainable, safe and satisfying living and working environments’.¹ The main concerns are to achieve a balance between economic, social and environmental sustainability. The blueprint in the case of advanced projects is to ‘articulate the aims and objectives of adopted LEPs and DCPs’.²

Principle 1: Value the Site Attributes – preserve ecosystems, protect biodiversity, air, water, and conserve heritage

This principle is the one most relevant to this report. The key strategy for managing this is:

- Conserve the natural attributes of the site (topography, orientation, soils, waterways, vegetation and wildlife habitat, environmental and archaeological heritage items).

This report is part of a series of archaeological and heritage reports written for the whole of the site. Many of the non-indigenous archaeological sites were identified in 1994 and then listed on SREP 30 are within the Regional Park. This has produced outcomes in accordance with the sustainability principles.

¹ Penrith City Council *Sustainability Blueprint for Urban Release Areas*, June 2006, p. 1.

² *Sustainability Blueprint*, p. 3.

1.6.4 Australian Heritage Council

Site 3 was listed by the Australian Heritage Commission (now Council) in the 1990s when they visited the site and listed the natural environment. Since that period the Commonwealth government has divested itself of any financial interest in this project and Commonwealth ministers do not have to make decisions over this land. Therefore there are no statutory heritage constraints associated with the Australian Heritage Council.

1.7 Study Area

The study area is the Central Precinct (Figs 1.1, 1.2). The only heritage site within the Central Precinct is Site 3 which is a scheduled item under SREP 30.

1.8 Methodology

The brief for this report required the Non-Indigenous heritage report to:

- review existing reports and planning documents
- undertake site inspection
- historical report on the development and known uses of the site
- analyse heritage issues
- address SREP 30
- produce a report in accordance with Heritage Office and DIPNR guidelines.

This report involved the review of existing heritage and planning documents for non-indigenous heritage for the study area. The methodology employed for this report is based on the NSW Heritage Council's *Archaeological Assessment Guidelines* (1996), the *State Heritage Manual* (1996) and recent amendments to the significance assessment criteria of the *State Heritage Manual* (November 2000).

1.9 Limitations

There were no specific limitations on this project. Sufficient time and funding was made available to complete this report to an appropriate standard.

1.10 Authorship

The detailed historical research for Section 2 of this report was undertaken by Jan Barclay Jack and Assoc. Professor Ian Jack, Ian Jack Heritage Consulting Pty Ltd. . The other sections of this report were written by Dr Mary Casey, Director, Casey & Lowe Pty Ltd. A site inspection was undertaken by Mary Casey and Abi Cryerhall. Tony Lowe, Director, Casey & Lowe Pty Ltd reviewed this report.

1.11 Acknowledgements

Dan Keary, Delfin Lend Lease

1.12 Abbreviations

| | |
|------|--|
| AA | Australian Archives |
| AHC | Australian Heritage Council |
| ML | Mitchell Library, State Library of NSW |
| NAA | National Archives Authority |
| SREP | Sydney Regional Environmental Plan |
| SPF | Small Pictures File, Mitchell Library |

1.13 List of Illustrations

Section 1

| | |
|--|---|
| Figure 1.1: St Marys Development precincts..... | 1 |
| Figure 1.2: Central Precinct Framework Plan. Site 3 is located within the proposed open space (red arrow)..... | 3 |
| Figure 1.3: Aerial photo showing the location of the Central Precinct and Site 3 outlined in pink.... | 4 |
| Figure 1.4: Plan showing the location of listed heritage sites within the Western Precinct, SREP 30. | 8 |

Section 2

| | |
|---|----|
| Figure 2.1: Map of land grants to the King family and their neighbours, South Creek. Approximate location of Site 3 is indicated. Source: Penrith City Council Library website..... | 13 |
| Figure 2.2 Probable location of stockman's hut of 1807 is on the higher land, above the 40-metre contour line, shown in red hatching. The stockyard is likely to have been nearby above the 30-metre contour. 'Elizabeth Farm' boundaries are marked in yellow. The ADI 3 site is marked with a cross within a circle. Central Mapping Authority, 1:25000 maps, Riverstone 9030-1S, Springwood 9030-4S..... | 16 |
| Figure 2.3: Map of 'Elizabeth Farm' in 1941. National Archives of Australia, SP 857/8 PM 1941/203, map neg. no 3294. | 25 |
| Figure 2.4: Known buildings on 'Elizabeth Farm': 1 - vicinity of the stockman's hut of 1807; 2 - sheds built after the 1960s. Central Mapping Authority, 1:25000 maps, Riverstone 9030-1S, Springwood 9030-4S..... | 27 |
| Figure 2.5: 'Dunheved' homestead, 19 May 1838, pencil sketch by Conrad Martens. The location of the fenced paddock shown on 'Elizabeth Farm' by that date is indicated by the red arrows. Mitchell Library, SSV*/SP COLL/MARTENS/33, annotated. | 27 |
| Figure 2.6: 'Dunheved' in 1838, watercolour by Owen Stanley. Mitchell Library, PXC 279 fo.1929 | |
| Figure 2.7: 'Dunheved' in 1840, pencil sketch by Philip Gidley King jr. Mitchell Library, PX*D 379 fo.26..... | 30 |
| Figure 2.8: 'Dunheved' homestead, with a yacca in front of verandah, pencil drawing by Conrad Martens, 12 May 1838. Mitchell Library, PX*D 307-1/..... | 30 |
| Figure 2.9: 'Dunheved' homestead in the early twentieth century. Photograph in possession of a member of the Lethbridge-King family, copied by Jan Barkley Jack in 1988..... | 32 |
| Figure 2.10: The site of 'yellow clay' on the 'Dunheved' estate plan of 1869. It is marked in the bottom right hand part (red arrow) of this extract from the plan, to the left of J.K.L.'s lease. Plan of Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey & Lowe, ML SLNSW. | 36 |
| Figure 2.11: The location of two tributary creeks on 'Elizabeth Farm' in 1869. The creeks meet just above the 'be' of 'Elizabeth' near the site of ADI 3. Plan of 'Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey & Lowe, ML SLNSW. | 37 |

Section 3

| | |
|--|----|
| Figure 3.1: Detail of aerial showing the location of Site 3 in the southern portion of the Central Precinct. Delfin Lend Lease 2008. | 40 |
| Figure 3.2: Detail from 1956 aerial showing the approximate locations of Site 3 and the Dunheved homestead site, Site 1, Windsor Mosaic, flown 28/8/1956 by Royal Australian Air Force..... | 41 |
| Figure 3.3: View to northeast from Site 3 in October 1994 with a thick scatter of sandstock bricks in the foreground. | 42 |
| Figure 3.4: View taken from a location similar to Figure 3.1, looking north. Note the electricity tower and lines at the top of the photo. There has been considerable regrowth at this site between 3 March 2008 and October 1994. The old creek line is still there but is not as visible as in 1994. | 43 |

| | |
|--|----|
| Figure 3.5: Sketch plan drawn in October 1994 showing the location of brick ‘scatters’ and two walls. The walls were not visible in 2008 due to the leaf litter and regrowth. Tony Lowe, October 1994 | 44 |
| Figure 3.6: Brick fragments in Area A. The green colour on the brick is glaze which forms in the kiln process. Fragments of bricks had glaze on broken faces which indicates that this could have only happened at a brick manufacturing site as these types of broken bricks would not have been taken off site as they have no use | 44 |
| Figure 3.7: Area B is covered long grass and leaf litter. This contained the base of a brick clamp with bright orange bricks. Looking west | 45 |
| Figure 3.8: Three brick fragments recovered from Areas A and B. The central fragment is from Area B. Both the brick fragments from Area A had evidence of vitreous glaze, with notably the right fragment having glaze on the broken face indicating it probably exploded in the clamp kiln and the glaze then formed on the broken face | 45 |
| Figure 3.9: Photo looking northeast across the top of Area B | 46 |

Appendix 1

| | |
|--|---|
| Figure 1: Type of moulding table. Dobson noted that this was an unusual moulding table. Dobson 1850 (2):16 | 5 |
| Figure 2: More typical moulding table. Dobson 1850(1):103 | 5 |
| Figure 3: Three moulds and a stock board (bottom left). Birmingham, Jack & Jeans 1983:58, source is Dobson 1850 | 5 |
| Figure 4: Pallet barrow, loaded with bricks (top) and without bricks (bottom). Barrow for taking green bricks to the hacking grounds. Dobson 1850 (2):20 | 6 |
| Figure 5: Reconstruction of a brick clamp similar to the one found at 20 Albion Street, Surry Hills. This would be much larger than the ones at Site 3 as it is on a commercial scale rather than for specific purposes. Proctor, Sabel & Meddens 2000:189 | 6 |
| Figure 6: Typical layout of brickyard. Note the location of a pug mill in the tempering area. It is unlikely that the brickyard at Site 3 area had a pug mill. Dobson 1850: (2):5 | 8 |

2.0 Historical Background

2.1 Background

The study area is part ‘Elizabeth Farm’ which was part of the ‘Dunheved’ estate established by Governor King and created from grants made by Governor Bligh to his wife and children. Occupation of the property by the staff of the King family appears to date to c1807. Discussions of Dunheved typically include ‘Elizabeth Farm’. Historical evidence indicates that it was used for grazing and there is no real historical evidence to say that the property was used for brickmaking which is to be expected for this typical aspect of many early properties.

2.2 Introduction to the King family farms

2.2.1 South Creek, 1805–1807

Governor Philip Gidley King was attracted to these western pastures on the upper reaches of South Creek in the District of Evan. The lands were about 50 km from Sydney, and were four or so hours’ ride. Around August 1804 King sought to grant his wife, Anna Josepha, a portion of this area, but the 2,350 acres of the promise had to be cancelled before it was executed; it was declared illegal, and signed off by King’s Secretary.³

However, the receipt of grants in the name of children had been standard colonial procedure for several years, and governors’ children, unlike wives, proved to be acceptable recipients. In January 1806 King’s grants to his four legitimate children in the colony were given title. The lands were adjacent to each other on both banks of the South Creek, amounting to a rectangular-shaped family holding of 2,340 acres, almost the amount the governor had first set aside for his wife. All were below the area where another creek, now known as Ropes Creek, wound from the south-east to its junction with South Creek.

The northernmost of the farms were those given as ‘Phillip Farm’ and ‘Elizabeth Farm’ to two of the children. They shared the same northern and southern boundary line. Elizabeth’s farm, ‘Elizabeth Farm’, later defined as portion 116 in the parish of Londonderry, was contained for its entire length on the east by the bank of the South Creek, her property’s 610 acres well-watered by a large ox-bow of the creek. On the opposite bank of South Creek and just a little larger in area with 660 acres was the portion of her brother, Phillip Parker King: ‘Phillip Farm’, later defined as portion 112 in the parish of Rooty Hill. Bordered on its western extremity by the creek waters, it also had the advantage of a short section of Ropes Creek at its north-eastern tip. Together the two grants stretched from a line along what is today Francis Street, Werrington (and its imaginary extension), to just west of Forrester Road, St Marys. Both had as their northern limit a boundary running just north of Links Road, Dunheved and its imaginary extension westward.⁴

To the south of Elizabeth’s farm and sharing the same surveyed western line as hers, was ‘Mary Farm’ of 790 acres later defined as portion 118 in the parish of Londonderry. Mary was the youngest of the Governor’s children and it is her grant that extended marginally further to the south than any other of the 1806–1807 grants to the King family. It too had South Creek as its eastern limit, as well as having two tributaries running diagonally across its upper and lower lands. Today’s Dunheved Road forms the east-west boundary between the properties of the two sisters.⁵

³ Land Grants Register 3C, p. 171; L. Macquarie, *Journals of his Tours in New South Wales and Van Diemen’s Land 1810-1822*, Library of Australian History in association with the Library Council of New South Wales, Sydney 1979, p. 89.

⁴ Land Grants Register 3C, p.194, 194 (3) Phillip Farm 1.1.1806, p.195, 195 (2) Elizabeth Farm 1.1.1806; Parish maps of Londonderry and Rooty Hill; UBD Sydney and Blue Mountains Street Directory, 42nd edition, 2006, maps 164, 165.

⁵ Land Grants Register 3C, p.196, 196 (1) Mary Farm 1.1.1806.

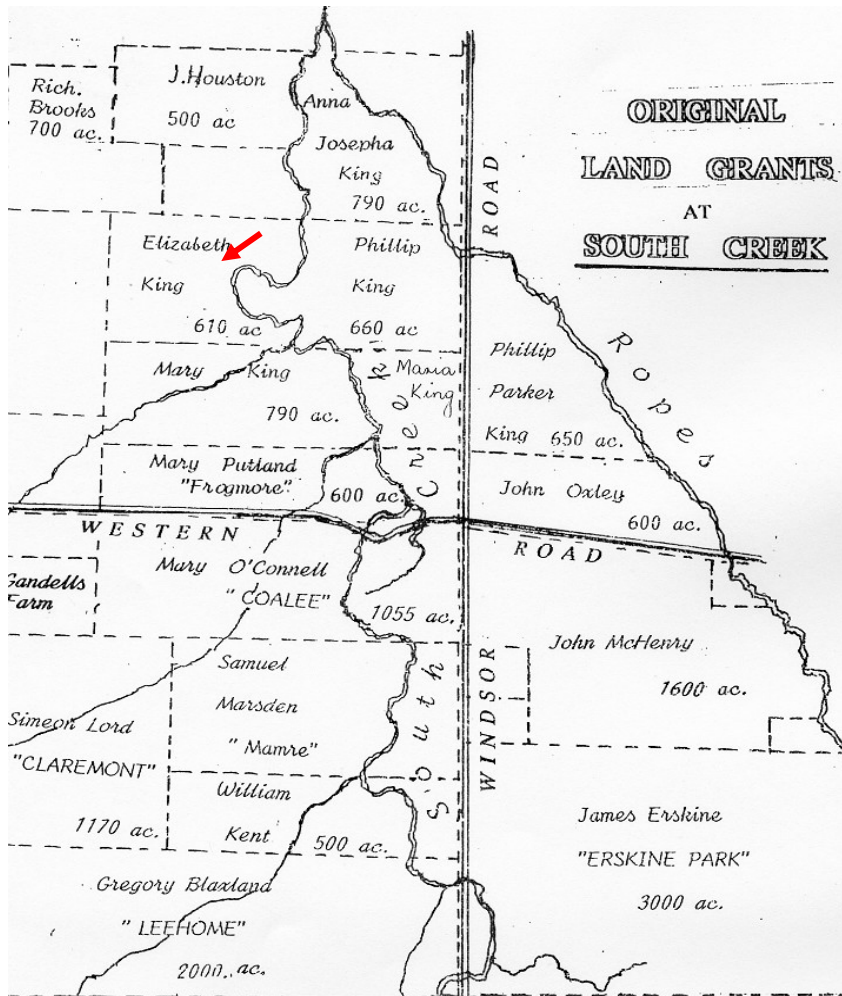


Figure 2.1: Map of land grants to the King family and their neighbours, South Creek. Approximate location of Site 3 is indicated. Source: Penrith City Council Library website.

Maria King, another daughter, had received 'Maria Farm' later defined as portion 110 in the parish of Rooty Hill, just across South Creek from 'Mary Farm', but her grant was smaller and amounted to only 280 acres. The eastern limit of Maria's land, like Phillip's, was on a line west of today's Forrester Road (on some maps shown as 'Windsor Road', a thoroughfare which was never developed). Together the lands of Phillip and Maria on the eastern side of South Creek, lie in today's landscape from just a little north of the industrial area of Dunheved to approximately the present Western Railway line at St Marys.⁶

The farms of the King children were surveyed in 1805 by James Meehan, and registered on 1 January 1806.⁷ That same day, New Year's Day 1806, Governor King also signed title deeds for a property of 600 acres adjoining the King children's grants at South Creek to Mrs Mary Putland, the daughter of the incoming governor, who was to accompany her father to the colony. Mary Putland's grant was to the south of the grants to Mary and Maria King and shared the same east and west lines as the extremities of the King children's grants, spanning South Creek.⁸

This was the enactment of part of an agreement that Governor King appeared to have reached with Bligh before the in-coming governor arrived in the colony, although it is not known who took the initiative. Bligh had been awarded his commission in May 1805 and a letter dispatched immediately would have reached the shores of New South Wales around October or November 1805,⁹ about the time that Governor King would have had to send the surveyor to South Creek to measure out the

⁶ Land Grants Register 3C, p.195, 195 (1) Maria Farm 1.1.1806; Parish maps of Londonderry and Rooty Hill.

⁷ HRNSW, VI, p. 263, 26.3.1807; Land Grants Register 3C, pp. 194-196.

⁸ Land Grants Register 3C, p. 206, 206 (1), Mrs Mary Putland 1.1.1806; HRNSW, VI, p.118, 7.8.1806.

⁹ J. and J. King, *Philip Gidley King*, Methuen, Sydney 1981, p.138.

lands if the deeds were to be ready on 1 January 1806 for signing, as they were. The full dimensions needed to be marked on site, made available and written into the title deeds: these tasks would take several weeks.

Bligh landed in New South Wales on 8 August 1806, and it was stated in a Government and General Order that in ‘consequence of some previous arrangements’, was to take up his executive authority five days later.¹⁰ On arrival in the colony, William Bligh welcomed the Governor’s foresight with regard to his daughter obtaining land holdings, accepting grants for himself during the days King retained his governing powers after Bligh’s arrival.¹¹ Such legitimate discretionary power available to governors was conditional on later ratification by the British Government. As no comment on the reciprocal granting was ever made, the grants to the governors’ children remained in force.

Bligh’s reciprocation once governor, was the long-desired grant to Anna Josepha at South Creek, later defined as portion 113 in the parish of Rooty Hill, albeit of less acreage than originally planned. Mrs King’s grant was rectangular in shape, neatly divided into two triangular portions around Ropes Creek. South Creek was the western boundary. A line west of a notional connection of Stoney Creek Road and the lower part of Forrester Road are useful indicators of the eastern boundary, as with the farms of Phillip and Maria. The grant was signed off by Bligh on 1 January 1807.¹² She called her property ‘Thanks’.¹³

Thus the King family holdings, viewed as one Concern from their inception, by the end of 1806 were made up of Anna Josepha’s newly promised 790-acre property, plus ‘Phillip Farm’, ‘Maria Farm’, ‘Elizabeth Farm’ and ‘Mary Farm’ which in total then gave the King family 3,130 acres of rich potential farmland and pasture.

On the banks of South Creek the King and Putland holdings shared the same eastern boundary line as the 1804 allocation of 1,030 acres selected by the Reverend Samuel Marsden, and as Captain William Kent’s 500 acres, but were separated from them, for the latter were located further to the south. This Marsden grant was named ‘Mamre’. In turn the pastures of the Creek attracted the powerful emigrant Gregory Blaxland in 1808 and others.¹⁴

2.2.2 ‘Dunheved’, 1806–1816

In the ongoing correspondence of the farm’s formative days in the early nineteenth century, the official name is often forsaken for more general working terms such as ‘the Farm’. Sometimes the King properties were referred to as ‘the Concern’, ‘Mrs. King’s Farm’ or other such variations when none of the family was in residence. Common usage of the formal term increased when the King family returned to New South Wales. Certainly ‘Dunhaved’ [sic] is the name which Ryan suggests was in common usage at least from around 1826, his spelling differing from the consistent family usage of ‘Dunheved’.¹⁵

It is likely that the King family’s lands were utilized immediately the children’s allotments had been selected in 1805, as was common, for King had his cattle waiting in July.¹⁶ The King lands are not listed in the Muster of August 1806 where the lands of the civil and military personnel appear not to be included. The property does, however, appear indirectly in an entry for Ann Parker who is shown

¹⁰ *HRNSW*, VI, p.118, 7.8.1806.

¹¹ Ryan, *Land Grants, 1788-1809*, p.190.

¹² Land Grants Register 3C, p. 219 Mrs Anna Josepha King 1.1.1807; *HRNSW*, VI, p. 263, 26.3.1807; J. and J. King, *Philip Gidley King*, Methuen, Sydney, 1981, p. 148.

¹³ ‘Plan of Dunheved’, prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey & Lowe.

¹⁴ Land Grants Register 3C, p. 168, 168 (2) Kent 12.8.1804, p. 171 (3) Marsden 15.8.1804, p. 248 Blaxland 29.11.1808.

¹⁵ Macquarie, *Journals*, p. 19; J.T. Ryan, *Reminiscences of Australia*, Robertson, Sydney 1894, facsimile, Nepean Family History Society, South Penrith 1982, p. 343.

¹⁶ King to Earl Camden, 20.7.1805, *HRNSW*, V, p. 657.

as living on 15 acres she had purchased from ‘King South Creek’. At that time, a Charlotte Bishop also received 100 acres nearby but is not shown in the muster as a landholder.¹⁷

Another related entry is that for William Blake who had come free to the colony with the Kings on the *Speedy*. He is shown to be a settler and ‘Servant to Gov. King’. One hundred acres were granted to Blake. As a reward, the allotment was registered in his own name on land adjacent to ‘Elizabeth Farm’ to the north, on 1 January 1806, the same date the King children received title to their grants. William Blake’s land was still fallow eight months later, and he appears not to have used it. King’s son Phillip Parker King became the owner when his agent purchased the land in 1814.¹⁸

William Hayes, on the other hand, was definitely on the King family’s farms. Hayes is listed as employed on Governor King’s farm at Parramatta in 1806, but as such a farm did not exist and as Parramatta was the nearest town to the South Creek farms, this can be taken as a firm reference to the King South Creek properties. Hayes had arrived in New South Wales in 1799 on the *Anne*, as a young man of 29 years, under a seven year sentence of transportation. He appears to have had charge of at least the stock on the property perhaps from 1805.

Hayes was a very literate man and sent full accounts and financial statements regularly and directly to the King family during their absence. The fact that his inevitable temporary tent or hut accommodation was replaced before the King family left the colony in early 1807, shows that the Concern was well under way by that time.¹⁹ In fact, his letters subsequently reveal so much purposeful and intense activity on the property at that time under his supervision on ‘Dunheved’, that only one conclusion is possible: Philip Gidley King had left nothing to chance and the instructions that he had imparted to Hayes in the months prior to sailing were implemented accordingly.²⁰

Philip Gidley King’s vision for his enterprise included a homestead on ‘Mary Farm’ to the west of South Creek, but his plans for running stock encompassed the entire five farms. It was probably because of King’s preferred homestead location that William Hayes’ living quarters were positioned on the east side of the fordable creek, not far upstream of the proposed main homestead site. Hayes chose a spot just north of the ox-bow and proceeded to have a cottage constructed for himself. This appears to be the estate’s first permanent living structure and it dates to 1805 or 1806.²¹

‘Elizabeth Farm’ was used for grazing stock from the beginning. Already by February 1807, nearly two kilometres of fencing had been constructed on this part of the King estate at the substantial cost of £72.²² The following year in 1807, a house was built on ‘Elizabeth Farm’ for the stockman. The stockman’s house was located on the high ground northwest of where the proposed King homestead on ‘Mary Farm’ was to have been. Nearby was the first stockyard on ‘Elizabeth Farm’, used ‘for the young herd of cattle which were drafted from the general herd some time since’.²³ The site of the stockman’s house and the yards can be identified as the higher spur of land above the 30 to 40 m contour near the south-west boundary of ‘Elizabeth Farm’.

¹⁷ C. Baxter (ed.), *Musters of NSW and Norfolk Island, 1805-1806*, ABGR in association with the Society of Australian Genealogists, Sydney 1989, pp.130-131 Parker B0266.

¹⁸ Baxter (ed.), *Musters 1805-1806*, p.10 Blake A0204. p.167 Mrs A. J. King C0762, pp.134-135 Blake B0401; Ryan, *Land Grants 1788-1809*, p.186; C. Baxter (ed.), *General Musters of New South Wales, Norfolk Island and Van Diemen’s Land 1811*, ABGR in association with the Society of Australian Genealogists, Sydney 1987, p. 12 Blake 0478; ML A865, CY 2129, Hassall’s account, 30 June 1814. Blake’s name is shown incorrectly as Black on the parish map of Londonderry.

¹⁹ ML MSS 710, CY 1192, Hayes to Governor King, 9 October 1807, 97.

²⁰ ML MSS 710, CY 1192, Hayes to Governor King, 9 October 1807, p. 97.

²¹ Letters of Harriet King, ML MSS 1793/2, CY2482, p. 121, 25.2.1829.

²² ML A865, CY 2129, Stock account at Dunheved, 1806-7. The length of the fence was 363 rods (1815 metres).

²³ ML MSS 710, CY 1192, Hassall to Governor King, 6.10.1807, pp. 93-95; Hayes to Governor King, 9 October 1807, p. 97.

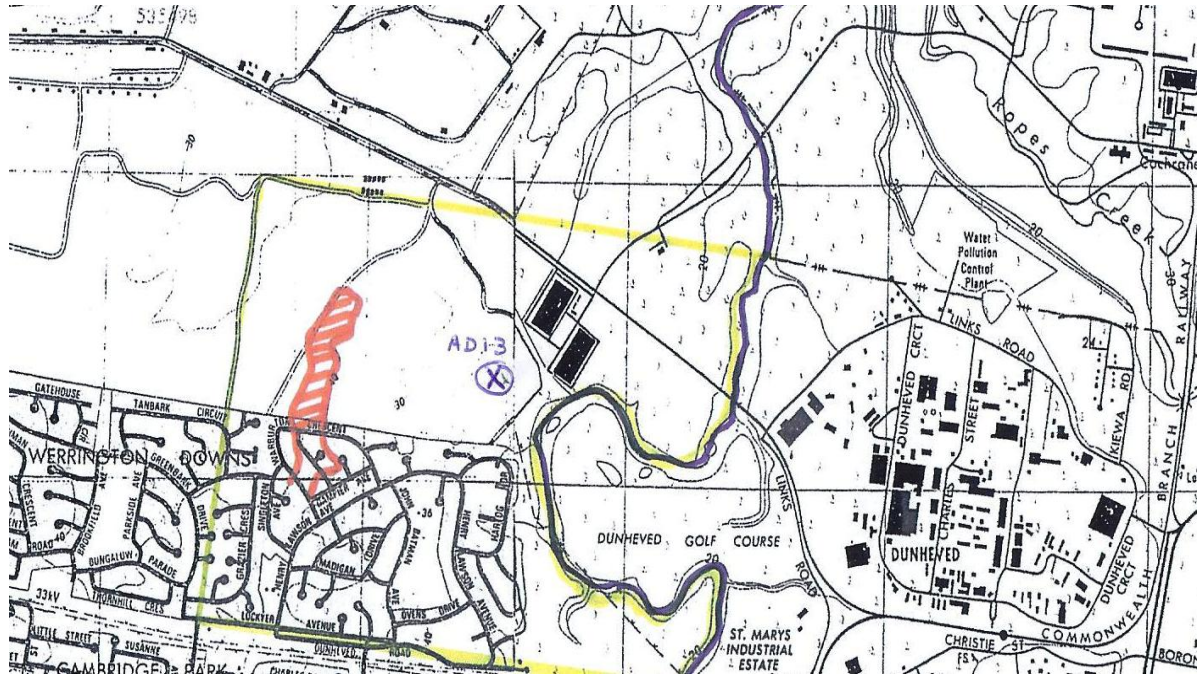


Figure 2.2 Probable location of stockman's hut of 1807 is on the higher land, above the 40-metre contour line, shown in red hatching. The stockyard is likely to have been nearby above the 30-metre contour. 'Elizabeth Farm' boundaries are marked in yellow. The ADI 3 site is marked with a cross within a circle. Central Mapping Authority, 1:25000 maps, Riverstone 9030-1S, Springwood 9030-4S.

Philip Gidley King's early death aged 50 the following year²⁴ meant that the vision of a grand homestead became modified. The Concern continued to operate as a pastoral identity for the whole family at that time from afar, and later under Phillip Parker King, his wife Harriet and their family. Expediency and the additional separate interests of the King siblings saw, in time, the site of the cottage of Hayes as overseer remain the focus of the property. Renovated, enlarged and possibly with another cottage built forward and slightly to the north, the dwellings north of the ox-bow on the eastern creek bank were to become the 'Dunheved' homestead and quarters that survived until the 1940s. This was where Harriet and Phillip King and later Mary and Robert Copland Lethbridge lived during their residences on 'Dunheved'.²⁵

Broadly overseeing King's lands and affairs in the early days of the King family's absence as his agent, was Rowland Hassall, one of the missionaries who had come to Sydney from Otaheite. Hassall had his own farm in the Dundas district and was a friend of the Reverend Samuel Marsden.²⁶ Hassall only stayed on the King family lands on occasional visits. On 28 November 1810 he journeyed out especially to greet Governor Macquarie and his party, and to show them around. He went riding with them and dined with the governor at the party's camp nearby, until 'returning home in the evening to Mrs. King's farm'. When Macquarie came again in April 1815, Hassall accompanied the governor's party from Parramatta to the Kings' property where they all stayed overnight, all except the Macquaries and Hassall apparently camping in the usual manner.²⁷

Cultivation was begun on 'Dunheved' whilst the Kings were still in the colony. As early as June 1807, Rowland Hassall could report that two crops were being grown in the cleared paddock and these were being fenced off from each other. The maize planted the previous year had 'turned out

²⁴ King, *Philip Gidley King*, pp. 3, 152.

²⁵ D. Walsh, (ed.), *The Admiral's Wife: Mrs Phillip Parker King A Selection of Letters, 1817-1856*, Hawthorn Press, Melbourne 1967, p. 62.

²⁶ *HRNSW*, IV, pp. 44, 74.

²⁷ J.S.Hassall, *In Old Australia*, Hews, Brisbane, 1902, facsimile, Library of Australian History, Sydney 1977, pp. 28-29; Macquarie, *Journals*, pp. 20, 89.

well' and its 100 bushels had provided plenty for both the 'men and pigs and, I hope, enough to pay for the men's salt Rations that they have received from the Store'. The wheat grown had also been 'expended at the farm'. The ten acres of wheat at that time sown in the paddock was a source of so much pride that Hassall boasted that he thought it far superior to that growing on Governor Bligh's Hawkesbury land.²⁸

Eighteen pigs were kept in 1807, enough to allow five of the hogs to be sold, netting over £5, as well as to kill as necessary to provide salted pork for use on the farm. One pig had been stolen.²⁹ Cattle grazed at 'Dunheved' from the Kings' earliest ownership, for Philip Gidley King, from the time of his arrival as governor, had them strongly on his mind. In 1803, he had told Sir Joseph Banks in a letter:

...No country can equal the fine state of all the horned cattle and improving quality of the sheep. Perhaps no country in the world is better calculated for raising these species of stock, nor is there less disease than among the cattle we have.³⁰

2.2.3 'Phillip Farm', 'Werrington' and 'Dunheved', 1817–1839

Phillip Parker King, an hydrographer, and Harriet (née Lethbridge) arrived in Sydney in September 1817, newly married, and spent three months familiarising themselves with the colony and 'Dunheved'. During the next five years, while her husband was intermittently away for a total of 34 months surveying the Australian coastline for the navy, Harriet Lethbridge King remained in Parramatta. She stayed at Rosehill Cottage. During her stay Harriet was left at times to superintend the forwarding of plans for the 660 acres that belonged specifically to Phillip and herself, whilst maintaining the Concern on behalf of the whole family. Phillip Parker King had several extended shore leaves that would have enabled him to organize affairs on 'Dunheved'.³¹

On becoming ill in 1819, Rowland Hassall resigned as New South Wales agent for the King family. His resignation and death in August the following year probably crystallized the resolve of Phillip Parker and Harriet King to take a more active part.³² Phillip Parker's poor health appears to have decided the timing of his retirement from the navy. When the couple left Australia in late 1822, the decision to live on 'Dunheved' appears to have been already taken. Additional lands were to be sought, beginning with a grant recently added nearby which comprised 600 additional acres from Governor Macquarie. The Parker Kings had also decided to expand their holdings further by purchase. The faithful William Hayes continued as resident manager, and it appears friends like Marsden and Harris also kept an eye on things.³³

Although still functioning as the one family estate of 'Dunheved', by the end of the second decade of the nineteenth century the King family's South Creek properties had at least two additional working farms on them, run by King's children: 'Phillip Farm' belonging to Phillip and Harriet King, set up as an entity around 1814–1817, and 'Werrington' owned by Mary King and her husband, Robert Copland Lethbridge, on Mary's grant. The separate development of Werrington began in 1829, and the home they built there soon after was made of stone, quarried on 'Dunheved'.³⁴ This stone was probably obtained from the southern part of 'Elizabeth Farm'; which is shown as 'Quarry bush' on the 1869 estate map (Figs 2.10, 2.11).³⁵

²⁸ ML MSS 710, CY 1192, Hassall to Governor King, 6.10.1807, pp. 93-94; ML A 865, CY 2129, 1807 accounts.

²⁹ ML MSS 710, CY 1192, Hassall to Governor King, 6.10.1807, pp. 94; ML A 865, CY 2129, 1807 accounts.

³⁰ *HRNSW*, V, p.136, 9.5.1803.

³¹ *ADB*, II, pp. 61-62; L. Parr (ed.), *John King Lethbridge: the Diaries, 1871 & 1880*, Nepean District Historical Society, Penrith, 2000, p. 6.

³² ML MSS 710, CY 1192, 1819-1820; *ADB*, I, p. 522.

³³ *ADB*, II, 1967, pp. 61-62.

³⁴ Letters of Harriet King, ML MSS 1793/2, CY2482, p. 121, 25.2.1829.

³⁵ 'Plan of Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey & Lowe.

By 1825 a vineyard had been planted. Three years later in the Census, the ‘Dunheved’ family Concern is listed under Harriet’s name, showing that cattle numbers which had grown to 928 in 1827, rounded down to 850 head after sales, and that 56 horses were at the stud. Cultivation had increased to 250 acres of 1,150 acres of cleared land within an estate that now consisted of 11,245 acres. The wheat was grown on ‘Phillip Farm’. Sending the heifer herd north to Robert Copland Lethbridge’s grant near what is today Newcastle, was being considered because the drought had left little feed on ‘Elizabeth Farm’ and on ‘Dunheved’ generally.³⁶

Wool was to become an important staple for the family’s income, but prior to 1827 the King Concern’s flocks at Bathurst had suffered large losses. Those remaining were brought back to ‘Dunheved’ and kept there with sheep that Phillip and Harriet brought out from England. The herd of cattle was enlarged to compensate the sheep loss, and money from cattle and horse sales was used to buy another flock. The sheep numbered 1,050 in 1828, making them the most numerous of the livestock held. The sheep are noted as grazing westwards of the homestead, which implies that they were on ‘Elizabeth Farm’.³⁷

From correspondence it would appear that two categories of the various types of livestock were run on the farms. The stock belonging to all the children and Anna Josepha were seen as a single entity from which each of the five received an equal share, including Elizabeth who had married Charles Runciman and remained in England. Anna Josepha, in England until 1832, was said to have received some £1,000 per year return from the Concern. The second source of income for some of the siblings appears to have come from additional stock held individually.³⁸

‘Dunheved’ had remained under the management of Hayes until Harriet King arrived back in Australia permanently in 1827. Toby Ryan, a neighbour of the King’s at that time paints the following picture:

...the estate...was about the largest in the County, very valuable...It was well stocked with sheep and cattle, and a large quantity of cultivation was carried on, with about eighty to one hundred assigned servants on the estate.³⁹

In addition, the horse breeding carried on there by William Hayes, and protected so carefully by Surgeon Harris many years before, had come to contain ‘a splendid lot of animals’, in the view of Ryan (an experienced judge of stock). ‘Dunheved’ was a horse stud of distinction. About this time, Harris was building a residence on his nearby property named ‘Shanes Park’ and lived there with his wife, so he was well informed about the King Concern.⁴⁰

An Irishman named Flanagan succeeded Hayes as manager of the Concern in 1827. He had been engaged in Ireland, apparently by William Hayes when he visited Britain in 1816, and had been employed minding the King sheep at Bathurst. He and his family moved into ‘the house by the Garden’ according to Harriet when the sheep came back to ‘Dunheved’.⁴¹ Contemporary opinion in the next decade was that Flanagan managed the farm with flair and that in its expansion, it became the ‘pattern farm to the whole country’ working half a dozen teams and keeping a dairy and a horse stud. It was described in the early 1830s as:

...an establishment ...[that] had four men constantly employed, besides occasional hands, a stud groom, veterinary surgeon, two horse breakers, engaged breaking in for the market...[From the King stallions] came some good race horses and hackneys, which could not be surpassed.⁴²

³⁶ Letters of Harriet King, ML MSS 1793/2, CY2482, p. 117, 25.2.1829; *Census of New South Wales November 1828*, p. 432 Harriet King K0883; Walsh (ed.), *The Admiral’s Wife*, pp. 65, 85, 87.

³⁷ *Census of New South Wales November 1828*, p. 432 Harriet King K0883; Walsh (ed.), *The Admiral’s Wife*, pp. 64-65; ‘Plan of Dunheved’, prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe.

³⁸ ML A 1980/3, CY906, p. 230, 15.7. 1819; Walsh (ed.), *The Admiral’s Wife*, p. 64.

³⁹ Ryan, *Reminiscences of Australia*, p. 15.

⁴⁰ Ryan, *Reminiscences of Australia*, pp. 26, 29.

⁴¹ Walsh (ed.), *The Admiral’s Wife*, pp. 60, 65; Ryan, *Reminiscences of Australia*, pp. 15-16; Letters of Harriet King, ML MSS 1793/2, CY2482, p. 79, 20.3.1827.

⁴² Ryan, *Reminiscences of Australia*, p. 16.

Flanagan was still at ‘Dunheved’ in 1834, and produced fine horses even without keeping a book detailing their pedigrees.⁴³

2.2.4 ‘Phillip Farm’, ‘Werrington’ and ‘Dunheved’, 1840 onwards

For ten years from April 1839 Phillip and Harriet King were away, primarily at Port Stephens as Phillip had been appointed Commissioner of the Australian Agricultural Company.⁴⁴ By this time Phillip’s sister Elizabeth had died in England and her widower, Charles Runciman was in process of selling ‘Elizabeth Farm; and its stock, to Phillip.⁴⁵ At first the properties were let.

Patrick Leslie, a Scottish immigrant, and his wife (a Macarthur) rented ‘Dunheved’ house in 1840 after their marriage, according to Philip Gidley King jr.⁴⁶ The land ‘near Parramatta’ where in 1839 Patrick and his brothers Walter and George tried their first Australian agricultural venture, dairy farming, was ‘Dunheved’. A substantial letter from Leslie to his relatives in Scotland in September 1839 survives, discussing the stock and his family affairs.⁴⁷

The drought and depression from 1838 to 1845 affected the Australian Agricultural Company, as well as financially ruining many others, including Mary and her husband Robert Copland Lethbridge and Charles Marsden at ‘Mamre’.⁴⁸ Sometime around the time that the Bank of Australia crashed in 1843, the Copland Lethbridges were forced to rent out ‘Werrington’, finding refuge on ‘Phillip Farm’ and living in the ‘Dunheved’ homestead.⁴⁹

The Lethbridges continued to reside at ‘Dunheved’ during the 1850s and 1860s, their children growing up there. After a visit at ‘Dunheved’ in 1855, Bishop Barker acknowledged that he had found ‘Mr Lethbridge...a very sensible man with a nice wife and a large family...They live in a simple primitive style with few domestics’. Both Robert Copland Lethbridge and Mary had died by 1872, but their son John King Lethbridge carried on the farm.⁵⁰

The estate of ‘Dunheved’ during the 1880s and 1890s was occupied by relatives of the Kings, the family of Lieutenant H.E. Goldfinch.⁵¹ Elizabeth Maria King, the only daughter of Philip Gidley King jr and Elizabeth Macarthur, had married Lieutenant Henry Goldfinch in the 1870s. One of their sons, born in 1885, was Sir Philip Henry Macarthur Goldfinch, K.B.E. Philip Gidley King jr’s plan of ‘Dunheved’ in 1869 has later annotations that show much of the fencing was repaired or replaced under Henry Goldfinch’s instructions in 1889.⁵²

Twenty years after Philip Gidley King jr. died in August 1904 his heirs sold the property to M. Fisher in 1924.⁵³ In 1939 3,610 acres of the former King estate at ‘Dunheved’ was purchased by Mr

⁴³ Ryan, *Reminiscences of Australia*, pp. 36, 92.

⁴⁴ ADB, II, p. 63.

⁴⁵ ML, A 1977, CY 876, Stillwell to P.P. King, 10 10.1838, p.82; Philip Gidley King jr, ‘Notes on [Elizabeth] Farm’, 1891, ML. A 1977, CY 876, p.751.

⁴⁶ ML, PX* D379, fo. 26, Philip Gidley King jr’s notation on the back of his sketch of ‘Dunheved’, 1840.

⁴⁷ ML, PX* D379, fo. 26, Philip Gidley King jr’s notation on the back of his sketch of ‘Dunheved’, 1840; N. Bartley, *Australian Pioneers and Reminiscences 1849-1894*, 1896, reprint, John Ferguson in association with the Royal Australian Historical Society, Sydney 1978, pp. 169-170; Ryan, *Reminiscences of Australia*, p. 341; ML. DOC 1414, photocopy of letter from P. Leslie, 29 .9.1839.

⁴⁸ Eugenie Stapleton, *South Creek-St Marys: from Village to City*, 2nd, ed., Penrith City Library Historical Series no.5, Penrith City Council, Penrith 1988, p. 7.

⁴⁹ J. Barkley, *At Home in Tregear*, Tregear Public School, Sydney, 1988, p. 10.

⁵⁰ L. Stacker, *Pictorial History, Penrith and St Marys*, Kingsclear Books, Sydney 2002, p. 103; Parr (ed.), *John King Lethbridge: the Diaries, 1871 & 1880*, p. 5.

⁵¹ ADB, II, p. 63; Ryan, *Reminiscences of Australia*, p. 343; Winsome Shaw, oral communication to Jan Barkley Jack, 1988; Plan of ‘Dunheved’, 1869, prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe.

⁵² J.McD. Jones, *Nepean District Cemetery Records, 1806-1976*, author, Sydney, 1977, p.180, no.3568, p. 184, no.3633; Plan of ‘Dunheved’, prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey & Lowe.

⁵³ Parr (ed.), *John King Lethbridge: the Diaries, 1871 & 1880*, p. 20.

I'Anson or I. Anson, who sold it to F.C. Pye on 28 February 1941. Pye's land included both the old 'Phillip Farm' and 'Elizabeth Farm'.⁵⁴

After an unsuccessful attempt to sub-divide the estate, Pye sold 2,921 acres of 'Dunheved' to the Commonwealth on 21 August 1941.⁵⁵ Only the lands east of South Creek were purchased initially in 1941, and gradually these farms were developed into a munitions factory. The farms once owned by the King family on the western side, including the northern part of 'Elizabeth Farm', were also sold to the Commonwealth in July 1942.⁵⁶

On the east side of the creek, the major munitions factory was soon erected after 1941, to the north of the homestead complex. 'Dunheved' house was demolished in 1947 by a Castlereagh contractor, F. Gavin. The barn had already collapsed in 1946 and the coach house was already partly unroofed. Nothing remained of the Kings' complex around the homestead by November 1947, when it was reported that 'the site has been left in a clean and tidy condition'.⁵⁷

2.3 'Elizabeth Farm' and its relation to the rest of 'Dunheved'

2.3.1 Documentary evidence for uses of 'Elizabeth Farm', 1805–1839

Most of 'Elizabeth Farm' appears to have been bushland, particularly away from the creeks, so extensive clearing would have been necessary. Species to be found there, like those described on the opposite side of South Creek, were originally: box, apple, ironbark, oak, gum and ti-tree.⁵⁸ Whilst by the 1860s the land between South Creek and Ropes Creek was well-cleared, on 'Elizabeth Farm' at that time there were still two areas of remnant bush. From half-way down the ox-bow on the south-eastern side of the property appears still uncleared except for the early stockyards and stockman's house on the higher land to the west. The southerly part of 'Elizabeth Farm' was in the 1860s and 1870s still known as 'Quarry Bush' or a 'Quarry Paddock'.⁵⁹ It is likely that the stone for the Lethbridges' house at Werrington was quarried here in 1829–30.⁶⁰ To the west the property had been cleared to the boundary, but immediately beyond the boundary was treed and referred to by the family as 'Richmond Bush'.⁶¹

As soon as the cattle numbers became too large to keep the herds together on 'Phillip Farm', a decision was made to keep some cattle across the Creek to the west, north of the planned homestead site. A house for the stockman was thus erected on 'Elizabeth Farm' in 1807, even before the King family had reached England. Other built fabric such as fencing on Elizabeth's portion existed from that time or slightly earlier.

Rowland Hassall as agent for the Kings kept excellent records. In a letter to Philip Gidley King soon after the King family had left the colony, he reported on 6 October 1807 'we have finished the Stockmans house & Stockyard upon Elizabeth hill...'.⁶²

In the previous June he had paid Anthony Rope, an ex-convict farmer living on a nearby property and another man with the surname of Smith (probably John Smith the soldier living on the farm), £15 for

⁵⁴ National Archives of Australia, SP 857/8, PC 41/190, Deputy Commissioner of Taxation to Department of Interior, 15 May 1941; SP 857/8, PM/203, 26 March 1943.

⁵⁵ *Commonwealth Gazette* 167, 21 August 1941, p. 1836.

⁵⁶ *Commonwealth Gazette* 183, 2 July 1942, p. 1575.

⁵⁷ National Archives of Australia, SP 857/8, PM 46/504, file on 'Dunheved' homestead.

⁵⁸ NAA, SP857/8, PC41/190, 15.4.1941.

⁵⁹ Plan of 'Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey & Lowe; Parr, *John King Lethbridge: Diaries, 1871 & 1880*, pp. 42, 68.

⁶⁰ Letters of Harriet King, ML MSS 1793/2, CY 2482, p.121, 25.2.1829.

⁶¹ Plan of 'Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe.

⁶² ML MSS 710, CY 1192, Hassall to King, 6.10.1807, pp. 93-95.

having built 'a house on 'Elizabeth Farm'. This dwelling had a skillion room, like the one Smith was housed in near Hayes' overseer's house on 'Phillip Farm'.⁶³

There is only one hill that is a good ten to 20 m higher than the creek banks and most other ground on the Kings' farms. That hill is on Elizabeth's farm. The orthographic map shows this as a spur of land running from north to south just west of the South Creek ox-bow. The highest core of this eminence is 40 m AHD, widening in a gradual slope to be 30 m for much of the land between its ridge line and South Creek. Therefore any uncertainty which rests on whether Elizabeth Hill is on 'Elizabeth Farm', appears dispelled.

However another question remains. Elizabeth Hill is a spot on the most westerly of the farms, the furthest distance from Sydney and a ride that involved crossing both Ropes Creek and South Creek, far north of the main track westward that had developed south of the King grants. Why is it chosen to accommodate the stockman's house? The low terrain around the creeks encompassing most of the farms probably provides the answer. In 1806 there had been high floods on the Nepean–Hawkesbury river system. The site of 'Dunheved' homestead on the east bank appears to have been above average flood height, but it seems, the settlers were wary from 1806 onwards and chose the highest land available, for living quarters right along all the waterways.⁶⁴

For the same reason, at about the same time, this ridge land that began on 'Elizabeth Farm' and continued onto 'Mary Farm', was exactly the place where Governor King had planned to put his own dwelling. Harriet in a letter to her husband, Phillip Parker King, told how Mary and Robert Copland Lethbridge had utilized that high land on 'Mary Farm' as the seat of their enterprise, 'Werrington'. Harriet thought it 'a pretty situation' and noted the house was to be built of stone. She explained that:

Copland has begun on his farm on the third rise of ground from the old stockyard...where your father proposed building.⁶⁵

Therefore the western spur or its surrounding land on the 30-40 metre contour, is the likely site of the stockman's dwelling. The stockman's house on 'Elizabeth Farm' was almost certainly built out of timber but may have had brick chimneys like Hayes' own house. The name of the stock-keeper is not known, so it is not clear if 'Simpson's house', which received a hearth in 1814, was that belonging to the stockman on 'Elizabeth Farm' or not. However, provision of a hearth at Simpson's dwelling does firm up the case that sometime between 1807 and 1814 a chimney for the stockman's hut on Elizabeth's portion would have been similarly provided.⁶⁶

From the earliest farming days it appears there was also at least one connecting ford or bridge across the creek to join 'Elizabeth Farm' to 'Phillip Farm', probably after one had followed a track to Hayes' house from the main western road. A drawing of 1840 shows a well-constructed timber bridge almost in front of the 'Dunheved' homestead complex, a little to the south. Although by 1840 the bridge appears a fairly sophisticated one, the layout of the farm and the early combined use of 'Elizabeth Farm' and 'Phillip Farm' suggest that this was a crossing place at least from 1807.⁶⁷

Credibility is given to the idea of reaching the farms by northern tracks to various parts of the farms from what is today the Great Western Highway, by Macquarie's description of the way he and his wife went there by carriage in April 1815, setting out from Parramatta along the road west to the Nepean, and detouring to 'Mrs. King's farm'.⁶⁸

⁶³ ML MSS 710, CY1192, Hassall to King 6.10.1807, pp. 93-95, 97; ML A865, CY2129, Hassall account 1807; Plan of 'Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe.

⁶⁴ J. Barkley and M. Nichols, *Hawkesbury 1794-1994: the first two hundred years of the the second colonisation*, Hawkesbury City Council, Windsor, 1994, p. 178; Ryan, *Reminiscences of Australia, passim*.

⁶⁵ Letters of Harriet King, MLMSS 1793/2, Reel CY2482, p. 121, 25.2.1829.

⁶⁶ ML MSS 710, CY1192, Hassall to King, 6.10.1807, pp 93-95.; ML A865, CY2129, Accounts 1814, p. 56.

⁶⁷ Philip Gidley King jr, sketch of 'Dunheved', 1840, ML. PX*D 379 fo. 26.

⁶⁸ Macquarie, *Journals*, p. 89.

It is clear that 'Elizabeth Farm' played a large part in the stock affairs of 'Dunheved' from 1807, for over the years a significant amount of money was invested in the fencing there. Much fencing was already erected on 'Elizabeth Farm' by February 1807, possibly the western boundary fence. By October 1807, a stockyard had been built on Elizabeth Hill at much the same time that stockyards were constructed on the east side of the Creek at 'Phillip Farm'.⁶⁹

The yard on 'Elizabeth Farm' was for 'the young herd of Cattle which were drafted from the general herd' before October 1807. In all, its 363 rod length (1.8 kilometres) cost £72.12.0. The enclosures which were underway were ongoing with more fencing completed in December 1807 at a further cost of over £47. As early as 1807, in addition to the Concern's cattle, 'Miss Elizabeth' was running her own small herd of three goats, with Hayes reporting two new kids. By 1809 Elizabeth King had 11 goats on her farm.⁷⁰

In 1829 it was referred to by the family as 'the old stockyard' on ground several rises lower than the peak of the hill.⁷¹ The site on Elizabeth Hill, although well out of flood reach, seems not to have retained into the twentieth century, any special enclosure, as indicated on the 1941 plan of the farm drawn up when thoughts of subdividing the lands of 'Elizabeth Farm' were aired.⁷²

Another stockyard was erected on 'Elizabeth Farm' by June 1814. It was 20 rods square with a pen. In all 90½ rods of timber went into the construction. At 6/- per rod the total cost was £27.3.0.⁷³

The need to fence so diligently had been forced on the King family by the almost universal problem of trespass that existed in the colony. In May 1814 Hassall had written to Anna Josepha defending the cost of the earlier fencing on 'Elizabeth Farm', commenting 'I think the time is fast approaching when all lands must be fenced as there are great disputes in the Colony about trespasses done by stock'. The next month he was even more specific, preparing the family, for he believed that 'Our heaviest expense in future will be in making Stockyards and fencing in land for the Cattle'.⁷⁴

The problem was so bad that just one month later, the Kings' agent was apologizing for having to spend £50 purchasing the farm beside 'Elizabeth Farm'. This was 'Blakes Farm' of 100 acres adjoining the north side 'of Miss Elizabeth'. A later letter from Hassall elaborated, softening the blow by indicating that the soil was very good and the property cheap, and telling how he was forced to buy Blake's farm '...in order to prevent any person coming on the farm with stock or for cultivation...'.⁷⁵

The various sketches of the 'Dunheved' complex show some of the surrounding area on both sides of South Creek by the 1830s and 1840s. Immediately opposite the homestead above the bank on 'Elizabeth Farm' can be seen a rectangular paddock running north-south, enclosed with well-made post and three-rail fence on all sides except the creek edge. The sketch Conrad Martens made in 1838, looking across the south-western corner of the homestead to the western side of the creek reveals part of the paddock's southern boundary and a very long stretch of its western side.⁷⁶

Complementary is Owen Stanley's watercolour, also drawn in 1838. It shows that paddock at its northern-eastern corner, clearly emphasizing the quality and sturdiness of the same fencing. Another fence, likely to be on the property's northern boundary, is also post and three-rail, and appears to create a narrow corridor running between the paddock and that boundary. The corridor opens out to

⁶⁹ ML MSS 710, CY1192, Hassall to King, 6.10.1807, pp. 93-95.

⁷⁰ ML MSS 710, CY1192, Hayes to King, 9.10.1807, p. 97; ML A865, CY2129, stock accounts 1807-1809.

⁷¹ ML A865, CY2129; ML865, CY2129; Letters of Harriet King, MLMSS 1793/2, Reel CY2482, p. 121, 25.2.1829.

⁷² NAA, SP857/8, PC41/190, Subdivision map of Dunheved Estate, 1941.

⁷³ ML A865, CY2129, Account 34, 30.6.1814.

⁷⁴ ML A865, CY2129, Account 48, 17.5.1814; ML A865, CY2129, p. 56, 8.10.1814.

⁷⁵ ML A865, CY2129, p. 56, 30.6.1814.

⁷⁶ Conrad Martens, sketch of 'Dunheved', 1838, ML SSV*/ SP CON/MARTENS/33.

give fenced access to the creek, just on the slight bend where the creek has been dammed. It too is open to South Creek.⁷⁷

The north-south rectangular paddock is shown in both drawings to have been almost completely cleared. It is in great contrast to the land behind which remains virgin bush, at least in parts. As this cleared land is on the northern boundary, at the diagonally opposite corner of 'Elizabeth Farm' to the high land, it appears not to have any relationship to the 1807 enclosure which is stated categorically to be on Elizabeth Hill. This smaller paddock may possibly be the second stockyard paddock noted as constructed in 1814.⁷⁸

Alternatively the northern creek paddock may be an enclosed end of a larger east-west paddock only partly cleared. The 1869 plan shows the east-west paddock stretched from the South Creek frontage across Elizabeth's property to its fenced western boundary. If from its inception, it contained the north-south creek paddock within it, it would explain the mechanism whereby cattle could be taken to the smaller paddock for watering, but usually retained and enclosed within the long paddock. The totality of the east-west long paddock, if built as early as the watering paddock would represent an enclosure along the 96.5 chain fence later built by Robert Copland Lethbridge.

Other information found on the 1869 plan of 'Dunheved' about later fencing could indicate other large, early paddocks to the south of the northern creek paddock which was illustrated in 1838 and 1840. It is possible that these were undertaken before 1870, and that the fencing shown in the later plan was just renewal work. Such a fence, whatever its first date of erection, created at 'Elizabeth Farm' three sizable east-west paddocks.⁷⁹

The middle, east-west paddock would have included the road from the creek crossing to Elizabeth's Hill. Along the bank of South Creek near the crossing, the lands at the top of the slope are also cleared extensively. Martens' sketch of 1838 shows a single tree on the southern fence of the north creek paddock and another within, while Philip Gidley King jr's broader view of the 'Dunheved' homestead in 1840 shows the fence line beside the road and the bridge over South Creek to be also post and three-rail on both sides of South Creek. On 'Elizabeth Farm' another single tree, also near the creek-crossing, can be seen. Similarly, Stanley's view of the north boundary where it meets South Creek confirms cleared banks and a solitary tree in the open corridor to the water. No stock is shown in the paddocks around the creek which form the background to the sketches and paintings of the period.⁸⁰

Through the southernmost of these long paddocks the road to the hill would have continued, and this paddock also enclosed the stockyards of 1807 as it encompasses the northern base of the hill. If this area was not cleared and fenced before 1870 it would have formed part of the bushland that the King family came to call Quarry bush or Quarry Paddock.⁸¹

The 1807 dwelling is the only cottage to date known to be on 'Elizabeth Farm' by 1838.⁸²

It is said that Anna Josepha, receiving all five shares of the farm whilst the children were young, was sent around £1,000 per year from the South Creek farms. Once Phillip and Harriet came out to manage the Concern, the children as adults received their own shares. The sheep were run under the

⁷⁷ Owen Stanley, 'Capt. King's farm Dunheved', watercolour, 1838, ML, PXC 279 fo.19.

⁷⁸ ML, A 865, CY 2129, Hassall's account no. 54, 30.6.1814; Conrad Martens sketch of 'Dunheved', 1838, ML SSV*/ SP CON/MARTENS/33.

⁷⁹ Plan of 'Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey & Lowe.

⁸⁰ Conrad Martens sketch of 'Dunheved', 1838, ML SSV*/ SP CON/MARTENS/33; Owen Stanley, 'Capt. King's farm Dunheved', 1838, PXC 279 fo.19; Philip Gidley King, 'Dunheved'. 1840, ML, PX*D 379 fo.26.

⁸¹ Plan of 'Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe; Parr, *John King Lethbridge: Diaries, 1871 & 1880*, pp. 42, 68.

⁸² Conrad Martens sketch of 'Dunheved', 1838, ML SSV*/ SP CON/MARTENS/33.

account of Phillip Parker King and proceeds of the wool clip, a fifth share, were credited to all, including Elizabeth in England.

After Elizabeth King married Charles Runciman she remained in England. Throughout her life, therefore, the affairs of her farm in New South Wales continued to be handled by Phillip and Harriet as part of the general ‘Dunheved’ Concern. There had been a marriage settlement regarding her Australian lands and her share of those she inherited in Devon. On Elizabeth’s death, Phillip Parker King, her brother, in 1838 sought clarification of a law-suit regarding its settlement that was to come before Chancery. Remunerations had been made regularly to Elizabeth and Charles in England during her lifetime from the profits of the sheep run on ‘Dunheved’, and continued, it seems after her death to Charles until the settlement of the suit.⁸³

In December 1835 Phillip Parker King credited to Charles’ English account £24.2.8, ‘for his 1/5 proportion of proceeds of 16 Bales of Wool marked PPK less £100 forwarded to him 16 November 1835’. A year later Charles was sent £400, and £303.18.11 followed in February 1837.⁸⁴ The 1836 settlement is itemized to show that it was derived from earlier figures. It included the flock of 126 sheep which were grazing on ‘Elizabeth Farm’ in 1829. Over the next two years also given, the increase was substantial: by 1830 sheep numbered 176, and the following year, 327. In a return letter Charles Runciman had suggested that money be reserved from his settlements for ‘restocking the farm at any future period’ and Phillip Parker King retained £75.⁸⁵

Eventually Charles Runciman sold ‘Elizabeth Farm’ to Phillip Parker King. The legal matters had been made more difficult by the distance the King family was from their solicitors and by mails being lost on the voyage from England on several occasions. Philip Gidley King jr recalled only the generalities of the settlement and did not have the detailed documents available when writing about the title in 1891, 35 years after he had inherited it:

...Mr Charles Runciman...sold to Capt. Phillip P. King her brother the said farm together with as I understand the share held by his wife in the stock which had been at Dunheved and elsewhere- the deed was...transmitted to New South Wales- after a time the whole of these[not?] forthcoming...we made for a duplicate conveyance but I don’t think any [was ever?] received...In due time the ownership passed to me P.G. King and I wrote in 18— to the solicitors office but received no answer...I have letters from Mr Runciman to Capt. King and myself. This farm should be brought under the Real Property Act. I have had personal possession since 1856.⁸⁶

2.3.2 Documentary evidence for uses of ‘Elizabeth Farm’ after 1840

Thus by the 1840s or 1850s, Phillip Parker King owned ‘Elizabeth Farm’, although it was the Robert Copland Lethbridge family that occupied the ‘Dunheved’ estate. Robert Copland was active in the ongoing fencing creation and repair on ‘Elizabeth Farm’. It is clear from Hassall’s letters that the boundary of the farm was fenced as a priority early, but that within the grant was mainly open ground from the South Creek to the western boundary, with possibly minimal paddock fencing and some remaining bush. Robert Copland Lethbridge constructed a long east-west fence. This either created another paddock behind that of 1815–1837, or it re-fenced the previously used paddock. In the same year, his son, John King Lethbridge, built another east-west fence across the entire grant in the vicinity of the ox-bow, giving or continuing to give, the main part of ‘Elizabeth Farm’ two impressively large additional paddocks.⁸⁷

⁸³ ML A1977, CY876, p. 54, 13.12.1836, p. 59, 10.12.1835, p. 92, 10.10.1838.

⁸⁴ ML A1977, CY876, pp. 92, 59-68.

⁸⁵ ML A1977, CY876, pp. 54, 57, 13.12.1836.

⁸⁵ ML A1977, CY876, pp. 54, 57, 13.12.1836; pp.59-65, 10.10.1838.

⁸⁶ ML A 1977, CY876, p.751, 2.11.1891. ‘Elizabeth Farm’ was converted to Torrens title by Primary Application 26115 (parish map of Londonderry)

⁸⁷ Plan of ‘Dunheved’, prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe.

The known documentation indicates that the farm continued to provide pastures for stock, with accommodation related only to this purpose. The stock was mainly cattle in the early years, and then cattle and sheep, owned by the total Concern (see sections 1.2 and 1.3).

A fire caused much of the fencing to be lost in 1889 in the north-western corner of 'Elizabeth Farm'. Its renewal was organized by Henry Goldfinch with the labour done by Luxford. At the same time Goldfinch supervised new fencing to enclose or re-enclose several more smaller paddocks or yards in the north-eastern corner. These were behind the creek stockyard shown in the 1838–1840 sketches and took up the area to its west, in the north-east corner of the large east-west paddock.⁸⁸ The southernmost paddock on 'Elizabeth Farm' remained bushland in part beyond the turn of the century.

The farms, including 'Elizabeth Farm' were sold in the years following the death of Philip Gidley King jr in 1904, and by 1939 'Dunheved' was owned by I'Anson. In March 1941 Mr F.C. Pye bought most of the property, only to sell the lands on the eastern side of South Creek to the Commonwealth Government a month later.⁸⁹ His 2,521 acres, along with Mr F. Dumble's 313 acres and Mrs E.M. Smith's 47 acres were to become a Munitions Factory site, under the Federal Department of the Interior.⁹⁰

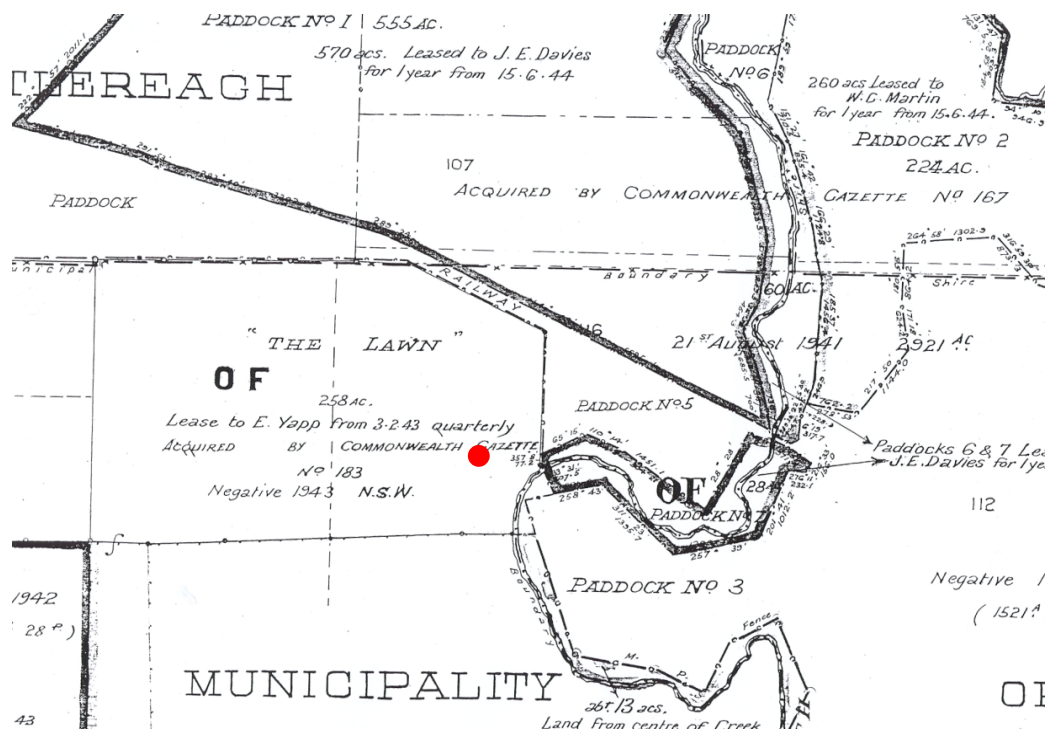


Figure 2.3: Map of 'Elizabeth Farm' in 1941. National Archives of Australia, SP 857/8 PM 1941/203, map neg. no 3294.

Originally Mr Pye had planned to subdivide all of the 'Dunheved' lands. The plans show that 'Elizabeth Farm' [portion 116] was to be divided into eight allotments. Lots 34 and 37, which comprised most of the farm's area, were each to be retained as allotments suitable for grazing, of 195 acres and 176 acres respectively. Two smaller allotments of 40 acres and one of 34 acres were

⁸⁸ Plan of 'Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe.

⁸⁹ NAA, SP857/8, PC41/190, 15.5.1941.

⁹⁰ NAA, SP857/8, PC41/190, 23.5.1941.

planned for the north-east corner in the upper crook of the ox-bow, and three similar farms of 22 or 33 acres in the lower crook where the eastern section of the Quarry Bush was located.⁹¹ Instead, most of ‘Elizabeth Farm’ was acquired by the Commonwealth Government in 1942, gazetted on 2 July. In 1943, the Commonwealth leased the north-west sector of ‘Elizabeth Farm’ to Ernest Yapp for grazing cattle. This includes the study site, ADI 3.

The land, known as ‘The Lawn’, was described as ‘undulating, well improved for grazing, watered by South Creek’, though only in its south-east corner (Fig. 2.3).⁹² The 254 acres to the south, also part of the original ‘Elizabeth Farm’, had been owned by a retired butcher, Leslie S. James, since April 1940.⁹³ The fence which separated Pye and James was still the sapling and post fence erected by Lieutenant Goldfinch in 1888. Yapp complained in 1944 that it ‘is very old and, of course, needs constant attention in detail to keep it stock proof’.⁹⁴ A narrow strip down the west side of James’ land gave Yapp access to Dunheved Road from the north-western part of ‘Elizabeth Farm’.

So it was, that the Commonwealth owned on its northern half of ‘Elizabeth Farm’ three sections: ‘The Lawn’ and the separate paddock 5 to its east, as well as the part of paddock 7 which was west of South Creek above the ox-bow (Fig. 2.3).⁹⁵

The southern part of ‘Elizabeth Farm’ was not acquired by the Commonwealth and was developed for housing, now part of Werrington Downs.⁹⁶

Today, the two large sheds on ‘Elizabeth Farm’, erected about 1956 (Fig. 3.2), appear to straddle the Commonwealth lands of paddock 5 and ‘The Lawn’ above the ox-bow. They are the only remaining structures on the northern section of ‘Elizabeth Farm’ and have no connection with the Munitions Factory or the ADI 3 site.⁹⁷

2.4 Need for brickmakers by the ‘Dunheved’ Concern

2.4.1 Buildings on ‘Elizabeth Farm’, 1807 onwards

Elizabeth Farm’ was used for grazing stock from the beginning. As discussed in section 2.2, by the end of 1807 there were nearly two km of fencing, a stockyard and a stockman’s house with a skillion. The site of the stockman’s house and the yards can be identified as the higher spur of land above the 30 to 40-metre contour on the western side of ‘Elizabeth Farm’. This is not the site of the identified brick-scatter, which lies further east on the 25-metre contour, marked ADI 3 (Fig. 2.4).

There is no evidence about the construction of the stockman’s house on the higher land, but it was probably made of timber. It is likely to have had a chimney and a hearth from the beginning and these are likely to have been of brick, as they were in the extensions to Hayes’ cottage across South Creek on Phillip’s Farm and in an unlocated hut occupied by a man called Simpson in 1814.⁹⁸ Anthony Rope, the builder of the hut on ‘Elizabeth Farm’ in 1807, had been a bricklayer in his early years in the colony, before he became a farmer in 1791.⁹⁹ The origin of bricks used on the King estate before 1813 is not, however, documented.

⁹¹ NAA, SP857/8, PC41’190, Subdivision plan of Dunheved, 1941. The plan was drawn by R.J. Crampton, real estate agents of Sydney.

⁹² NAA, SP 857/8. PM 43.275, plan, neg. 2116.

⁹³ NAA, SP 857/8, PM 41.205, Deputy Crown Solicitor to Crown Solicitor, 29.4.1940.

⁹⁴ Plan of ‘Dunheved’, prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe; NAA, SP 857/8. PM 43/275. Yapp to Department of Interior, 24.4.1944.

⁹⁵ NAA, SP 857/8. PM 43/275, plan, neg. 2116.

⁹⁶ NAA, SP857/8, PM/203, PM/1941/203, plan B23, map neg no. 3294.

⁹⁷ Mary Casey, personal communication to Ian Jack, May, 2008.

⁹⁸ ML A 865, CY 2129, Hassall’s account, 31 December 1814.

⁹⁹ M. Gillen *The Founders of Australia*, Library of Australian History, North Sydney 1989, p. 313.

In this context, it is significant that the scatter of sandstock bricks and the remains of two brick walls on ‘Elizabeth Farm’ today, which constitute site ADI 3, are interpreted by the archaeologist as relating to brickmaking activities rather than to a residence.¹⁰⁰

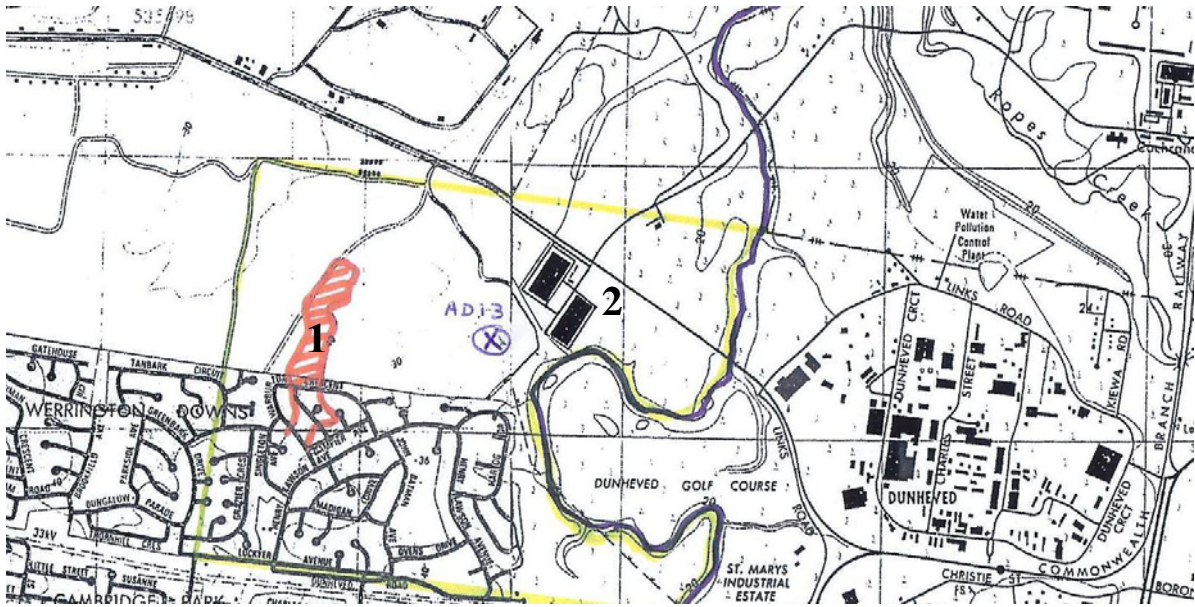


Figure 2.4: Known buildings on ‘Elizabeth Farm’: 1 - vicinity of the stockman’s hut of 1807; 2 - sheds built after the 1960s. Central Mapping Authority, 1:25000 maps, Riverstone 9030-1S, Springwood 9030-4S.

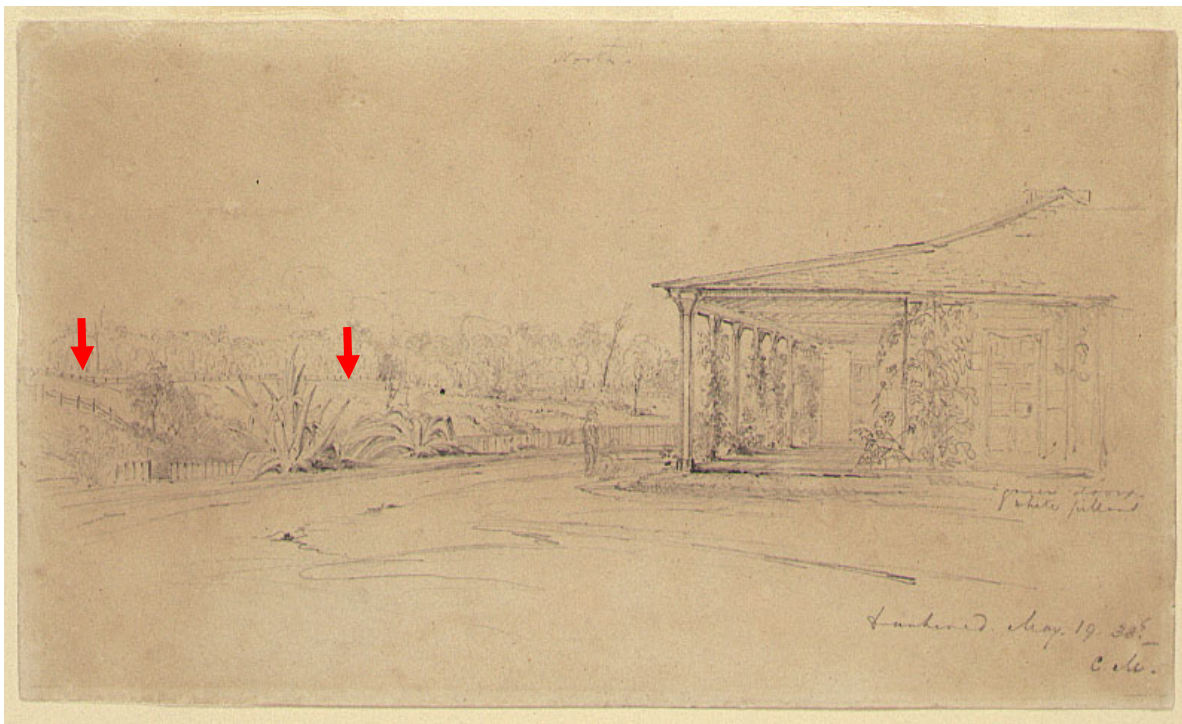


Figure 2.5: ‘Dunheved’ homestead, 19 May 1838, pencil sketch by Conrad Martens. The location of the fenced paddock shown on ‘Elizabeth Farm’ by that date is indicated by the red arrows. Mitchell Library, SSV*/SP COLL/MARTENS/33, annotated.

¹⁰⁰ Casey and Lowe Associates for Brayshaw McDonald Pty Ltd., ‘Historical Archaeological Survey St Marys Munitions Factory, for Australian Defence Industries’, October 1994, 19, Figure 15, Photo 3.

2.4.2 Buildings on ‘Dunheved’, 1806 onwards

The focal point of the King estate was ‘Phillip Farm’, on the east bank of South Creek. The overseer, William Hayes, was accommodated in a cottage built in 1805 or 1806 on ‘Phillip Farm’, just north of South Creek’s ox-bow.¹⁰¹

The area behind this cottage was quickly developed by 1807, with an enclosed garden and orchard some 90 metres square.¹⁰² Men’s huts were built around the same time along with a storehouse which had a skillion addition for John Smith ‘the soldier’, who assisted in the building of the stockman’s house on Elizabeth Farm. There was also by 1807 a stockyard on Phillip’s Farm for milch cows¹⁰³ and in 1808 a thatched barn nearly 10 metres long was completed. This barn appears to have been built in brick: the evidence for this is the colouring on Owen Stanley’s original watercolour painted in 1838.¹⁰⁴ Governor Bligh had built a brick barn at Pitt Town by 1807,¹⁰⁵ so the early date is not unlikely.

In 1813–14, considerable improvements were made. A new shed for the waggon and carts was 32 feet long and 18 feet wide, framed and weather boarded with two doors, built at a cost of £30. The fine new barn which cost £70, was, like the 1808 barn, 30 feet long: the 1813 barn was sheathed in weatherboard, 10 feet high, with a shingled roof.¹⁰⁶

Hayes’ original cottage of 1805–06 was probably built in weatherboard or slab, with a shingled roof. However, its chimneys would almost certainly have been made of brick. Clay bricks also featured in substantial extensions to the cottage made in 1813 and 1814, when a new room was brick-nogged by an employee called Armstrong. Some 16 metres (49’ 7”) of brick nogging were installed in the room which measured 13 feet by 15 feet. This seems to indicate that all four walls of the new room were made of brick infill between the timber framework. Armstrong then plastered the finished walls and whitewashed them. The new room also had a brick chimney and a brick hearth. Another chimney was built for the kitchen, and the five existing chimneys repaired. The privy received a brick floor and a watercourse made of bricks was laid around both the dwelling and the kitchen building.¹⁰⁷

The first specific mention of the purchase or manufacture of bricks on the King estate is in 1813, when a man called Morgan was paid £1.5s. for 1000 bricks. It is not stated whether these bricks were made on the estate or whether they were purchased from outside. The normal practice was to cart heavy building materials such as stone blocks and bricks as short a distance as possible. Since the clays on the King estate are known from later evidence to be very suitable for making bricks, it is possible that Morgan was brought in to fire bricks somewhere on the family’s South Creek farms. No-one with the surname Morgan is listed in the colony between 1805 and 1828 as a brickmaker. However, an Edward Morgan, who had arrived on the *Guildford* in 1812 to serve a life sentence, had a ticket-of-leave and was working as a labourer for John Blackman at Evan in 1828. In 1813 when the bricks were supplied to ‘Dunheved’, Edward Morgan would have been 42 years of age.¹⁰⁸

The work on the overseer’s cottage continued in 1814. A separate kitchen 13 feet wide by 14 feet long was built at a cost of £112 18s. and paid for by 30 June 1814. Rowland Hassall told Anna

¹⁰¹ ML MSS 710, CY 1192, Hayes to Governor King, 9 10.1807, p. 97.

¹⁰² ML MSS 710, CY 1192, Hassall to Governor King, 6 October 1807, p. 96.

¹⁰³ ML MSS 710, Hayes to Governor King, 9 October 1807, p. 97.

¹⁰⁴ ML MSS 865, CY 2129, Hassall’s account, 30 June 1808; ML, PXC 279, fo. 19.

¹⁰⁵ Hordern House, *Colonial Paintings*, 1995, lot 6.

¹⁰⁶ ML A865, CY 2129, Hassall’s account, 30 June 1813.

¹⁰⁷ ML A865, CY2129, Hassall’s accounts, 30 June 1813, 30 June 1814.

¹⁰⁸ ML A865, CY 2129, Hassall’s account, 31.12.1813; *Census of New South Wales November 1828*, 274 M2991. The date of the ship’s first arrival in Sydney is January 1812 (J. S. Cumpston, *Shipping Arrivals & Departures, Sydney 1788-1825*, Roebuck Society, Canberra 1977, p. 81), but is shown as 1810 in the 1828 Census.

Josepha King that ‘finding every material except brickwork’ had cost another £18.0.0.¹⁰⁹ This means that the bricks were additional to the sum paid to the builders but there is no separate account detailing how they were acquired.

The work carried out on this dwelling in 1813–1814 and paid for by King’s widow, Anna Josepha, was designed to elevate it to a new level of aesthetics and comfort. Perhaps it is no coincidence that such refinements should be made around the time Phillip Parker King reached manhood and was about to begin to shoulder the responsibilities of the Concern, possibly planning already the visit to check personally on the Concern which eventuated in Harriet’s stay in the colony in 1817.

It was the overseer’s renovated cottage that Macquarie visited on his next trip to ‘Mrs King’s farm on South Creek’ in April 1815 on his way to the new town of Bathurst across the mountains. Macquarie’s use of the term ‘took our quarters up here for the night’ suggests that he and Mrs Macquarie may have actually stayed in the newly decorated and furnished King dwelling, since on the previous occasion he had specifically indicated that Rowland Hassall had ‘accompanied us to our encampment...staying to dine with us’. The Macquaries and Hassall were joined for dinner by Major Antill, Lieutenant Watts, Doctor Redfern, Mr Cox and Mr Meehan, and the consensus was that ‘We all dined here very comfortably’. The ‘Dunheved’ homestead, even before it hosted its owners, had pleased the governor.¹¹⁰

On the return journey in May 1815, Macquarie noted even more positively and specifically, that in the company of Hassall, Antill, Watts, Doctor Redfern and Mr Lewin:

Mr. Hassall provided a most excellent dinner for us at Mrs. King’s overseer’s house, and to which we sat down at 5 o’clock, drank tea at 7, and went to bed at 9 o’clock...¹¹¹

By this statement of Macquarie’s, confirmation is given of the existence by 1814 of a sizable, comfortable overseer’s house on the King family farms with good cooking facilities in the new kitchen.



Figure 2.6: ‘Dunheved’ in 1838, watercolour by Owen Stanley. Mitchell Library, PXC 279 fo.19

¹⁰⁹ ML A865, CY 2129, Hassall’s account, 30 June 1814.

¹¹⁰ Macquarie, *Journals*, pp. 89-90, 19-20.

¹¹¹ Macquarie, *Journals*, p. 109.

After this spurt of activity in the middle of the Macquarie period, the next stage in the evolution of 'Dunheved' took place in the 1820s and seems to have been largely achieved by 1827. The evidence is purely pictorial, since no series of accounts survives after 1822. There are two vistas of the homestead cluster at 'Dunheved', one dating from 1838, the other from 1840.

One was the watercolour painted in 1838 by Owen Stanley, who visited his old commander, Phillip Parker King, while he was sailing round the world on the 'Britomart'.¹¹² Stanley uniquely reveals details of the rear of the homestead complex, painted from the north-west (Fig. 2.6).

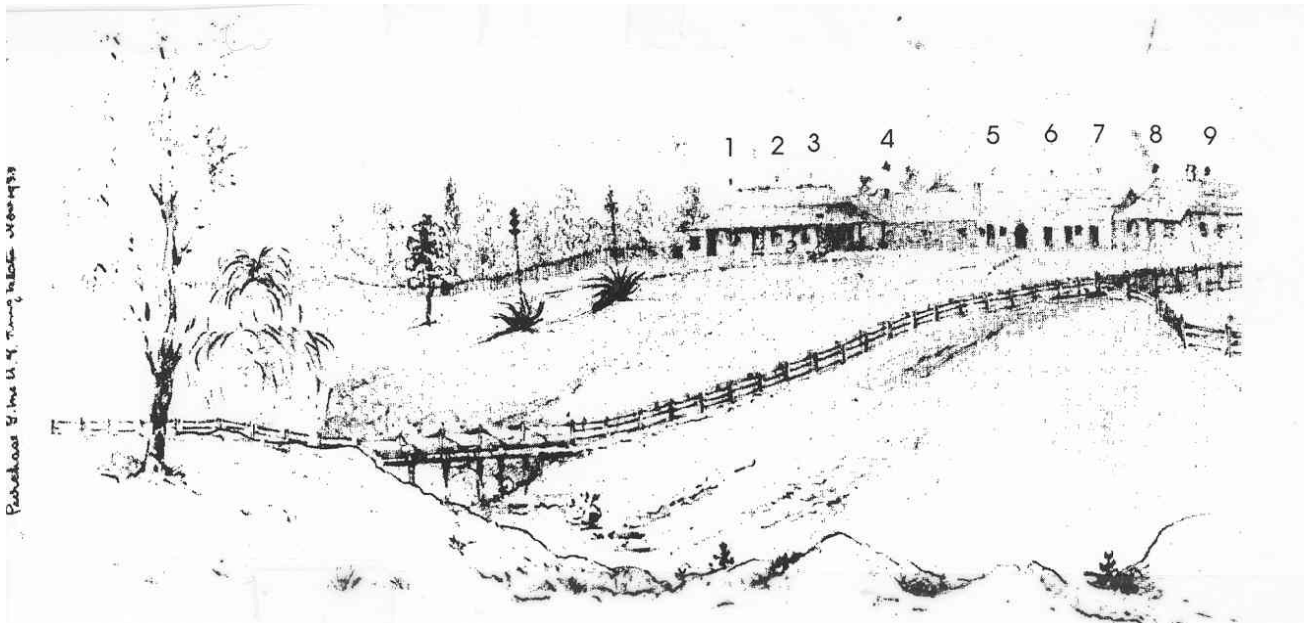


Figure 2.7: 'Dunheved' in 1840, pencil sketch by Philip Gidley King jr. Mitchell Library, PX*D 379 fo.26.

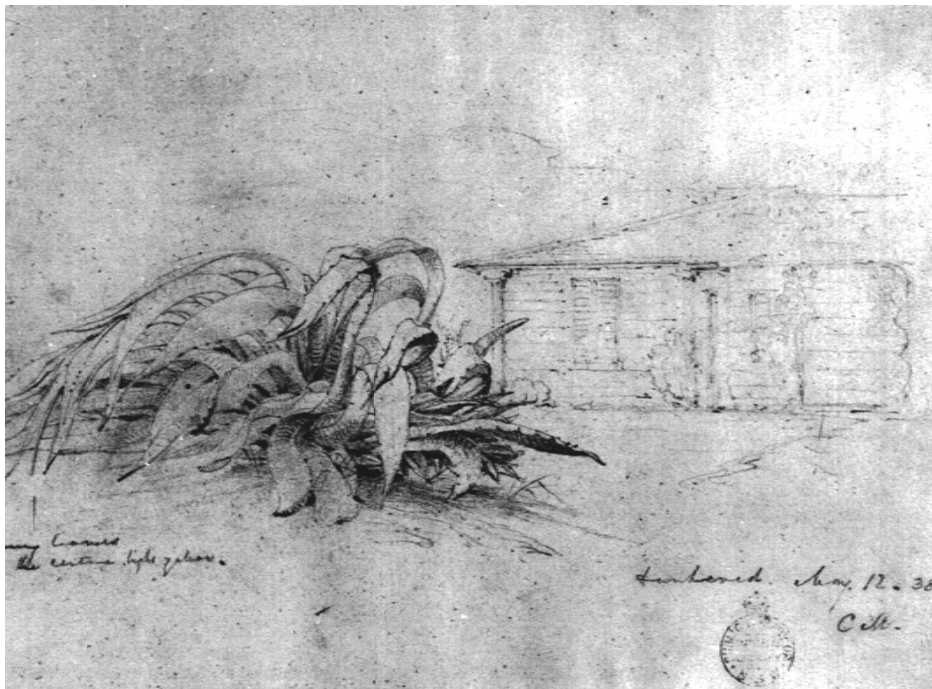


Figure 2.8: 'Dunheved' homestead, with a yucca in front of verandah, pencil drawing by Conrad Martens, 12 May 1838. Mitchell Library, PX*D 307-1/

¹¹² ML, PXC 279 fo.19.

The other image, from a different angle, was drawn in pencil in 1840 by Philip Gidley King, jr, the eldest son of Phillip Parker King (Fig. 2.7). This sketch shows the western aspect of the complex. From left to right, the buildings are identified by P.G. King on the dorse of the sketch as: the homestead with a bedroom on the left and a large sitting-room to the right; then, behind and to the right, a ‘cottage with 3 rooms in it, store room and pantry’; then a farm store-room with the kitchen and dairy behind; and finally on the right-hand edge of the painting, a servant’s cottage.¹¹³

There are also a number of pencil sketches by Conrad Martens, drawn in May 1838, which give glimpses of the house and its setting.¹¹⁴

Because of the lack of precise documentary information, the way in which the complex evolved between 1814 and 1838 is not knowable in detail. There are two principal explanations. The less plausible scenario is that Hayes’ extended cottage of 1814 was actually the bones of the homestead shown in the 1838 and 1840s sketches. To allow this to fit completely with Philip Gidley King’s drawing of 1840, however, the three-roomed cottage shown behind the homestead must have been built between Hayes’ house and the large orchard sometime between 1814 and 1840. The only alternative would be that it had developed from the storeroom with John Smith’s skillion built in 1807, but this would be inconsistent with Stanley’s watercolour.

More simply and more plausibly, one might take the view that after Hayes’ house was extended to three rooms in 1814, a new homestead specifically for the King family was begun. This development could date either from the early 1820s while Harriet and (sometimes) Phillip Parker King were still in the colony or else between 1832 and 1837 prior to the sketch of 1838. In 1827 the Irish family of Flanagans, who came to ‘Dunheved’ after minding the King sheep at Bathurst, were living in the ‘house by the garden’.¹¹⁵ On his 1840 drawing Philip Gidley King jr mentioned ‘the garden which is very pretty before this Cottage [the three-roomed cottage]’¹¹⁶, so it is likely that the Flanagans were accommodated there.

The first date for the homestead, in the early 1820s, is the more plausible, because of Harriet’s reaction when she arrived at ‘Dunheved’ in 1827, writing to her husband that it was ‘a very nice house indeed, now, far better than I expected, the verandah is all round and a very nice width’.¹¹⁷

‘Dunheved’ homestead and its out-buildings remained in existence for over a century. For ten years from April 1839 Phillip and Harriet were away at Port Stephens as Phillip had been appointed the Commissioner of the Australian Agricultural Company. The drought and depression from 1838 to 1845 affected the Australian Agricultural Company, as well as many others including Mary and her husband Robert Copland Lethbridge, who were financially ruined and had to rent out ‘Werrington’, finding refuge on ‘Phillip Farm’, living in the ‘Dunheved’ homestead. The managers at ‘Dunheved’ when the Lethbridges were still at ‘Dunheved’ included J. G. Hand.¹¹⁸

By that time Phillip Parker King had retired and was living with Harriet in Sydney. Both were dead by 1874. The estate of ‘Dunheved’ then passed to the eldest son, Philip Gidley King jr, who had sketched the homestead in 1840. But the property appears to have been occupied in the later Victorian period by relatives, John King Lethbridge, John Lethbridge King and later by Lieutenant H.E. Goldfinch.¹¹⁹ Philip Gidley King jr did not die until 1904.¹²⁰ Although a good deal of attention was paid to maintaining and renewing the fencing on all parts of the estate, including ‘Elizabeth

¹¹³ ML, PX*D 379 fo.26.

¹¹⁴ In particular, Mitchell Library, PX*D 307-1; Mitchell Library, SSV*/SP COLL/MARTENS/33.

¹¹⁵ Walsh (ed.), *The Admiral’s Wife*, pp. 60-61.

¹¹⁶ ML PX*D 379 fo.26d.

¹¹⁷ Walsh, (ed.), *The Admiral’s Wife*, p. 62.

¹¹⁸ Ryan, *Reminiscences of Australia*, p. 341.

¹¹⁹ *ADB*, II, p. 63; Ryan, *Land Grants, 1788-1809*, pp. 338, 341, 343.

¹²⁰ F. O’Grady, ‘King, Philip Gidley (1817-1904)’, *ADB*, V, p. 30.

Farm', there does not seem to have been any significant building done and the homestead area was not dramatically changed.¹²¹



Figure 2.9: 'Dunheved' homestead in the early twentieth century. Photograph in possession of a member of the Lethbridge-King family, copied by Jan Barkley Jack in 1988.

John King Lethbridge in 1871 transported some bricks from 'Dunheved' in a single unaided trip to his house, 'Werrington', which was rented out.¹²² They are most likely to have been left-over bricks. The only building of note erected by the family in the later Victorian period was on newly purchased land to the east of 'Dunheved'. John King Lethbridge and his family left 'Dunheved' about 1877 for their new house called 'Tregear' ['Tregear'], a homestead not dissimilar to 'Dunheved'.¹²³

'Tregear' ['Tregear'] had brick chimneys, so bricks would have been required in 1876 and 1877. Perhaps these were also from 'Dunheved', either newly made or from stocks held there, left over after some bricks were sent to 'Werrington' in 1871.

In the twentieth century, 'Dunheved' passed from the hands of the King family and most buildings on the estate deteriorated. By 1941, when the Commonwealth was purchasing much of the former King estate, the old homestead buildings were said to be 'in such a state of dis-repair that only a

¹²¹ Plan of 'Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe.

¹²² Parr (ed.), *John King Lethbridge: the Diaries, 1871 & 1880*, p. 51.

¹²³ Jan Barkley, *At Home in Tregear*, p. 5.

conservative value can be attached to them'.¹²⁴ The complex by the Commonwealth valuer was described as a:

Brick Cottage of about seven rooms, numerous out-buildings of weatherboard and large slab sheds.¹²⁵

The original house was probably brick-nog rather than brick, but otherwise the description is recognizable as the final stages of the homestead built for Phillip Parker King and Harriet in the 1820s. In 1827 Harriet had added a room to balance the existing nursery wing, making a house of four or five rooms. By 1838, when the house attracted artists' sketches, the wing enclosed by the northern verandah is clearly two rooms deep. From then on 'Dunheved' was a home with a good deal of brickwork, containing some seven rooms. By 1941 it was in terminal decay.¹²⁶

At first, after the Commonwealth acquired the estate, the overseer for the last private owner, F.C. Pye, occupied part of the homestead, but he left, the buildings on the site were demolished and the debris was cleared away in mid-1947. The whole area was 'left in a clean and tidy condition' by November 1947.¹²⁷

2.4.3 St Mary Magdalene Church, St Marys, 1837–1840.

The King family was staunchly Anglican. It was the aspiration of Governor King's widow, Anna Josepha, on her return to New South Wales, that a church should be built for her family and the use of surrounding property owners and others in the area. Like her husband before her, she wished to remember her past in England, desiring it should be named after the church of the same name in Launceston, Cornwall. To accommodate her wishes, her son, Phillip Parker King, donated land to allow the construction of the church of St Mary Magdalene beside the main western road near South Creek.¹²⁸

Bishop Broughton laid the foundation stone of a new church on the land given by the Kings on 22 November 1837.¹²⁹ There was already a slab building on the Great Western Highway used as a place of worship and this remained in use while the new church was being built between 1837 and 1840.¹³⁰ Construction of St Mary Magdalene Church took place between November 1837 when the foundation stone was laid and April 1840 when it was consecrated by Broughton.¹³¹

As a philanthropic gesture befitting one of the most prosperous of the local pastoralist families, the King family donated the bricks for the church's construction.¹³² The June 1920 obituary on a local identity, George Shadlow, who died at the age of 89 years, and who had talked of his father, Thomas Shadlow, recalled how:

He knew all about the building and opening of the Church of St Mary's Magdalene. The bricks used in the construction on the building were made on Dunheved Estate and donated by Mr King, and the carting of these was the contribution of the late Mr [Thomas] Shadlow.¹³³

The bricks were made on 'Dunheved' by a free immigrant, James Payne¹³⁴ and where they are visible today under the present cement rendering are pale yellow in colour, as accords with the local clays.¹³⁵

¹²⁴ NAA, SP 857/8, PC41/190, valuation, 23 May 1941.

¹²⁵ NAA, SP 857/8, PM41/206, Williams to Department of Interior, 3.6.1941.

¹²⁶ Walsh, (ed.), *The Admiral's Wife*, pp. 61-62; ML, PXC 279 fo. 19.

¹²⁷ NAA, SP 396, S1/12, Commonwealth reference cards, St Mary's; SP 857/8, PM46/504, Director of Works to Department of Interior, 27.11.1947.

¹²⁸ Stacker, p. 111.

¹²⁹ P.W. Gledhill, *Church of St Mary Magdalene, St Marys (formerly South Creek): a Souvenir Book of the Church and Parish*, 1937, p.11.

¹³⁰ Gledhill, *Church of St Mary Magdalene*, p. 11; Owen Stanley's sketch of the slab church, 1838, Mitchell Library, PXC 279 fo.18.

¹³¹ J. McD Jones, *Nepean District Cemetery Records 1806-1976*, author, Sydney, 2001, p.173.

¹³² Mr George Luxford, descendant of James Payne, personal communication, 19.4.2008.

¹³³ *Nepean Times*, 19.6.1920, p. 2.

¹³⁴ Stapleton, *South Creek-St Marys*, p. 7.

The man who made these bricks, James Payne, was 23 years of age at the time the building of St Mary Magdalene Church began. He had just become a tenant farmer on the King estate in 1838.¹³⁶ By 1869 Payne and his wife Ann were farming over 200 acres at the extreme north of Anna Josepha's original grant, straddling Rope's Creek.¹³⁷ He lived on until 1898, when he was buried at St Mary Magdalene's graveyard, aged 84.¹³⁸

Payne made the bricks somewhere on Dunheved estate. Little is known of his activities as a brickmaker, although he is thought to have worked at some stage with a later local brickmaker named Potts.¹³⁹

Thomas Shadlow is shown in the 1839 Directory as a settler on South Creek. Like Payne, he was a free settler farming in the Evan area, aged at that time 37 years of age, having arrived in the colony in 1821. His holding in 1828 had been a modest 41 acres in size, 36 of which he cultivated and on the rest ran his 12 cattle.¹⁴⁰

2.5 Brickmaking on Nineteenth-Century 'Dunheved'

2.5.1 Summary of likely brickmaking needs

Much building took place on the five properties which constituted the King family's 'Dunheved' and acquisitions that were added to the original Concern over the years. As discussed in section 3, the constructions that involved bricks in their fabric appear mostly to have been built on 'Phillip Farm' or on 'Elizabeth Farm' over a period of around thirty years, between 1806 and 1838. Many of these bricks were most likely made during the period that Phillip Parker King began interesting himself in the New South Wales properties at South Creek up to 1832, even though he spent little time in the colony during this period. The works were delegated to his agent Rowland Hassall to organize and his overseer on the property, William Hayes, to implement. Whilst she was in the colony, Phillip's wife Harriet was the catalyst for some of the work.

The records for the period 1807 up to 1820 are extant and so the works during this time are well-documented, although still somewhat ambiguous. During this time it is known that 2,600 bricks were ordered for use on 'Phillip Farm' for a variety of uses, mostly to repair and gentrify the earliest cottage on the site, the house of overseer William Hayes.

A few of these may have been used on 'Elizabeth Farm' where the stockman's house was built in 1807 (seemingly the only building fabric apart from the two modern sheds on that farm) because the house probably had some brick fabric such as a hearth or a chimney.

More bricks could have been used in ongoing expansion of the main homestead after 1827, until Phillip Parker King moved to Port Stephens in 1839, but this does not appear to relate to extensive works. Tough economic times leading into a depression, did not favour home extensions, so as far as is known there was no building or renovating undertaken on the homestead or any other part of 'Dunheved' during the period from the late 1830s into the 1860s. Little change to the fabric was to be expected for the next thirty years as the Robert Copland Lethbridges farmed 'Phillip Farm', and

¹³⁵ Personal observations by Jan Barkley Jack and Ian Jack of bricks exposed in the lowest courses of St Mary Magdalene Church, St Marys, 19.4.2008.

¹³⁶ Greville's *Official Post Office Directory of New South Wales*, Greville, Sydney 1872, sub St Marys: Stapleton, *South Creek-St Marys*, p. 16; George Luxford, descendant of James Payne, personal communication to Jan Barkley Jack, 19.4.2008.

¹³⁷ Plan of 'Dunheved', prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe.

¹³⁸ J.McD. Jones, *Nepean District Cemetery Records, 1806-1976*, p.191 no.3752.

¹³⁹ George Luxford, descendant of James Payne, personal communication to Jan Barkley Jack, 19.4.2008.

¹⁴⁰ *New South Wales and Port Phillip General Post Office Directory for 1839*, Macle hose, Sydney 1839, Directory, p. 143; Sainty and Johnson (eds.), *Census of New South Wales November 1828*, pp. 333, 426.

then their son John King Lethbridge followed them as a temporary measure until he could commence his own farm ‘Tregeare’ [‘Tregear’] on the eastern side of Ropes Creek. Other resident members of the family, like the Goldfinches, did not own the property and so are unlikely to have built.

After 1840 the first direct reference to bricks on ‘Dunheved’ comes from John King Lethbridge. These bricks are referred to briefly in 1871 as being transported by Lethbridge from ‘Dunheved’ to ‘Werrington’.¹⁴¹ Few bricks seem to have been carried and there were no repeat trips noted. They are most likely, therefore, to have been bricks left over from a previous phase of building on ‘Dunheved’.

Only those bricks made especially to construct the philanthropic donation of St Mary Magdalene Church to the community, between 1837 and 1840, are firmly and directly documented by a contemporary source, as actually made on ‘Dunheved’. George Shadlow, who indirectly leaves this record, as a small boy had lived in the district in the 1830s, and knew about the later stages of the church’s construction in which his father was involved. He had made it well known locally before his death that he remembered the construction details, and knew the bricks to have been ‘made on Dunheved Estate’.¹⁴²

2.5.2 Possible use of ‘Elizabeth Farm’ as the site of the ‘Dunheved’ brickworks

Local word of mouth recorded in the local newspaper from descriptions given by a man who remembered the church’s erection, gives a firm basis for the belief that bricks were made on ‘Dunheved’ for the construction of the Church of St Mary Magdalene at St Marys. A site study of the bricks at the church confirm the compatibility of the bricks in their colour and size with those found at ADI 3. No historical documentation has been found, however, to confirm that ‘Elizabeth Farm’ on ‘Dunheved’ to be the site of this activity. Yet the bricks on the ADI 3 site on ‘Elizabeth Farm’ are consistent with the 1837–1840 bricks made on ‘Dunheved’ and used to build St Mary Magdalene church (see 2.1).¹⁴³

The likelihood of ‘Elizabeth Farm’ being a site for estate brickmaking is also suggested by the lack of agriculture and house sites there during the period in question, as well as its proximity to the ‘Dunheved’ homestead complex where the earliest bricks were mostly used. On the other hand on the 1869 estate map, there is only one relevant annotation. To the south-east of ‘Dunheved’ homestead, close to the west bank of Ropes Creek, there is an area marked ‘yellow clay’. Between this area of clay deposit and the creek there is a smallish enclosure (Fig. 2.10).¹⁴⁴

The Ropes Creek site has the advantage of being close to a reliable water source and water was essential to puddle the clay. The ADI 3 site is less well placed, some distance from South Creek, but it was not without a seasonal water supply in the nineteenth century. Two small tributary creeks running south and east through this sector of ‘Elizabeth Farm’ are shown in faint pencil on the 1869 estate map and their junction is close to the ADI 3 site (Fig. 2.11).

Because of land movements after the Commonwealth acquired the land, the line of these original small watercourses is now obscured, and the ground modified by modern earthworks.

No bricks can be brought to hand to offer additional confirmation of the use of bricks made on the property with regard to ‘Dunheved’ homestead, its outbuildings and the men’s houses. Likewise, the identities of brickmakers employed by the King family in the period up to 1814 have proved elusive, although it is known there has always been an abundance of clay on ‘Dunheved’ and the surrounding

¹⁴¹ Parr (ed.), *John King Lethbridge: the Diaries, 1871 & 1880*, p. 51.

¹⁴² *Nepean Times*, 19.6.1920, p. 2.

¹⁴³ Plan of ‘Dunheved’, prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey and Lowe.

¹⁴⁴ Plan of ‘Dunheved’, prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey & Lowe.



Figure 2.10: The site of ‘yellow clay’ on the ‘Dunheved’ estate plan of 1869. It is marked in the bottom right hand part (red arrow) of this extract from the plan, to the left of J.K.L.’s lease. Plan of Dunheved’, prepared by John Lethbridge King, 1869, with annotations up to 1899, copy supplied by Casey & Lowe, ML SLNSW.

areas suitable for brickmaking.¹⁴⁵ The three brickmakers known by name (Morgan, Webb and Payne), and the one brick-layer (Rope) who are associated with the building work on ‘Dunheved’ have no specific recorded location for the origin of their bricks.

The exact date that bricks were first used in chimneys on the estate is likely to have been in or soon after 1806. Yet nowhere has mention been found, at this time, of where the bricks were made. It is likely the bricks were manufactured on the ‘Dunheved’ property as the necessary clay existed on all the farms there including ‘Elizabeth Farm’, and self-sufficiency was usual on large Concerns. The dwellings built by John Stogdell and Andrew Thompson using bricks made nearby bear witness at that time near Windsor.¹⁴⁶

This, however, does not rule out the possibility that the bricks were made elsewhere locally, for they would then have still been made from similar clays. They could have been made by one of the brickmakers at nearby Castlereagh. The sandstock bricks known to have been made in the St Marys district and surrounding areas, like Castlereagh, are pale yellow to yellowy-pink in colour, flecked with impurities like grass and small stones.

The names of the early Castlereagh brickmakers are unknown, but their handicraft survives, as, for example, at ‘Minnaville’. There, the brickmaker’s mark was a scrape across the brick made by the sweep of the palm of his hand. Recently similar bricks with the same mark have been found at ‘Minnaville’ in a well.¹⁴⁷

Brickmakers in the Castlereagh area or the adjoining district of Hawkesbury in private employ at that time were rare. They were mostly employed by the government, not least Governor King, like those supervised around 1802 at the northern end of Windsor, making bricks for the government store and schoolhouse in 1800, 1802 and 1804. Similarly, like the artisans who in 1817 were supervised by Richard Fitzgerald while they made bricks on Richmond Hill Common for St Matthew’s Church in Windsor. In each of these cases and in others, the bricks were manufactured as close to the site of construction as possible.¹⁴⁸

Some of the houses on the nearby Castlereagh plain in the early Macquarie period were of brick construction, like ‘Hadley Park’ which was ‘a two-storey brick-nogged farm house built about 1812’.¹⁴⁹ Brick-nogging was also the construction used at Mamre, the Reverend Samuel Marsden’s house nearby and that of William Cox at The Cottage at Mulgoa. Both were built around the time of the renovations to Hayes’ cottage at ‘Dunheved’, or possibly a little later.¹⁵⁰

Later, in the district, bricks with a frog shaped in the form of a ‘P’ (or possibly an ‘R’) were made in the St Marys district. In this form, a single initial usually indicates the brickmaker’s surname and it was a most common form of identification in the 1840–1850 period. Only two brick-makers have surnames beginning with ‘P’ and one of these is James Payne. The other is Potts, with whom Payne is thought to have worked for a time. These bricks are also the distinctive local colour.¹⁵¹

¹⁴⁵ Alan Hackett, brick historian, personal communication, 18.4.2008.

¹⁴⁶ Simeon Lord, as Attorney of Hugh Meehan against John Palmer, Court of Civil Jurisdiction, CY1092, 10.8.1802-7.7.1800, SRNSW, p.291; J. Barkley Jack, *The Hawkesbury Settlement Revealed*, forthcoming; V. Ross, *Matthew Everingham*, Library of Australian History, Sydney 1980, p. 94.

¹⁴⁷ Alan Hackett, brick historian, personal communication, 18.4.2008.

¹⁴⁸ Enclosure 3, ‘List of Public Buildings Proposed to be Erected by Gov’r Hunter, *HRNSW*, IV, p. 155; King to Hobart, 7.8.1803, *HRNSW*, V, p. 197; King to Hobart, *HRNSW*, V, p. 425; Fitzpatrick, *Those were the Days*, p. 208.

¹⁴⁹ T. Kass, ‘A History of Hadley Park, Castlereagh’, Final Report for Graham Edds and Associates, Richmond, for the Penrith Lakes Development Corporation, 1996, p. 21.

¹⁵⁰ Nepean District Historical Society, *The Cottage, Mamre and Leeholme*, the Society, 1979, p. 2.

¹⁵¹ Alan Hackett, brick historian, personal communication, 18.4.2008.

The ADI 3 site thus is a possible site for local brickmaking from 1806 to 1840, and to a lesser degree after that. The lack of agriculture and the lack of houses on 'Elizabeth Farm', and particularly this low part of 'Elizabeth Farm', make it hard to postulate a residential site. For industrial purposes, it benefited from easy access to seasonal water nearby and the substantial remains of early bricks on the site are compatible with those known to have been made by James Payne in the late 1830s. It is also quite close to the 'Dunheved' homestead complex where most of the need for bricks was generated in the early period, and to the 'Elizabeth Farm' stockman's cottage of 1807 which likely had a brick chimney and hearth.

On the other hand, no archaeological trace of the irregular pits from which the clay would have been dug has been described nor any evidence of a circular pug-mill.¹⁵² But since the alternative interpretation of the remains as a residence has no supporting documentary or graphic evidence, and the ground has been disturbed, the interpretation of the brick scatter at ADI 3 as part of a brick-clamp or Scotch kiln is not proven, but not unlikely.

¹⁵² Cf. J. Birmingham, 'Brick-making and other Clay-using Industries', in J. Birmingham, I. Jack and D. Jeans, *Industrial Archaeology in Australia: Rural Industry*, Heinemann, Richmond Victoria 1983, p. 54.

3.0 Site 3 – Archaeological Evidence

3.1 Site 3 – Elizabeth Farm

There is only one identified heritage site within the Central Precinct: this is Site 3 located in the early grant called ‘Elizabeth Farm’. It is listed on SREP 30 as Site 3. Mary Casey and Abi Cryerhall undertook an inspection of Site 3 on 3 March 2008. This was more than 13 years since Mary Casey first inspected the site with Tony Lowe in October 1994. Site 3 is in the southern section of the Central Precinct (Fig. 3.1).



Figure 3.1: Detail of aerial showing the location of Site 3 in the southern portion of the Central Precinct. Delfin Lend Lease 2008.

In October 1994 Casey & Lowe reported on Site 3:

Extensive areas of brick scatter and some *in situ* walls or paving on both sides of creek (Photo 3). Some bricks partially salt glazed. Bricks flat sandstock or with shallow rectangular frog. Creek bisects the site but it appears to be the result of relatively modern earthworks. Remains of several timber post and spike structures but these appear to be associated with erosion control. Four stone artefacts noted, three on northern mound (1994:19).

After 1994 the area was fenced off but only some of the posts remain as markers of the curtilage.

The areas identified in 1994 were difficult to find on 3 March 2008 due to reduced visibility caused by considerable regrowth and extensive leaf litter and grass. The main guides to the location of the remains found in 1994 were the two erosion control mounds. During this site inspection we walked a considerable area of the identified curtilage of Site 3 and found that other than the main areas identified on the sketch plan (Fig. 3.2) there was little evidence of bricks or other artefacts.

The brick scatter in Area A was more extensive than found in Area B (Figs 3.3, 3.5). Broken bricks were all over the place and at no point was there any evidence for mortar found on the hundreds of brick fragments.

The brick scatter in Area B appears to be the definite base or floor of a clamp kiln for the firing of bricks (See Section 3). Where this brick surface is visible in section it appears like a brick floor but there is a clear absence of mortar. This appears to have been remains of a small clamp kiln,

presumably for firing a smaller quantity of bricks than in Area A. The bricks visible in this area were all orange sandstocks. While this archaeological feature was photographed there is limited visibility in the photos (Figs. 3.6, 3.8).

Brick Fragments found in Areas A and B measured (Fig. 3.7):

- W: 10.5cm, D: 7cm, L?, (Area A)
- W: 10.5cm, D: 5.6cm, L:?, (Area B)
- W: 9cm, D: 6.5cm, L:?, (Area A)

A general inspection indicated a range of fragments from flat orange sandstocks which typically date 1788–1840s and cinder bricks typically dating 1860s to 1880s. A visible inspection indicates that there were smaller bricks (probably earlier) 9cm wide, and larger bricks (10.5cm wide) thought this could be more about the unevenness of the firing process.

It is possible that the Area B brick kiln or kilns were the ones used during the earlier periods of the establishment of Dunheved. It is likely that the Area A kiln or kilns may have been used during the mid to later nineteenth century.



Figure 3.2: Detail from 1956 aerial showing the approximate locations of Site 3 and the Dunheved homestead site, Site 1, Windsor Mosaic, flown 28/8/1956 by Royal Australian Air Force.



Figure 3.3: View to northeast from Site 3 in October 1994 with a thick scatter of sandstock bricks in the foreground.



Figure 3.4: View taken from a location similar to Figure 3.1, looking north. Note the electricity tower and lines at the top of the photo. There has been considerable regrowth at this site between 3 March 2008 and October 1994. The old creek line is still there but is not as visible as in 1994.

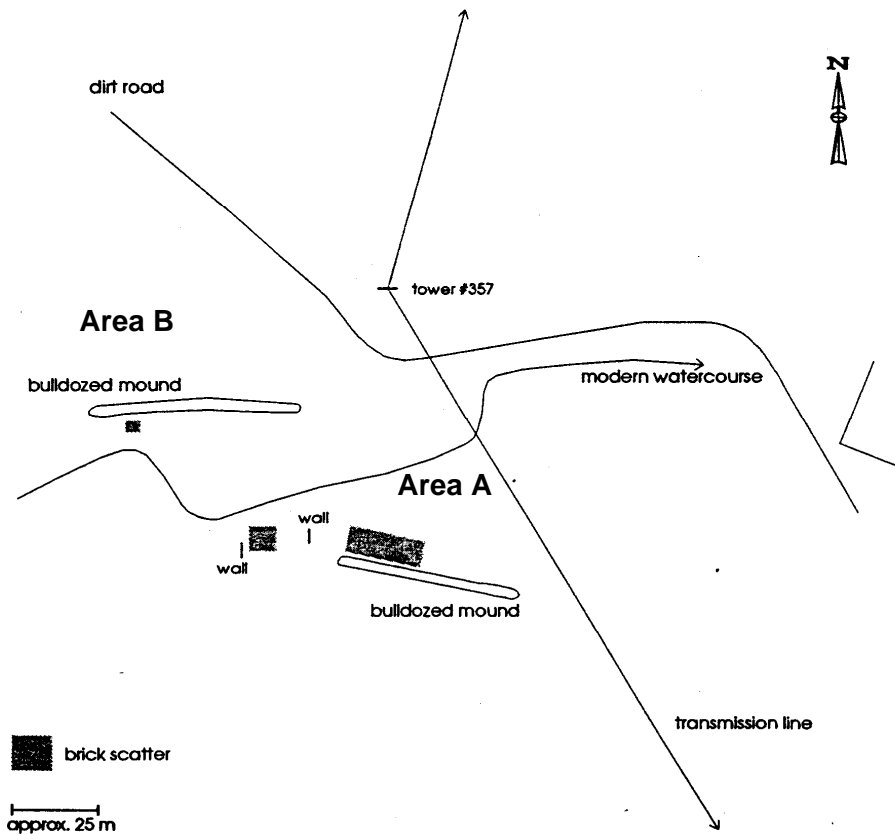


Figure 3.5: Sketch plan drawn in October 1994 showing the location of brick ‘scatters’ and two walls. The walls were not visible in 2008 due to the leaf litter and regrowth. Tony Lowe, October 1994



Figure 3.6: Brick fragments in Area A. The green colour on the brick is glaze which forms in the kiln process. Fragments of bricks had glaze on broken faces which indicates that this could have only happened at a brick manufacturing site as these types of broken bricks would not have been taken off site as they have no use.



Figure 3.7: Area B is covered long grass and leaf litter. This contained the base of a brick clamp with bright orange bricks. Looking west.



Figure 3.8: Three brick fragments recovered from Areas A and B. The central fragment is from Area B. Both the brick fragments from Area A had evidence of vitreous glaze, with notably the right fragment having glaze on the broken face indicating it probably exploded in the clamp kiln and the glaze then formed on the broken face.



Figure 3.9: Photo looking northeast across the top of Area B.

3.2 Possible Uses for Bricks Manufactured on Elizabeth Farm

The historical research (Section 2) identified two possible phases for which bricks may have been manufactured for the site. During the years of the establishment of Dunheved it could have been used for fireplaces in the stockman's hut, or the overseer's house then for the expansion of Dunheved homestead which had brick nogging and numerous other structures and out buildings. There were additional alterations made in the mid-century as well as the manufacture of bricks for St Mary Magdalene church at St Marys. It is noted that the bricks in the church are pale yellow in colour where visible under the render and were probably not made at Site 3. They may have been made elsewhere on the former estate where there was a 'yellow clay' resource which is now within the suburb of Werrington County.

3.3 Layout of Brickmaking at Site 3¹⁵³

At Site 3 preliminary inspections to date identified only some elements of the estate brickmaking site as identified above:

- Base of at least two brick clamp kilns.
- Brick scatters, including some highly fired bricks.
- Nearby watercourse, possibly seasonal, somewhat changed from 1956 aerial.
- Relatively close to the homestead but at sufficient distance not to disturb its residents (Fig. 3.2). Possibly located on the western side of the creek where it was initially intended to locate the homestead.
- No clear evidence of a brick pit but there is modern twentieth-century disturbance by erosion control measures which may have disturbed or obscured such remains.
- Activity areas: hacking ground, moulding area, pug mill or tempering area and clay pit. The location of these areas are unknown but may be revealed by further research.

3.4 Heritage Significance

3.4.1 Basis of Assessment of Heritage Significance

To identify the heritage significance of an archaeological site it is necessary to discuss and assess the significance of the study area. This process will allow for the analysis of the site's varied values. These criteria are part of the system of assessment which is centred on the *Burra Charter* of Australia ICOMOS. The Burra Charter principles are important to the assessment, conservation and management of sites and relics. The assessment of heritage significance is enshrined through legislation in the NSW *Heritage Act 1977* and implemented through the *NSW Heritage Manual* and the *Archaeological Assessment Guidelines*.¹⁵⁴

The various nature of heritage values and the degree of this value will be appraised according to the following criteria:¹⁵⁵

Criterion (a): Historic Significance - (evolution)

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);

Criterion (b): Associative Significance – (association)

an item has strong or special association with the life or works of a person, or group of persons, or importance in NSW's cultural or natural history (or the cultural or natural history of the local area);

¹⁵³ See Appendix 1 for information on the layout of a typical pre-mechanised brickyard.

¹⁵⁴ NSW Heritage Office 1996:25-27.

¹⁵⁵ NSW Heritage Office 2001.

Criterion (c): Aesthetic Significance - (scenic qualities / creative accomplishments)

an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the cultural or natural history of the local area);

Criterion (d): Social Significance - (contemporary community esteem)

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

Criterion (e): Technical/Research Significance - (archaeological, educational, research potential and scientific values)

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);

Criterion (f): Rarity

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);

Criterion (g): Representativeness

an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places of cultural or natural environments (or the cultural or natural history of the local area).

To be assessed as having heritage significance an item must:

- meet at least one of the one of the seven significance criteria
- retain the integrity of its key attributes

Items may also be ranked according to their heritage significance as having:

- Local Significance
- State Significance

Research Potential

Research potential is the most relevant criterion for assessing archaeological sites. However, assessing research potential for archaeological sites can be difficult as the nature or extent of features is sometimes unknown, therefore judgements must be formed on the basis of expected or potential attributes. One benefit of a detailed archaeological assessment is that the element of judgement can be made more rigorous by historical or other research.¹⁵⁶

Assessment of Research Potential

Once the archaeological potential of a site has been determined, research themes and likely research questions identified, as addressed through archaeological investigation and analysis, the following inclusion guidelines should be applied:

Does the site:

- contribute knowledge which no other resource can?*
- contribute knowledge which no other site can?*
- is the knowledge relevant to general questions about human history or other*

¹⁵⁶ NSW Heritage Office 1996:26.

*substantive problems relating to Australian History, or does it contribute to other major research questions?*¹⁵⁷

If the answer to these questions is yes then the site will have archaeological research potential.

3.4.2 Discussion of Heritage Significance

Criterion (a): Historic Significance - (evolution)

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);

Site 3, 'Elizabeth Farm' was once part of the Dunheved estate. It is likely to be associated with the initial occupation and development of Dunheved from c1807 into the 1860s. As part of the complex of sites once associated with the Dunheved homestead, the family seat of Governor Philip Gidley King and his wife Anna Josepha King's descendants in New South Wales, it represents a rare link to the beginnings of colonial Australia and the development of pastoral estates reliant on convict labour.



Criterion (b): Associative Significance – (association)

an item has strong or special association with the life or works of a person, or group of persons, or importance in NSW's cultural or natural history (or the cultural or natural history of the local area);

This site is associated with an extremely significant family in the early settlement of New South Wales, the descendants of Governor Philip Gidley King and his wife Anna Josepha. Among these descendants was Philip Parker King, an Admiral in the British Navy and an important hydrographer who surveyed those parts of the coast of New Holland not undertaken by Matthew Flinders. Governor King came out with the First Fleet and was Lieutenant-Governor on Norfolk Island where he established the settlement and the cultivation of flax. The grants associated with this estate were awarded to his children in compensation for his service to the colony and the British Government.



Criterion (c): Aesthetic Significance - (scenic qualities / creative accomplishments)

an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the cultural or natural history of the local area);

There is no known aesthetic significance associated with this site other than it represents a rare phase of technical endeavour to survive in New South Wales.



Criterion (d): Social Significance - (contemporary community esteem)

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

No public consultation has been undertaken to assess the social significance of these remains at Site 3. It is likely that these remains have social significance to people interested in the past of St Marys and the operation of early estates on the Cumberland Plain and through its linkage to the King family.



¹⁵⁷ Bickford, A. & S. Sullivan 1984:23.

*Criterion (e): Technical/Research Significance - (archaeological, educational, research potential and scientific values)
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);*

Site 3 contains the remains of a brickmaking area associated with the establishment and expansion of the Dunheved homestead site and adjacent areas. It represents the remains of ancillary work sites associated with the support of a major colonial homestead. It is possible there were other sites like this associated with Dunheved but they have not survived the subdivision and break-up of the estate and the development of a munitions factory. This site has mostly survived due to the lack of impact during the twentieth century once it was acquired by the munitions factory after 1942. Prior to 1942 other than brickmaking the main activity was grazing of animals.

Site 3 contains some visible and buried remains of at least two brick clamp kiln as well as some buried and obscured remains of early nineteenth-century brickmaking which represents the range of activities undertaken at a typical early nineteenth-century brickmaking site: a hacking ground, moulding area, pug mill or tempering area, clay pits and clamp kilns.

The research significance of this site while valuable is superseded by the value of the survival of such an ephemeral site type which once would have been typical on many colonial estates.



*Criterion (f): Rarity
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 discussion in Section 3 indicates that there are no known contemporary brick clamp kiln sites surviving in the Cumberland Plain. All sites outside the Cumberland Plain will be later in date than Site 3. Four sites which post date 1830 are known from the Lake Innes Estate near Port Macquarie. There are likely to be among a small number of surviving estate brickmaking sites in New South Wales but all will date later than the earliest one at Site 3. This is an unusual type of early site and represents a phase in the manufacture of brickmaking rarely found in NSW.



*Criterion (g): Representativeness
an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places of cultural or natural environments (or the cultural or natural history of the local area).*

The remains associated with the brickmaking activities at this site are representative of an early phase in brick making in colonial NSW. This simple technology lasted until the introduction of machinery in the 1880s and the shift to making shale bricks.



To be assessed as having heritage significance an item must:

- meet at least one of the one of the seven significance criteria
- retain the integrity of its key attributes

Items may also be ranked according to their heritage significance as having:

- Local Significance
- State Significance

If the answer to these questions is yes then the site will have archaeological research potential.

Does the site:

(a) contribute knowledge which no other resource can?

As discussed above this is considered to be a rare type of archaeological site associated with the State significant remains of Dunheved. While we know quite a bit about early brickmaking and technology we have limited understanding of how it translates into a rural use on colonial estates. The historical research indicates that information on this type of site is scarce and can often only be identified through the employment of brickmakers. It is part of the development of early estate life in colonial New South Wales. It is considered to be able to contribute knowledge which no other resource can.

(b) contribute knowledge which no other site can?

As very few brickmaking sites dating between c1807 and the 1860s are known to survive in colonial New South Wales it is considered it can contribute knowledge which no other site can.

(c) is the knowledge relevant to general questions about human history or other substantive problems relating to Australian History, or does it contribute to other major research questions

The knowledge about early brickmaking and adaptation of technology to the Australian environment and how people managed early estates is relevant to general questions in Australian history.

3.4.3 Statement of Heritage Significance

The remains of brickmaking at Site 3 are one of the few surviving elements of the Dunheved homestead outside the original house site. It does not have the same range of archaeological significance as the State significant Dunheved homestead with its potential to contain evidence of numerous buildings and activities. It is a rare surviving example of brickmaking technology dating between c1807 and 1860s created as part of the development of a significant colonial estate. None of the other possible outlying Dunheved sites are known to survive. It therefore shares similar levels of significance as the main homestead site and it is therefore part of its State significance albeit only as an aspect of the Dunheved site.

4.0 Development Impacts within the Central Precinct

4.1 Proposed Impacts on Site 3

In response to the significance of Site 3, Maryland Development Company has identified the opportunity for Site 3 to be incorporated into an open space area, with a potential linkage to the Regional Park. Therefore the Site 3 can be retained *in situ*.

The retention of this site within a proposed park involves the solving of a number of management challenges:

- How to make this site usable as a open space area when considerable remains of the brickmaking activity survive above ground?
 - Extensive brick scatters.
 - Base of clamp kiln in Site A.
 - Other evidence
- How to manage the potential sub-surface archaeological remains in light of the park requirements?
- Can sections with the most intact remains be fenced off and left in their current condition?
- Can sections with the most intact remains be buried to avoid further impacts from vandalism and day to day use?
- Management of the riparian zone and its relationship to the archaeological resource.
- Any planting of trees, laying of turf or earth moving involves potential impacts on the archaeological resources.
- Management of the maintenance of the park and impacts on the archaeological remains in the short, medium and long-term.

Therefore there needs to be clarification of the how to manage both the archaeological issues and the establishment of a park and its long-term maintenance. This will occur through the DA process prior to development of the Central Precinct commencing.

4.2 Preliminary Management of Impacts on Site 3

The issues associated with the management of Site 3 and the Proposed open space have not been resolved at this time. The following is suggested to assist the resolution of various issues at this site, prior to lodgment of future DAs:

- Detailed GIS survey plan of the brickmaking activity areas to assist with the identification of individual features, scatters and other remains as a basic management tool.
- Once this survey plan is completed then design impacts can be clarified and issues further analysed.
- Decisions on management of Site 3 can then be made in light of further knowledge.
- The current curtilage for Site 3 may be more closely defined based on this survey.

5.0 Results and Recommendations

5.1 Results

- Site 3 is a brickmaking area associated with the building and development of Dunheved homestead.
- Site 3 appears to be in use intermittently from c1807 to the 1860s for brickmaking.
- Site 3 has the potential to contain remains of two or more brick clamp kilns and associated evidence for brickmaking activities.
- Site 3 is a rare type of archaeological surviving on the Cumberland Plain and has been identified as being part of the State significance of Dunheved.
- These remains are protected by the relics' provision of the NSW *Heritage Act* and any works in this area will require approval under the relics' provisions and SREP 30.

5.2 Recommendations

The following recommendations are based on the analysis of heritage significance outlined above, the statement of significance and the *Burra Charter* of Australia ICOMOS.

1. Any disturbance of archaeological remains will require an approval from the NSW Heritage Office and relevant council under SREP 30.
2. The management of the archaeological resource as part of the design process for the Proposed open space requires a detailed GIS survey as a basic requirement. This needs to be undertaken in consultation with Casey & Lowe. Identification of other brickmaking activities may be made during the survey.
3. The design for the open space area proposed to incorporate Site 3 may require a Statement of Heritage Impact to be written identifying the proposed impacts and any archaeological and statutory requirements.
4. It may be necessary to record and remove some remains at the site so that the main concentration of brickmaking activity can be left relatively undisturbed. Any such proposals would require a Statement of Heritage Impact and then an application to the Heritage Branch, Department of Planning.
5. The brickmaking activity should be interpreted within the proposed open space area. It should discuss the various stages of brickmaking, the role it played in the Dunheved estate, how brickmaking on site was once part of most colonial estates and interpret the site within its landscape context.
6. The results from any recording program should be incorporated into an overall interpretation strategy for the Central Precinct and the Regional Park (subject to PoM).

6.0 Bibliography

6.1 Bibliography

Please note the bibliography for Section 2 is found in the footnotes for that section.

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Appendix

Appendix 1: Brickmaking and its Historical Development in NSW

Development of Brickmaking in New South Wales – 1788 to 1840s¹⁵⁸

The penal settlement at Port Jackson (Sydney) was established on 26 January 1788. By July 1788 Captain Watkin Tench noted that a few female convicts were ‘kept at work making “pegs for tiles” ’ (roofing tiles were secured by clay pegs) and that there was ‘clay for making bricks in plenty, and a considerable quantity of them burned and ready for use’.¹⁵⁹ This activity was undertaken at the Brickfields, which includes the old DMR site on Campbell Street (now the Haymarket), as well as around Farm Cove and in Hyde Park. A 1788 plan located ‘Brick Field’ in the general area to the south of the ‘Head of the Spring’ which was in Hyde Park.¹⁶⁰ Brickmaking was an important activity in the early colony and essential to its survival as the local timber and stone were not suitable to current British building practices. In the early days as many as 30,000 to 40,000 bricks could be made in a month.¹⁶¹ Major differences between the manufacture of bricks and pottery meant that bricks could be fired at lower temperatures and made with unskilled labour.¹⁶²

Lawson suggests the reasons for the location of the brickfields were ‘partly due to the plentiful supply of suitable clays...for making bricks, tiles and pottery’ but also its closeness to the main road for shipment out to Rose Hill (Parramatta) and other important early localities.¹⁶³ To this should be added its closeness to Sydney Cove with its population and need for bricks and shipping facilities where bricks and pottery were exported along the coast, even as far south as Launceston, Tasmania.

On 6 October 1810 Governor Macquarie redefined the location of the Brickfields and placed a prohibition of brickmaking in the newly named Hyde Park. The northern boundary of the Brickfields was to be to the south of James Wiltshire’s lease (no. 86 on Meehan’s 1807 plan) and the northeastern corner where this line met John Palmer’s Surry Hills estate. This is approximately the area of Liverpool Street today, immediately south of Hyde Park.

Brickmaking also developed at Parramatta where convicts were employed through the Lumber Yard to make bricks, initially at the ‘Crescent’, now in Parramatta Park, then it moved to the northern side of Victoria Road, near Brickfield Street.¹⁶⁴

Many rural properties and estates would have undertaken their own brickmaking, employing a brickmaker for particular projects or perhaps having convict brickmakers assigned to them, as in the case of Lake Innes near Port Macquarie. Many of the early colonial buildings were made of bricks. Once bricks were fired then they become quite heavy to transport in any numbers and they also can break. Therefore it is desirable to burn the bricks as close as possible to the proposed building site but also close to a water source.

The earliest known brickyard in the Penrith St Marys area was at the Emu Plains Government Farm. In 1820 it recorded a quantity of 80,000 bricks made by the convict labour on the farm.¹⁶⁵ Gemmell mentions that ‘the earliest bricks made in St Marys came from the “King Farm” at Dunheved’, based on an oral history surrounding the building of St Marys Magdalene Church.¹⁶⁶

¹⁵⁸ Section 4.1 is text taken from a paper written by Mary Casey 1999, *AHA* 17:1-35.

¹⁵⁹ Tench 1979:71-72.

¹⁶⁰ Francis, Fawkes ‘Settlement at Sydney 16 April 1788’ from the Rex NanKivell collection, published in Kelly and Crocker 1978.

¹⁶¹ Tench 1979:192.

¹⁶² Lawson 1971:18.

¹⁶³ Lawson 1971:18.

¹⁶⁴ Gemmell 1986:72

¹⁶⁵ Gemmell 1986:73

¹⁶⁶ Gemmell 1986:73

Known Examples of Brickmaking on Estates and Brickworks

There are few surviving brickmaking sites representing the manufacture of bricks for firing in a clamp kiln and the use of traditional technology dating to the 1810s into the 1860s. Other than four sites at Lake Innes Estate (Section 3.5 below) dating from the 1830s no recorded examples could be found. Investigation of a series of early nearby Estates, such as Camden Park, Regentville, Kelvin Park, Denham Park and other estates listed on the State Heritage Register found no mention of any surviving brickmaking sites in their heritage listings. These are essentially ephemeral sites and would be removed when there was a requirement to subdivide and sell off land or improve it. There is some likelihood that other early brickmaking sites may survive in the hinterland of Sydney but they are currently not recorded.

Remains of a brick clamp kiln used for commercial manufacturing and associated brick yard have been found by Casey & Lowe on three sites in Surry Hills: 18–20 Albion Street, Silknit House site and 19–41 Reservoir Street. The brickfield evidence found at the sites was limited to the clamp kiln, hundreds of wheel-barrow tracks with single wheels from carrying brick to and from the kiln site, major alteration of the environment and stripping of the site down to clay subsoil. This was the only known brickmaking site found in association with extensive brickmaking in the Sydney CBD and Brickfield Hill.

There are many known nineteenth and twentieth-century commercial brickmaking sites in Sydney.¹⁶⁷ A number of these sites are listed on the State Heritage Inventory:¹⁶⁸

- Austral Brick Company brickworks group, Alexandria
- Bexhill and Casino Bricks, Lismore
- Kenny's Brickworks, Mudgee
- Mudgee Brickworks, Mudgee
- Eastwood Brickyards, Parramatta
- Goodlett and Smith, Holroyd
- Herrick's Brick Kiln, West Wylong
- Penrith Brick Company, Kingswood
- Sydney Park, St Peters
- Fowler's Pottery and Brickyard, Camperdown

All of these sites are listed on LEPs and appear to be of Local heritage significance. Yet these are not the best sort of comparative site for Site 3. A better type of comparison is where brickmaking would have occurred occasionally on a private estate. Lake Innes Estate, near Port Macquarie, has four separate brickmaking sites but the main house was made of bricks on this property and was an extensive endeavour. In addition Major Innes may have attempted to produce bricks for sale.¹⁶⁹

Brickmaking at Lake Innes Estate, Port Macquarie ¹⁷⁰

Lake Innes was established by Major Innes in the 1830s. Generally the land selected by Innes was not very fertile although it was sufficient for the production of most household supplies. The location had been chosen for business and social advantages rather than agricultural ones. Innes intended Lake Innes to be a country estate from which his grazing properties and other business enterprises in the Hastings Valley and the New England area could be managed. Other advantages included the ready supply of building materials (timber, lime and clay for brickmaking); and the proximity to the sea and the fashionably picturesque setting were just two of the social advantages of the place.

¹⁶⁷ Gemmell 1986

¹⁶⁸ State Heritage Inventory search undertaken 5 June 2007, using item group 'manufacturing and processing'. Additional sites such as Sydney Park and Fowler's site are well known.

¹⁶⁹ Connah, Graham (2007) *The same under a different sky. A country estate in nineteenth-century New South Wales*, BAR Series 1625,

¹⁷⁰ Casey & Lowe 2007

Construction of the estate commenced during 1830 or 1831 when Innes acquired bricks from government stocks in Port Macquarie for building chimneys in 1830.¹⁷¹ In 1832 the residence is noted in the *Post Office Directory* and building work continued up until 1839. The estate in its final form was extensive with a main house surrounded by gardens, outbuildings, stables, guestrooms, brickmaking facilities, orchards, animal pens and enclosures.

Through his influential connections, Innes managed to secure an assignment of Crown prisoners for personal use, as well as a contract for supplying provisions to the Government establishment at Port Macquarie.¹⁷² In 1837 Innes had 90 assigned servants, many of whom were skilled in essential trades including brickmakers, a bricklayer, a carpenter and joiner, plasterer, painter and glazier, slater, well-sinker and pump-borer, grooms, stableman, harness-maker and horsebreaker, a butler, maids and his own bagpiper.¹⁷³ In 1831 Innes was granted a land allotment in the town of Port Macquarie which was used to build a grain mill and enabled him to process locally grown wheat and corn and to fulfil his government contracts.¹⁷⁴

The archaeological work at Lake Innes found the remains of four separate brickmaking sites on the peninsula.¹⁷⁵ All four sites were situated at some distance from the main house: 1.1km, about 1km and 365m from the works village. The evidence at these four sites consists of:

- Suitable source of clay for brickmaking.
- A ‘clay pit’ from which clay was extracted for the brickmaking:
 - Site 3: remains of three and possibly four pits.
- Base of a brick clamp or remains of a clamp with *in situ* bricks:
 - Site 1: abandoned clamp kiln with *in situ* bricks
 - Site 2: probable base of clamp but no *in situ* bricks
 - Site 3: base of three clamps, no *in situ* bricks
 - Site 4: overgrown mound, appears to be a downdraught kiln with a chimney.
- Scattered bricks, some highly fired.
- Nearby water source:
 - Site 1: adjacent to swamp
 - Site 2: no permanent water source
 - Site 3: next to the edge of the lake
 - Site 4: head of a small watercourse
- At some distance from the main house and therefore the finished product required transportation to the building site, not always at the main house.

The historical research for this report (Section 2.4.2) suggested there should have been a ‘pug mill’ on site for mixing the clay to break it up. In Section 3.5 a technique is described which could have happened in a suitable spot in the locality where horses or people could have trod on the mixed clay with some shovel turning of the clay and water to mix it through. Connah does not indicate the possible location of where the clay was pugged at the four Lake Innes brickmaking sites.

Brickmaking Techniques and the Layout of a Brickyard

The brickmaking techniques employed at brickmaking sites were those traditionally practiced in Britain and Europe since the medieval period.¹⁷⁶ The traditional method was termed the Flemish or Walloon process and it was easily adaptable to the local conditions because of its simplicity, few tools required, low cost and high yield in areas of extensive clay beds and cheap labour.¹⁷⁷ There

¹⁷¹ Clive Lucas 1987: 24

¹⁷² Clive Lucas 1987: 32; 96

¹⁷³ Butlin et al. 1987, quoted in Connah 1998:13

¹⁷⁴ *Colonial Secretary*, 9 November 1831 CS IL 31/10052

¹⁷⁵ Connah 2007:77-84

¹⁷⁶ Proctor *et al* 1999:187; Pavlou 1976:59.

¹⁷⁷ Pavlou 1976:62.

were five steps to the brickmaking process: preparation of the clay, tempering, moulding, drying and burning.¹⁷⁸

Preparation of the clay was important to produce a sound brick without flaws or cracks that were hard and regular in shape.¹⁷⁹ This may involve the adding of substance such as alumina or silica or breeze to assist the clay to be plastic and to fire well. **Tempering** or pugging the clay involves the grounding of the clay into a homogenous paste, for the use of the moulder. A traditional method was to turn the clay over repeatedly with shovels and then tread it over with people or horses until it was sufficiently plastic.¹⁸⁰ This is an unmechanised technique eventually replaced by grinders or a pug mill.

The clay was pounded in rocky depressions or in the pits from which the clay was initially excavated. Typically the clay would then be spread out and left exposed to the elements to break down the pebbles and iron pyrites. It is likely that during the early days of the colony this process was ignored in the urgency to produce bricks. This resulted in the production of coarse and gravelly bricks. A constant supply of water was a requirement of the pugging process as the pugging or pounding instruments needed to be frequently rinsed to inhibit clay sticking to them and for pugging the clay.¹⁸¹ Once tempering or pugging of the clay was finished it was then left to stand. In the early days of the colony it was only left for a few days when traditionally it stood for a few months prior to being moulded into bricks.

Clay was transferred from the tempering area to the **moulding** table for the shaping of bricks. The moulding table was a timber structure with four legs and usually 1.6 m long and 1 m wide and high (about 6 ft by 3 ft). The table could be moved around to the location of the clay supply and was fitted with rough wheels for this purpose. Sand could be mixed with the clay during tempering to assist with moulding as well as used to coat the various tools to stop clay adhering.¹⁸² A stock-board was attached to the moulding table. The moulder had an assistant who passed him a brick-sized piece or pug of clay which he placed into the timber mould (Figs 3.10 to 3.12). ‘The stock board was dusted with sand and the mould dipped into ware and then sanded, then slipped into position over the stock-board. This process was called sand moulding, producing the term “sand-stock brick”’.¹⁸³

Dobson identifies ‘slop-moulding’ where the mould is placed only in water and ‘pallet moulding’ where the mould is dipped into sand.¹⁸⁴ The pug of clay was sharply knocked into the mould, pressed down into the frame with fingers and the strike drawn across the top to make a level surface while the other hand removed the excess clay. The mould containing the clay was then set on edge and carried over and laid on the ground to dry. Another drying method thought to be used in Australia where the mould was slid off the stock and the edge of the table onto a pallet or hack board.

¹⁷⁸ Dobson 1850:11.

¹⁷⁹ Dobson 1850:11.

¹⁸⁰ Dobson 1850:26.

¹⁸¹ Pavlou 1976:62.

¹⁸² Pavlou 1976:63.

¹⁸³ Pavlou 1976:64-65.

¹⁸⁴ Dobson 1850:27.

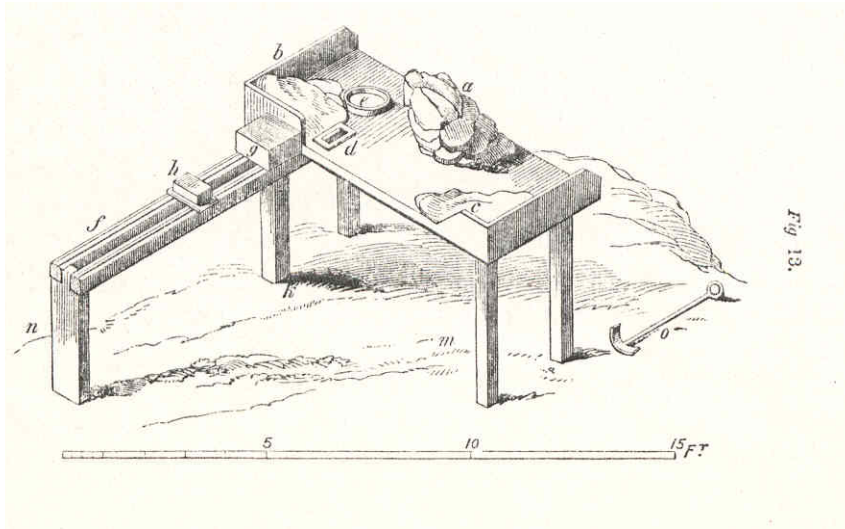


Fig. 13.

Figure 1: Type of moulding table. Dobson noted that this was an unusual moulding table. Dobson 1850 (2):16.

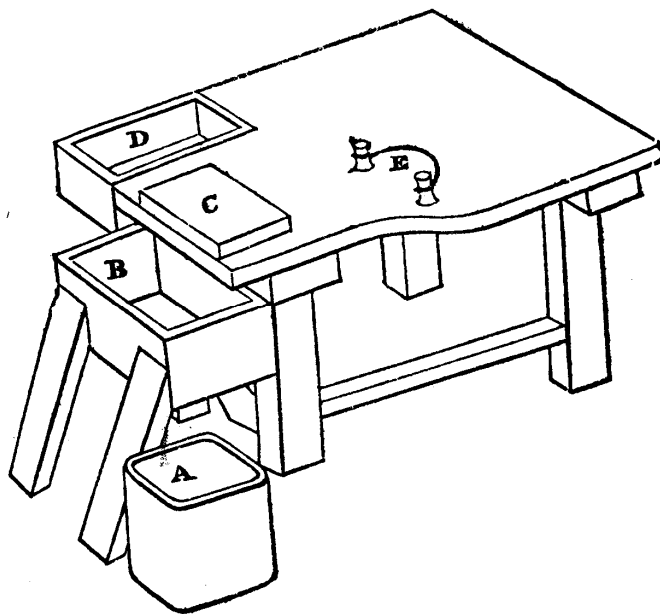


Figure 2: More typical moulding table. Dobson 1850(1):103.
 A: sand basket
 B: detached water box
 C: moulding board
 D: water box
 E: clay knife

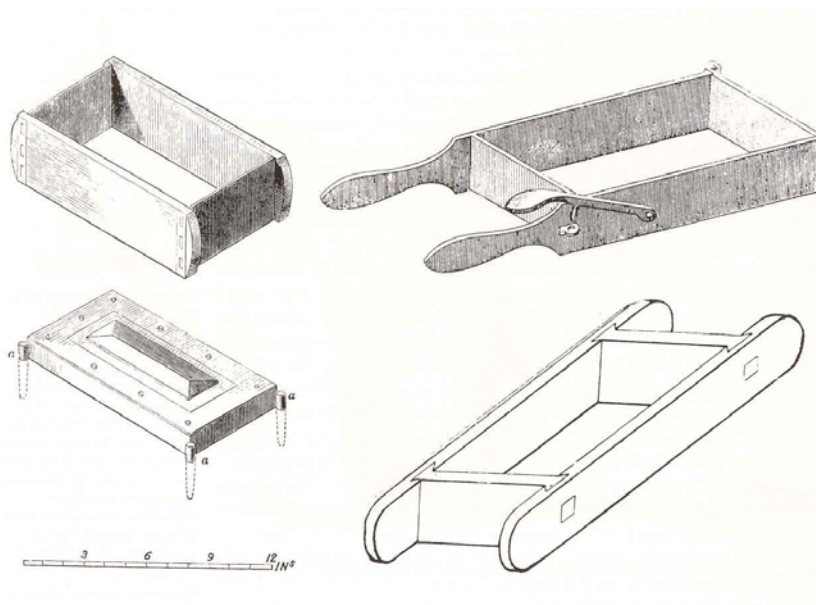


Figure 3: Three moulds and a stock board (bottom left). Birmingham, Jack & Jeans 1983:58, source is Dobson 1850.

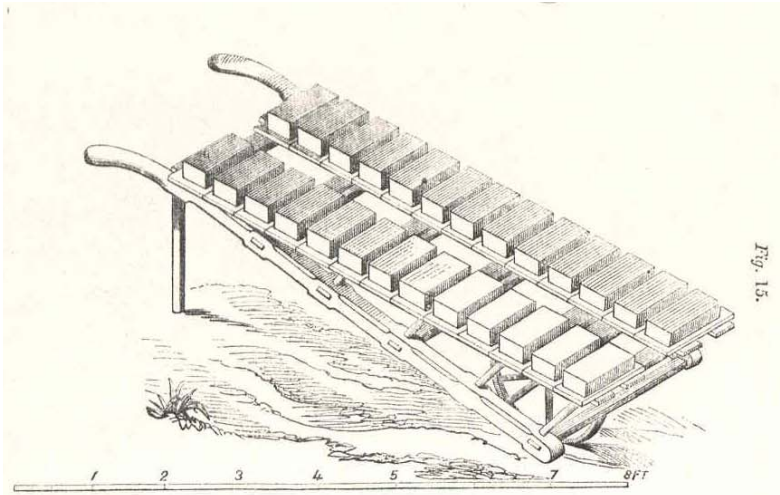


Figure 4: Pallet barrow, loaded with bricks (top) and without bricks (bottom). Barrow for taking green bricks to the hacking grounds. Dobson 1850 (2):20.

moulding stool, but this includes the whole of the land required for the several purposes.

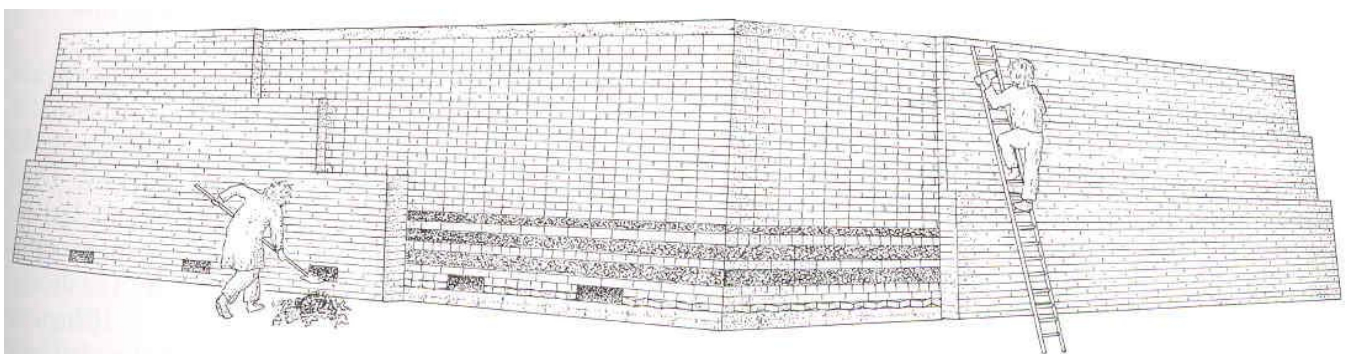
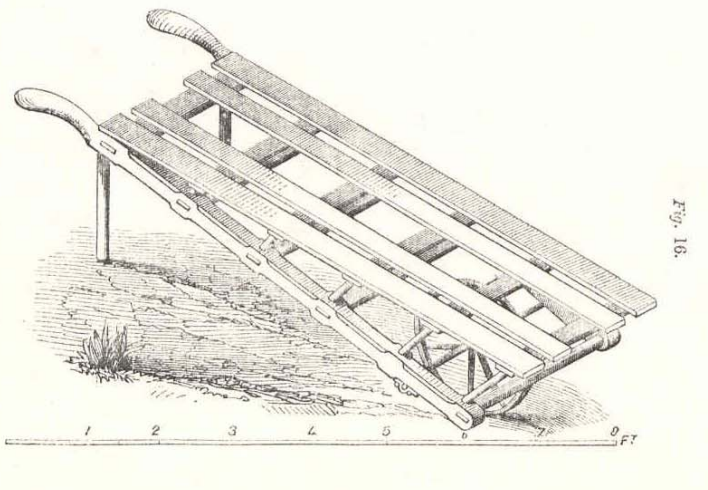


Figure 5: Reconstruction of a brick clamp similar to the one found at 20 Albion Street, Surry Hills. This would be much larger than the ones at Site 3 as it is on a commercial scale rather than for specific purposes. Proctor, Sabel & Meddens 2000:189.

The mould was then released from the brick. When the board had three green bricks it was then carried to the drying or hacking ground.¹⁸⁵ The advantage of pallet moulding is that only a single mould was required. The moulder could keep two wheelers busy with two barrows in work with a third being loaded.¹⁸⁶ In Britain an efficient moulder and his assistants could turn out between 30,000 to 40,000 per week and a clamp would contain 60,000 to 120,000 bricks and upwards.¹⁸⁷

The **hacking or drying** ground was usually between the clamp kiln and the moulding table. The green bricks were wheeled to the hacking ground and built up to dry in low walls called hacks.¹⁸⁸ During this stage it was important to make sure each brick dried evenly and were not affected by the sun, rain and wind. This was done by covering the hacks with 'straw, reeds, matting, canvas, screens or tarpaulins'.¹⁸⁹ Bricks to be burnt in a clamp are 'hacked at once on leaving the moulding stool, and remain in the hacks much longer than bricks intended for the kiln'.¹⁹⁰ Because a clamp attains its full heat very quickly the bricks must be thoroughly dried or they would 'fly to pieces'.¹⁹¹

This technique was typically used because each brick was supplied with its own fuel necessary for vitrification – the breeze or cinders which served to ignite the lower tiers of bricks and the heat then spread through all the bricks in the clamp. No spaces were left between the closely stacked bricks so as to spread the heat as evenly as possible.¹⁹²

Layout of the Brickyard

While all brickyards will have variations in their layout the underlying principle was 'to advance towards the kiln at each process, so as to avoid unnecessary labour'.¹⁹³ A typical layout of a British brickyard was included: clay pits at the rear, not too far away was the area where the clay was tempered. The drying or hacking ground usually formed 'two sides of a rectangular yard adjoining a public road, the kiln being placed as close to the drying ground as possible'.¹⁹⁴ This is somewhat different to the layout at another place where there was a clear progression from clay pits, tempering area, moulding table, hacks and then clamps with a fall in the slope of the ground level from the hacks to the clamp (Fig. 3.12). In this one the clay was tempered as close to the pits as possible and the pug mill was between the pits and the moulding stool.

¹⁸⁵ Pavlou 1976:65-66.

¹⁸⁶ Dobson 1850:28.

¹⁸⁷ Dobson 1850:37.

¹⁸⁸ Dobson 1850:28.

¹⁸⁹ Dobson 1850: 35-36.

¹⁹⁰ Dobson 1850:36-37.

¹⁹¹ Dobson 1850:37.

¹⁹² Dobson 1850:37-38.

¹⁹³ Dobson 1850:61.

¹⁹⁴ Dobson 1850:61.

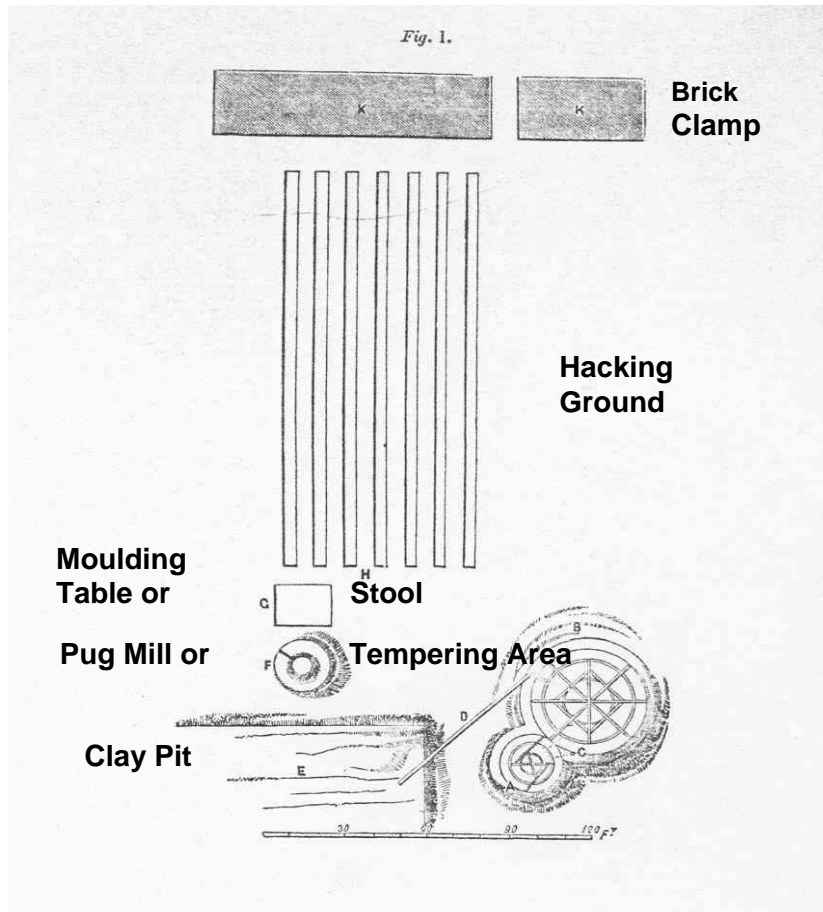


Figure 6: Typical layout of brickyard. Note the location of a pug mill in the tempering area. It is unlikely that the brickyard at Site 3 area had a pug mill. Dobson 1850: (2):5.