

Statement of Heritage Impact: Tallawarra Lands Part 3A

Report for TRUenergy Tallawarra Pty. Ltd.

December 2010

FINAL

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PROJECT Tallowarra Lands Part 3A Concept Plan Application

BIOSIS PROJECT NO s5749

REPORT FOR TRUenergy Tallowarra Pty. Ltd.

REPORT TITLE: Statement of Heritage Impact: Tallowarra Lands Part 3A

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CONTENTS

Acknowledgments	vii
Abbreviations	vii
Executive Summary	1
1.0 Introduction	4
1.1 Background	4
1.2 Project Area	4
1.3 Development Proposal	4
2.0 Planning Approvals	7
2.1 Part 3A of the EP&A Act 1979	7
2.2 Aims	8
3.0 Heritage status & planning documents	9
3.1 Heritage Registers	9
3.2 Non-Statutory Registers	12
3.3 Summary of heritage listings in the Study Area	13
4.0 Historical Context	15
4.1 Introduction	15
4.2 Early Colonial Period before Settlement (1788 – 1815)	15
4.3 Early Land Grants and Estates near Lake Illawarra (1815 – 1830)	15
4.4 The Osborne family and the Marshall Mount estate	19
4.5 The Brown Family and Wollingurry Dairy	20
5.0 Site Analysis	27
5.1 Introduction	27
5.2 Plans	27
5.3 Aerial Photographs	27
5.4 Archaeological Survey Constraints/Factors	33
5.5 Survey Methodology	33
5.6 Survey Team	34
5.7 Survey Results	35
6.0 Preliminary Statement of heritage Impact	42
6.1 Proposed Development	42
6.2 Potential Impacts	42

7.0	Conclusions & Recommendations	49
7.1	Conclusions of this report	49
7.2	Recommendations	50
8.0	Bibliography	52

TABLES

<i>Table 1: Summary of listed heritage items within and adjacent to the Study Area</i>	13
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FIGURES

<i>Figure 1 Locality</i>	5
<i>Figure 2 Overview</i>	6
<i>Figure 3 Listed heritage items</i>	14
<i>Figure 4 Land Grants</i>	22
<i>Figure 5 Historic Land Titles</i>	23
<i>Figure 6 1916 Subdivision</i>	24
<i>Figure 7 1975 Orthophoto</i>	25
<i>Figure 8 1974 Orthophoto</i>	26
<i>Figure 9 Potential Archaeological Sites</i>	41
<i>Figure 10 Tallawarra Lands Concept Plan</i>	48

PLATES

<i>Plate 1: LEP Item 6437 "Yallah Homestead"</i>	35
<i>Plate 2: LEP Item 6437 Views from "Yallah Homestead"</i>	36
<i>Plate 3: LEP Item 6339 View from Mount Brown Reserve</i>	36
<i>Plate 4: View to Mount Brown Reserve</i>	37
<i>Plate 5: LEP Item 31013 Military Bunker</i>	37
<i>Plate 6: Views from the military bunker on Mount Brown Reserve to Lake Illawarra</i>	38
<i>Plate 7: TH1 Former Homestead</i>	38
<i>Plate 8: TH4 Homestead site</i>	39
<i>Plate 9: TH7 Surviving corridor of the former Smelting Company Train Line</i>	39
<i>Plate 10: TH8 Concrete Tanks</i>	40

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Abbreviations

AHC	Australian Heritage Council
CHL	Commonwealth Heritage List
CMP	Conservation Management Plan
DEWHA	Department of Environment, Water, Heritage and the Arts
DECCW	Department of the Environment, Climate Change and Water (formerly DECC)
DGRs	Director-General's Requirements
DoP	Department of Planning
EA	Environmental Assessment
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
GSV	Ground surface visibility
ICOMOS	International Council on Monuments and Sites
LEP	Local Environmental Plan
LGA	Local Government Area
MGA	Map Grid of Australia
NHL	National Heritage List
NPWS	National Parks and Wildlife Service (now part of DECCW)
REP	Regional Environmental Plan
RNE	Register of the National Estate
SCA	Sydney Catchment Authority
SHR	State Heritage Register
SoHI	Statement of Heritage Impact

EXECUTIVE SUMMARY

Biosis Research Pty. Ltd. has been commissioned by TRUenergy Tallawarra Pty Ltd. to undertake a statement of heritage impact for the proposed development of Tallawarra Lands, to form part of the Environmental Assessment (EA) of the project. The Tallawarra Lands are located on the western foreshores of Lake Illawarra, adjacent to the West Dapto land release area, approximately 13 kilometres southwest of Wollongong town centre within the Wollongong Local Government Area. The site includes a number of wetlands and watercourses that flow east into Lake Illawarra, the largest being Duck Creek. The Tallawarra lands are a 572.1 hectare site, surrounded by existing suburbs, including Koonwarra, Dapto and Haywards Bay. Out of the total 572.1, 36.25 ha are occupied by an existing Gas Power Station and its proposed extension.

TRUenergy is seeking concept plan approval from the Minister for Planning under Part 3A for the proposed mixed use development of the remaining 535.9 hectare site. The proposed mixed use development concept may include:

- subdivision
- employment generating commercial, industrial and retail development
- new housing and retirement living units (approximately 1,210 dwellings)
- public open space areas / new recreation facilities
- environmental management and conservation areas and riparian corridors
- new internal roads
- new pedestrian and cycle pathways
- landscaping
- power station buffer areas

The Department of Planning (DoP) have issued advice and Director-General's Requirements (DGR's) for the Concept Plan of a mixed use development at Tallawarra Lands (MP 09-0131). The DGR's provide specification and guidance for the Environmental Assessment (EA) requirements in relation to Key Issues (Aboriginal and Non-Aboriginal) and reference various policies and guidelines that are to be considered in the EA. The DGRs require that the EA includes a statement of heritage impact prepared in accordance with NSW Government guidelines.

The Concept Plan of a mixed use development at Tallawarra Lands (Project Area) has been declared by the Minister for Planning as a 'major project' under the provisions of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act) and *State Environmental Planning Policy (Major Development) 2005* (SEPP 2005), and is therefore subject to the provisions of Part 3A of the EP&A Act. Reporting and assessment have been carried out in accordance with guidelines prepared for projects being assessed and approved under Part 3A of the EP&A Act.

The study found that development as defined by the Concept Plan has the potential to impact on some potential archaeological sites that are yet to be identified as relics. A number of the former buildings probably date to the twentieth century and were most likely associated with dairying. However, research to date has not confirmed the construction date of the former buildings and

documentary evidence suggests that stockmen's huts dating to the 1820 and 1830 may exist somewhere on the site. In addition, it is possible that an overseer's residence was constructed somewhere within the Study Area or directly adjacent to it. It was noted that the form of the LEP listed item (no. 6437) also known as *Yallah Homestead* is reminiscent of an early colonial residence and may be the overseer's residence described in documentary records. If *Yallah Homestead* is indeed the overseer's residence, it is likely to be associated with outbuildings, yards and other homestead buildings, possibly huts.

The Study Area also has a history of industrial use, visible in the surviving roads and rail lines as well as the operational power station in the adjacent excised land.

This report provides a preliminary statement of heritage impact as the impacts of the Concept Plan are not yet known. Further research into the history of the individual buildings on the site is also necessary to establish the level of significance of the archaeological deposits should they exist.

Views and vistas to and from heritage items are unknown also at this stage as the final development is not known, however, open spaces have been retained.

Based on the level of research undertaken for the Study Area and a general understanding of potential impacts of the site, the following recommendations have been formulated:

1. In the first instance, where practicable, avoid impact to all identified heritage items and archaeological sites. Those sites have been identified as: TH1, TH2, TH3, TH4, TH5, TH9 and TH10. The area to the east of the Concrete House (LEP Item 6437) may also be archaeologically sensitive.
2. Prepare an archaeological assessment for each potential archaeological site (including the area around the Concrete House) if impacts are unavoidable. This would include areas which are not built upon but will be affected by landscape works, infrastructure, road making, etc, depending on impacts to the landscape and ground levels. The appropriate stage for the preparation of archaeological assessments would be after Project Application and prior to construction commencing.
3. There is existing road and rail corridor infrastructure on the site which can inform the location of new roads through the development. It is recommended that when designing the street layout and street hierarchy of the development the reuse of these alignments are considered.
4. There are historical road and boundary alignments which are no longer visible on the ground (for example the boundaries and road through "Jordan's Farm") which could also inform the layout of streets and blocks within the study area.
5. If significant variations occur, for example a significant increase in or relocation of development areas, then a reassessment of the impact of the development may be required. Depending upon the location any such variations, additional archaeological survey and assessment by a qualified heritage consultant may be required.

6. Consult with the cultural heritage specialists if intending to do any invasive work on site (eg geotechnical investigation) in areas identified as heritage items or as potential archaeological sites.
7. Determine an interpretation strategy (location, content, design) as part of the subsequent detailed project application.

1.0 INTRODUCTION

1.1 Background

Biosis Research Pty. Ltd. has been commissioned by TRUenergy Tallawarra Pty Ltd. to undertake a statement of heritage impact for the proposed concept plan for Tallawarra Lands.

1.2 Project Area

The Project Area consists of the Tallawarra Lands located in the Illawarra district, on the western foreshores of Lake Illawarra, approximately 13 km south west of Wollongong, and occupying 572.1 hectares (ha). The Project Area is adjacent to the West Dapto land release area.

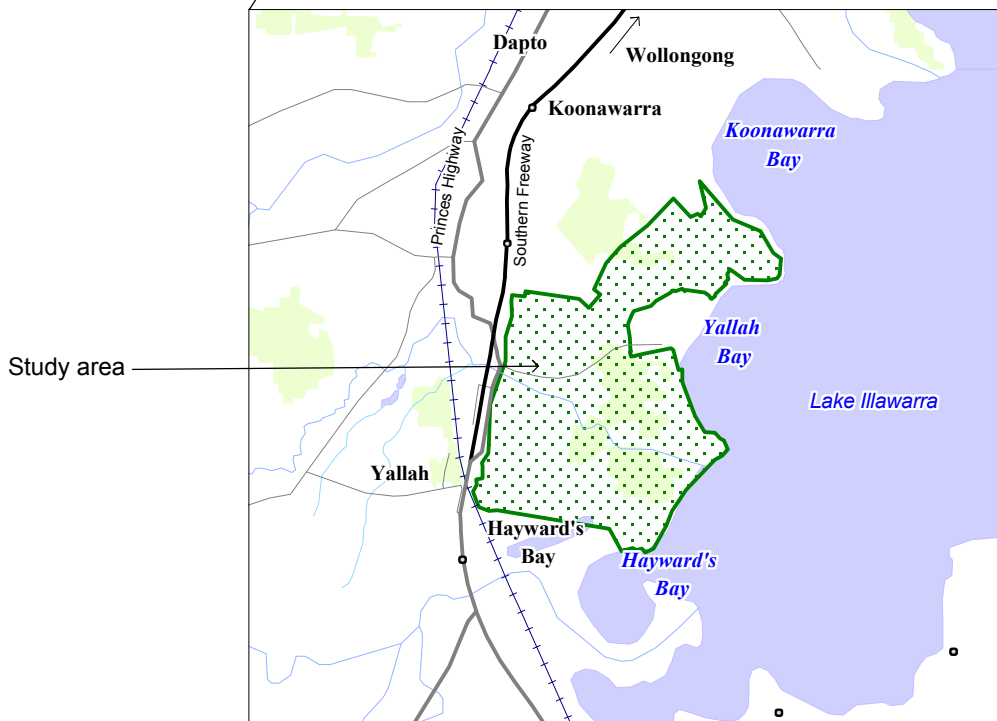
The site is bounded by Lake Illawarra to the east, Haywards Bay to the south, the F6 and the Princes Highway to the west, and existing residential areas to the north. The site includes a number of wetlands and watercourses that flow east into Lake Illawarra, the largest being Duck Creek. It is surrounded by existing suburbs, including Koonawarra, Dapto and Haywards Bay (Figure 1).

The land is predominantly rural and has been used for Power Station operations since the late 1940s. Following the closure of the original Power Station in 1989, the site was idle until 1999 when a combined cycle gas turbine power station was proposed by the then owners, Pacific Power. This new development did not occur until the site was purchased by TRUenergy in 2003. The new Power Station required far less land than the original Power Station and unused land is now surplus. The existing Gas Power Station and proposed extension occupy 36.25 ha (Figure 2).


1.3 Development Proposal

TRUenergy is seeking concept plan approval from the Minister for Planning under Part 3A for the proposed mixed use development of the 535.9 hectare site. The proposed mixed use development concept may include:

- subdivision
- employment generating commercial, industrial and retail development
- new housing stock (approximately 1,210 dwellings)
- public open space areas / new recreation facilities
- environmental management and conservation areas and riparian corridors
- new internal roads
- new pedestrian and cycle pathways
- landscaping
- power station buffer areas



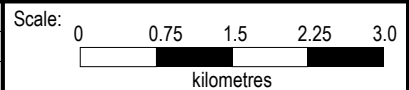
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Figure 1: Location of the Tallawarra Lands Study Area in a regional context.

Date: 2 August 2010	Drawn by: ANP
File number: S5749	Checked by: GLR
Location: \\Venus\insw_projects\N5000s\N5700s\N5749\Historical Report\Mapping\S5749 F1_Historic_Locality.WOR	





Legend

Survey Area


 Study Area

Figure 2: The Study Area

Date: 2 August 2010	Drawn by: ANP
File number: S5749	Checked by: PK
Location: ...\\Venus\new_projects\N5000s\N5700s\N5749\Historical Report\ Mapping\S5749 F2_Historic_Overview.WOR	

0 150 300 450 600 750
 Metres

Scale: 1:15,000 at A3
 Map Projection: Universal Transverse Mercator
 Horizontal Datum: Geodetic Datum of Australia 1994
 Map Grid: Map Grid of Australia Zone 56



Figure 2

2.0 PLANNING APPROVALS

2.1 Part 3A of the EP&A Act 1979

The Concept Plan of a mixed use development at Tallowarra Lands has been declared by the Minister for Planning as a ‘major project’ under the provisions of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act) and *State Environmental Planning Policy (Major Development) 2005* (SEPP 2005). It is therefore subject to the provisions of Part 3A of the EP&A Act. Reporting and assessment have been carried out in accordance with guidelines prepared for projects being assessed and approved under Part 3A of the EP&A Act.

The Department of Planning (DoP) have issued advice and Director-General’s Requirements (DGR’s) for the Concept Plan of a mixed use development at Tallowarra Lands (MP 09-0131). The DGR’s provide specification and guidance for the Environmental Assessment (EA) requirements in relation to Key Issues, in this instance Aboriginal and Non-Aboriginal heritage, and reference various policies and guidelines that are to be considered in the EA. This report focuses on the historical assessment of the Project Area.

The information provided in this statement of heritage impact will support the Application to the Department of Planning, in accordance with the requirements of Part 3A of the EP&A Act.

Part 3A, Section 75U of the EP&A Act specifies approvals and legislation not applicable to Major Projects.

75U (1) The following authorisations are not required for an approved project (and accordingly the provisions of any Act that prohibit an activity without such an authority do not apply):

- (d) a permit under section 87 or a consent under section 90 of the *National Parks and Wildlife Act 1974*

Instead, Project Approval may be given by the Director-General with conditions in regard to cultural heritage. Project Approval may incorporate the considerations of Wollongong City Council and the Heritage Branch, Department of Planning.

2.1.1 Director-General’s Requirements

The Director-General’s Requirements (DGRs) for the project identify Heritage as a key issue to be considered in the Environmental Assessment (EA). The DGRs specify that a Statement of Heritage Impact must be prepared in accordance with the NSW Heritage Branch publication *Statements of Heritage Impact*.

2.2 Aims

The following is a summary of the major objectives.

- Conduct heritage register searches to identify any previously recorded historical heritage sites within the survey area. Searches include the State Heritage Register, National Heritage List, Commonwealth Heritage List, Register of the National Estate, Local Environmental Plan (LEPs) State Environmental Planning Policies (SEPPs) and other relevant statutory and non statutory heritage lists.
- Conduct additional background research involving the review of relevant literature in order to recognise any identifiable trends in historical archaeological site distribution and location.
- Conduct a pedestrian survey within the Study Area in order to identify potential sites of cultural heritage significance and therefore identify any further heritage constraints and opportunities associated with the project.
- Determine the cultural heritage significance of the above and propose measures required to fulfil legislative requirements and TRUenergy policy.
- Identify impacts to known historical archaeological sites based on potential ground disturbances caused by the proposed development.
- Make recommendations to minimise or mitigate impacts to historical archaeological sites within the study area.

3.0 HERITAGE STATUS & PLANNING DOCUMENTS

3.1 Heritage Registers

3.1.1 Commonwealth Registers

Under the *EPBC Act Amendments 2003* (No 88), two mechanisms have been created for protection of heritage places of National or Commonwealth significance. The National Heritage List (NHL) provides protection to places of cultural significance to the nation of Australia. The Commonwealth Heritage List (CHL) comprises natural, Aboriginal and historical heritage places owned and controlled by the Commonwealth and therefore mostly includes places associated with defence, communications, customs and other government activities. There are no management constraints associated with listing on the CHL unless the listed place is owned by a Commonwealth agency.

Nominations to these two lists are assessed by the Australian Heritage Council (AHC), which also administers the (now static) Register of the National Estate (RNE), a list of places identified as having national estate values.

APPLICATION TO THE PROJECT AREA –HERITAGE REGISTERS ADMINISTERED BY DEWHA

A search of the Commonwealth registers was conducted on 22.2.2010.

- **Commonwealth Heritage Register:** None
- **National Heritage Register:** None
- **Register of the National Estate:** None

3.1.2 Heritage Act 1977

The State Heritage Register (SHR) is made under Part 3A of the *Heritage Act 1977*. The SHR is maintained by the Heritage Branch, NSW Department of Planning. In addition to the SHR, the Heritage Branch maintains an inventory of items that are listed on statutory registers in NSW but it should be noted that while archaeological sites may not be listed on any statutory registers, they are protected under the *Heritage Act 1977*.

State Heritage Register: The SHR contains items that have undergone a rigorous nominations process and have been assessed as being of Significance at a State level within New South Wales.

Items listed on the SHR have the highest level of heritage protection under state legislation. Demolition is not permissible and changes can only be made under an approvals process. The SHR lists items of a built nature, archaeological sites and moveable heritage. Generally approval must be obtained from the Heritage Council of NSW when making changes to a heritage place listed on the SHR (Section 60 Permit). Changes include archaeological excavation of archaeological sites listed on the SHR or archaeological excavation undertaken with the curtilage of an SHR listed item. In some cases, excavation may occur under an Exemption Notification.

APPLICATION TO THE PROJECT AREA – NSW STATE HERITAGE REGISTER LISTINGS

A search of the **SHR** was undertaken on 22.2.2010.

- **State Heritage Register:** None
-

S.170 provisions: In addition, Section 170 of the NSW *Heritage Act 1977* requires that culturally significant items or places managed or owned by Government Agencies be listed on a departmental Heritage and Conservation Register. Government Agencies have obligations, under this section of the Act, that include notification to the Heritage Council of intent to change or demolish an item on the register, or notify of change of ownership or management.

APPLICATION TO THE PROJECT AREA – GOVERNMENT AUTHORITY S.170 REGISTER

- **S.170 Register:** None within the site

However, RTA bridge No. 689 is located on the boundary of the Study Area with the Princes Highway (RTA Heritage and Conservation Register database number 4309595).

S.139 Relics Provisions: When excavating any land in NSW where there is a possibility that archaeological relics of State or local heritage significance may be disturbed, that excavation must generally be preceded by an archaeological excavation undertaken in compliance with an approved excavation permit (Section 140 Permit). In some cases, the excavation may precede as an Exception of the required section of the Act. Excavation with an approved s140 permit applies only to relics that are not listed on the SHR or within the curtilage of an SHR listed site.

The Proponent is seeking approval under Part 3A of the *EP&A Act 1979* thus approvals under the *Heritage Act 1977* are not required. However, Section 146 (notification of relics) of the *Heritage Act 1977* still applies.

APPLICATION TO THE PROJECT AREA – NSW HERITAGE ACT 1977 RELICS PROVISIONS

The requirement under s.146 of the *Heritage Act 1977* to notify the Heritage Council of NSW in the event that relics are unexpectedly discovered during works remains in force.

- The potential for relics to occur within the Study Area has been identified as an issue to be addressed. Those relics may be associated with early homestead and dairying sites and early industrial uses.
-

3.1.3 Environmental Planning and Assessment Act

The *EP&A Act* includes provisions for local government authorities to consider environmental impacts in land-use planning and decision making. Such impacts are generally considered in relation to the planning provisions contained in the LEP.

Local Environmental Plans: Each local government authority is required to create and maintain a LEP that in addition to other development controls, contain clauses for the protection of built heritage items, archaeological sites and conservation areas. Local Councils identify items that are of significance within their LGA, and these items are listed on heritage schedules in the LEP and are protected under the *EP&A Act* and in instances where the items has been included on the SHR or is an archaeological site, the *Heritage Act 1977*.

Councils are currently updating their existing LEPs into a standard template. In some cases, the standard LEP will consolidate the various LEPs that exist for one local government area, including the heritage schedules. The environmental heritage schedule of the *Wollongong Local Environmental Plan 2009* was searched for heritage items within and adjacent to the study area. The results are presented below.

APPLICATION TO THE PROJECT AREA – LOCAL ENVIRONMENTAL PLANS

A search of ***Wollongong LEP 2009*** was last undertaken on 10.07.2010.

- **Wollongong LEP 2009 (Schedule 5):**

- Item No.6339: Mt Brown Reserve, Koonawarra/Dapto, Lot 4 DP 223746, Lot 12 DP 233464, Lot 109 DP 1050302, Lot 22 DP 774118. Local significance. The heritage item is situated partly within the Study Area.
- Item No.61016: Military bunker, Mt Brown Reserve, Bright Parade, Dapto, Part Lot 4 DP223746. Local Significance. The heritage item is situated immediately adjacent to the Study Area.
- Item No.6437: House, Princess (*sic*) Highway, Yallah, Lot 1 DP 156657. Local significance. The heritage item is situated immediately adjacent to the study area.

3.2 Non-Statutory Registers

3.2.1 The National Trust of Australia (NSW)

The National Trust of Australia (NSW) is a community-based conservation organisation. The Trust maintains a register of heritage items and places. Although the Register has no legal foundation or statutory power, it is recognised as an authoritative statement on the significance to the community of particular items, and is held in high esteem by the public. The National Trust lists items or places that have heritage or cultural value to the community and, as such, the Trust encourages and promotes the public appreciation, knowledge, and enjoyment of heritage items for future and present generations.

APPLICATION TO THE PROJECT AREA – NATIONAL TRUST OF AUSTRALIA (NSW)

A search of the **National Trust Register** was undertaken on 17.2.2010

- No items within or adjacent to the study area are listed on the National Trust register

3.2.2 Heritage Studies

A number of heritage studies of the region have been conducted over the last four decades.

City of Wollongong Heritage Study

McDonald McPhee (1991)

McPhee *et al.* prepared a thematic history of the Wollongong LGA identifying significant activities within the district at certain times. Their understanding of the historic context of the area was used to identify historic built elements that reflected significant historic processes and periods. This document is concerned primarily with built heritage and is not specifically aimed at providing a predictive framework in which archaeological sites may be identified and managed. However, an understanding of the larger historic processes at work within the area will suggest the site types which could be present within the Wollongong LGA.

Heritage Development Control Plan

Wollongong City Council DCP (2001)

Wollongong City Council has prepared a historic heritage Development Control Plan (Technical Policy 97/2) which explains Council's policies and objectives in relation to buildings and landscapes which are listed as heritage items or which are within heritage conservation areas. As the study area does not include listed heritage items and is not within a conservation area listed in *Wollongong LEP 1990* this document is not applicable to the current proposal.

3.3 Summary of heritage listings in the Study Area

The Study Area partly contains 1 listed heritage item within its boundaries. Mount Brown Reserve is listed on the Wollongong LEP 2009 (Item No 6339). The curtilage of Mount Brown Reserve overlaps the boundary of the Study Area.

Three listed heritage items are located on the boundary of the Study Area. Table 1 provides a summary of items listed within and in the vicinity of the Study Area. Figure 3 shows the location of the heritage items identified in Table 1.

<i>ITEMS IN THE STUDY AREA</i>	RNE	CHL	NHL	SHR	W'GONG CITY LEP 2009	NATIONAL TRUST	S.170 REGISTERS
Mount Brown Reserve (part of Lot 22 DP 774118 and part of Lot 1091 DP 1140369)*					X		
<i>ITEMS IN THE VICINITY OF THE STUDY AREA</i>	RNE	CHL	NHL	SHR	W'GONG CITY LEP 2009	NATIONAL TRUST	S.170 REGISTERS
Mount Brown Reserve (that part not situated within the Study Area)					X		
House, Princes Highway, Yallah (Lot 1 DP 156657)					X		
Military Bunker – Mt Brown Reserve, Bright Parade, Dapto (part of lot 4 DP 223746)					X		
Duck Creek Bridge (RTA Bridge 689)							X

Table 1: Summary of listed heritage items within and adjacent to the Study Area

* The lot and DP information for Mount Brown Reserve in Wollongong LEP 2009 does not refer to Lot 1091 DP 1140369 (situated within the Study Area), however part of this lot forms part of the curtilage of the heritage item as shown on the Heritage Map of the LEP (Heritage Map – sheet HER_013).



Figure 3: Heritage items within or adjacent to the Study Area.

4.0 HISTORICAL CONTEXT

4.1 Introduction

Historical research has been undertaken to identify the land use history of the study area, to isolate key phases in its history, and to identify (where possible) the location of settlement or other intensive activities within the study area in the past. The historical research has also attempted to relate the history of the study area to the broader history of the Illawarra region, and specifically to the area around Dapto west of Lake Illawarra.

In addition to readily available online resources, research was conducted at the following locations:

- Land and Property Management Authority (LPMA)
- Wollongong City Library
- State Library of NSW

4.2 Early Colonial Period before Settlement (1788 – 1815)

The Illawarra district was first noted by Lt James Cook in 1770 when he located the headland of Port Kembla, naming it ‘Red Point’ (Lindsay 1994:1; McDonald 1966:5). He also identified Mount Kembla, naming it ‘Hat Hill’ (McDonald 1966: 5). The next recorded Europeans to visit the Illawarra district were Bass and Flinders in 1796, who sailed along the south coast from Sydney in their small boat, the *Tom Thumb* (Lindsay 1994: 1). Following their landing near Tom Thumb Lagoon, they entered Lake Illawarra and made the first recorded contact with the Aboriginal people in the Illawarra (McDonald 1966: 10).

In 1797 the *Sydney Cove* was wrecked in Bass Strait and survivors made their way through the area to find help, losing several members of their party to ‘hostile natives’ as they went (McDonald 1966: 17). Camping overnight at Coal Cliff, the survivors used coal found in a seam to keep warm. The survivors were eventually rescued and taken to Sydney, where their report of the coal led Bass to be sent back to the area to investigate the report (Lindsay 1994:2). Bass located a coal seam 6 feet thick; however this resource was not utilised for a further 80 years. During this visit Bass also located and named the Shoals-haven and the Shoalhaven River (Lindsay 1994:2).

While the Illawarra region was visited by Europeans during the first 25 years of settlement in NSW, there does not appear to have been any attempt to establish a permanent presence or to use the land for cultivation or pasturing until 1815.

4.3 Early Land Grants and Estates near Lake Illawarra (1815 – 1830)

4.3.1 The First Land Grants in the Illawarra

The first European settlement in the Illawarra region was established by Charles Throsby, who cut a cattle track from Glenfield to just behind South Beach, Wollongong, where he constructed a

stockman's hut and cattle yard in 1815 (Osborne 2000: 1). Joe Wild was Throsby's stockman, and was also made constable of the district of Five Islands in 1815 (McDonald 1966:28).

In 1816 the Surveyor-General John Oxley was sent to survey the area around Lake Illawarra for the purpose of delineating land to be granted (Osborne 2000:6). In 1817 the first five land grants in the Illawarra were made. They were:

- Richard Brooks, *Exmouth*, 1300 acres;
- George Johnston, *Macquarie Gift*, 1500 acres;
- Andrew Allen, *Waterloo*, 700 acres;
- Robert Jenkins, *Berkeley*, 1000 acres; and
- David Allen, *Illawarra Farm*, 2200 acres

Each of these grants was made to an absentee landlord who sent overseers, stockmen and convict labour to their Illawarra estates. At this time, the estates were principally used for grazing cattle (Cousins 1948: 79; McDonald McPhee 1991: 21). One of the first five grants, Richard Brooks' *Exmouth*, was situated partly within the study area.

4.3.2 Richard Brooks (1765? – 1833) and the Exmouth estate

Captain Richard Brooks' grant of 1300 acres (Portion 16 of the Parish of Calderwood) was made by Governor Macquarie in January 1817.¹ The grant document stated that the estate was to be known as *Exmouth* and it was granted on the condition that 75 acres of land was to be cultivated within five years. The southern boundary of Brooks' grant ran in an approximate east-west direction from the southern side of Tallawarra Point towards the north side of Mount Brown, and then continued westwards beyond the boundaries of the study area. The grant stretched northwards to Brooks Creek and west to Mullet Creek. The bulk of Brooks' grant lay to the west of Koonawarra Bay (north of the study area) and only the north east portion of the study area lay within its boundaries (Refer Figure 4).

Captain Richard Brooks settled in NSW in 1814 but had captained a number of convict transports and trading vessels to the colony since 1802. In the aftermath of the 1808 "Rum Rebellion" against Governor Bligh, Brooks sided with the deposed governor. Brooks already had pastoral interests in the colony before 1814, acquiring *Denham Court* estate near Campbelltown in 1812. Upon arrival he concentrated his interests in Sydney before moving permanently to *Denham Court* in 1823 (ADB Online: Richard Brooks). He died at the latter property in 1833 (Parsons 1966).

Brooks, like the other recipients of the five Illawarra land grants of 1817, was an absentee landlord, continuing to reside in Sydney and then at *Denham Court* (Dowd 1977). Historian F. McCaffrey wrote in 1922 that Richard Brooks established a homestead on the western shores of Lake Illawarra at "Woonawarry [*sic*] Bay" (McCaffrey 1922: 109). McCaffrey wrote:

¹ Crown Grant signed 24th January 1817 by Governor Lachlan Macquarie to Richard Brooks, Esquire.

It was here [near Koonawarra Bay] that Captain Brooks founded his homestead. It was a weatherboard house. The timber for it was sawn by Thomas Williamson on the land once owned by John Robbins in the year 1816, adjacent to Abbot's old home. There was the homestead and a large number of out-buildings. Near where a native fig tree was planted some years later, in about 1853, by Benjamin Marshall, Captain Brooks had two grants of land near the lake.

McCaffrey does not provide sources for this information and his description of the location of the homestead is not clear. Given that Richard Brooks was an absentee landlord who never resided in the Illawarra it is presumed that the homestead described by McCaffrey was for the manager or overseer of Brooks' estate. John Robbins and Benjamin Marshall held property to the north of Richard Brooks land at a later date. In the absence of any further information, the homestead described by McCaffrey should probably be located northwards towards Dapto rather than within the study area which is partly situated within the southern part of Brooks' grant.

4.3.3 William Browne (1762 – 1833), Cornelius O'Brien (1796 – 1869) and the Athanlin estate

The bulk of the study area (all that part not situated within Brooks' *Exmouth* grant) is situated within part of an extensive land grant made in 1823 to William Browne by Governor Brisbane, Governor Macquarie's successor. Browne's grant, at 3,000 acres (Portion 15 of the Parish of Calderwood), was the largest ever made in the Illawarra region (Refer Figure 4). The grant document stated that Browne's estate was to be called *Athanlin* and was granted on condition that Browne employ, accommodate and victual 30 transported convicts.² At the same time William Brown was also granted 800 acres (Portion 51 of the Parish of Calderwood) immediately to the south of *Athanlin*. A condition of this second grant was the employment of 8 transported convicts.³ At a combined area of 3800 acres, Browne's estate was the largest in the Illawarra until later landholders began to amalgamate the earlier grants.

William Browne (also known as "Merchant" Browne) arrived in NSW in April 1816 aboard the *Mary*. He was 54 at the time and had already built up a successful trading company based in India ("Browne and Turner") which traded with the Colony of NSW. In 1809 (while still living in India) he acquired the *Abbotsbury* estate situated near Cabramatta and later opened a large storehouse in Sydney in 1814. Upon arrival in Sydney Browne made his home there and did not take up residence at *Abbotsbury* until 1821. His other principal estate was *Oaklands* at Appin. He never resided at *Athanlin*. Browne was a Director of the Bank of NSW from 1819 to 1822 and was appointed a magistrate in 1822. He died at Wollongong in October 1833 and is buried there (Illawarra Family History Group 1992: 22-23; Binney 2005: 79; Scott 1967; McCaffrey 1922: 95).

The management of *Athanlin* was given to Browne's nephew Cornelius "Neil" O'Brien (1796-1869). Cornelius O'Brien along with his mother (Browne's sister) and two brothers arrived ahead of William Browne in 1815 (Scott 1967; Binney 2005: 79). Though Browne's *Athanlin* grant was not issued until 1823, his land at Illawarra was already being grazed by 1820, and indeed

² Crown Grant signed 30 June 1823 by Governor Thomas Brisbane to William Browne, Esquire.

³ Crown Grant signed 30 June 1823 by Governor Thomas Brisbane to William Browne, Esquire.

overstocked, and was being managed by his nephew Cornelius O'Brien (McDonald, 1976: 12). When in 1822 Governor Macquarie conducted a tour of the Illawarra, Cornelius O'Brien acted as his guide on the descent from Appin to Lake Illawarra and through the district (Scott 1967; Macquarie n.d.).

Macquarie's tour took him to the western shores of Lake Illawarra where, on the 15th January 1822, he travelled from Tom Thumb's Lagoon south across Richard Brook's estate to William Browne's estate. Macquarie wrote:

Mr Brown's [sic] establishment [was] situated on the western bank of the lake ... the lands we travelled over from Mr Allan's [at Red Point] to Mr Brown's [sic] were chiefly open forest land of good quality and well wooded and watered.

Macquarie n.d.: Tuesday 15 January 1822

Macquarie, however, did not mention any buildings which might have been situated on the land. Though he spent the night at Browne's establishment Macquarie did not state whether his party camped on the land or whether they slept in a building on his estate. The term "establishment", which Macquarie used to describe William Browne's property, suggests that more than temporary accommodation existed at this time. However no information from this period has been recovered which would indicate the exact location or nature of any such establishment, or indeed whether, given the size of Browne's estate, it was situated within the boundaries of the study area. Macquarie's reference to Mr Browne's establishment being located on "the western bank of the lake" may perhaps suggest that the focus of activity at this time was towards the lake and therefore possibly within the study area.

The year prior to Macquarie's tour, O'Brien investigated and cleared a new track between Appin and the Illawarra (O'Briens Road), which ascended the Illawarra escarpment between Mt Keira and Mt Kembla (Scott 1967; McDonald 1966: 37-38 and inside back cover; McCaffrey 1922: 95). Macquarie's party used O'Brien's road on the return leg of their journey to the Illawarra.

Knowing that Cornelius O'Brien was already managing his uncle's interests in the Illawarra by 1821, it is likely that improvements of some kind were present on Browne's estate from the early 1820s onwards. While the historical research has so far not indicated the presence of a true homestead on *Athanlin*, the presence of an overseer (O'Brien) and stockmen to run Browne's cattle herds, as well as convict labour required as a condition of Browne's grant, suggests that there would have at the least been stockyards and buildings (even if only rudimentary timber huts) on the land. However, no map, plan, drawing or description has so far been located to indicate where such improvements were situated, or whether any were situated within that part of the study area which falls within Browne's grant. Local historian F. McCaffrey, writing in 1922, stated that "the dwelling house and outbuildings that were erected by Mr William Browne for his overseer have long since disappeared" (McCaffrey 1922: 95). However, it is not clear from this source whether McCaffrey had specific knowledge of such buildings or simply assumed that such buildings would have once been present. Much of McCaffrey's writing was based on anecdotal sources and his use of documentary sources is often unreliable.

While still managing his uncle's *Athanlin* estate, Cornelius O'Brien established properties of his own in the Illawarra at Five Islands and Bulli and a grant was made to him in 1833 (Scott 1967). Shortly afterwards he joined his brother Henry O'Brien on the latter's extensive estates in the Yass district. Cornelius O'Brien sold his Bulli property in 1836 thus ending the Browne family's connection with the Illawarra and the study area in particular (Scott 1967).

In 1826 or 1827, Alexander Harris, author of *Settlers and Convicts* (Harris 1847), travelled to the Illawarra to build a house for one of the settlers on an estate beside "Yalla-Lake". When Harris refers to "Yalla-Lake" it is not clear whether he is describing Lake Illawarra as a whole or Yallah Bay only. Because he had critical comments to make about the settler he worked for, Harris did not provide the latter's name and in fact purposely avoided providing specific details which would allow the estate to be easily identified. The estate was south of Mullet Creek (which Harris had to cross) and on the way he spent the night at a cattle-station "on the border of the lake [Lake Illawarra]" where he stayed at a convict stockman's hut. It is very likely that this was located on either the *Athanlin* or *Exmouth* estates. His final destination was reached the next day. While it is possible that it lay within the study area there is insufficient detail in Harris' account to determine the exact whereabouts of the property. Here he built a homestead for the unnamed settler and his family, the construction details (but not the location) of which he described in great detail. While Harris' account may not assist in pinpointing the location of early settlement activity within the study area, the description of how the early cattle stations were managed and of the huts and homesteads to be found in the area at the time provides an idea of the activities which may have occurred within the study area (Harris 1847: 15).

Another source for the early colonial history of the Illawarra is a series of journals from the 1830s (Henderson 1983). While these journals make frequent mention of homesteads at *Daisy Bank* and *Marshall Mount*, no mention is made of any homestead or other buildings at *Athanlin* or *Exmouth*.

4.4 The Osborne family and the Marshall Mount estate

In 1829 Henry Osborne (1803 – 1859) arrived in the colony of NSW from Northern Ireland. In the same year he was granted 2,560 acres of land in the Illawarra. He named his estate *Marshall Mount* (Figure 4). Osborne's grant was situated to the south west of the study area, centred on what is now Albion Park. Henry's brother, Alick Osborne, had settled in NSW earlier than Henry, and owned another Illawarra estate, *Daisy Bank* which was situated at Dapto to the north of the study area (Cousins 1948: 53).

Henry Osborne was one of the first of the early landowners in the Illawarra who was not an absentee landowner but who actually settled on his estate (in contrast to William Browne and Richard Brooks). Osborne's homestead began with a slab hut (*Pumpkin Cottage*) in 1833 which was subsequently demolished and replaced by more considerable building in 1841 which in turn was expanded in subsequent years. The homestead at *Marshall Mount* is still standing and is listed as a heritage item.

The Osborne's association with the study area began when Henry O'Brien took over the *Athanlin* and *Exmouth* estates in the 1840s. Henry O'Brien also acquired other estates in the area, large and

small, until he was the largest landowner in the district. His estate extended from Mullet Creek in the north to the Macquarie Rivulet in the south, and from Lake Illawarra in the east to the Illawarra escarpment in the west. The study area thus formed only a part of the extensive *Marshall Mount* estate. While the Osborne family's homestead was well outside the study area, it is not clear from the research conducted for this report whether there were other homesteads or leases on their lands, and specifically, whether there were any within the study area.

Henry Osborne died in 1859. It was not until the 1890s however that the extensive estate which he had created began to be subdivided (Figure 5). Most of this activity occurred on the north and western parts of his estate around Dapto, leaving those parts of the study area which lay within his estate as residual property. Beginning in 1894, a succession of land titles was issued for town allotments carved out of the larger estate. In 1895 The Illawarra Harbour and Land Corporation Ltd took over Osborne's estate and continued the subdivision and sale of large parts of it into town allotments. That part of the study area which was situated within Osborne's estate remained unaffected (Certificates of Title, Vol.1159 Fol.101, Vol.1179 Fol.87, Vol.1192 Fol.220, Vol.1362 Fol.224).

Until this subdivision activity there does not appear to have been any new land title issued for land within the study area since the original grants of 1817 and 1823. It has also not been possible, without further research, to establish any lease arrangements which may have been made within the study area. Land title plans dating to the 1890s when the Osborne estate was being subdivided refer to the surnames "Jordan" and "Thompson" on land situated within the study area north of Duck Creek and extending to the western boundary of the study area (Figure 5). No reference has been found so far to any buildings erected by "Jordan" or "Thompson" on this land or what tenure arrangements they had.

In 1916 the residue of the Osborne's property within the study area was advertised for private sale as the "Lakelands Estate". No new land titles appear to have been issued as a result of this subdivision. However, the 1916 subdivision plan (Figure 6) illustrates one building within the study area and confirms that part of the area immediately north of Duck Creek was known as "Jordans Farm". In the north of the study area, on lot 8 of the Lakelands subdivision stood "O'Briens House" (Figure 6), which is situated in the location of the former riding school. Whether the name had any connection with the earlier Cornelius O'Brien, manager of *Athanlin*, has not been ascertained.

4.5 The Brown Family and Wollingurry Dairy

The Brown family, who for over a hundred years were one of the principal dairying families in the Illawarra, began their association with the subject site in 1906⁴ when they established the *Wollingurry* dairy farm and jersey stud at Yallah (Van Boeschoten 1988). A. Cousins, writing in 1948, described *Wollingurry* as a "neglected property" comprising three paddocks stretching over

⁴ In 1902 according to another source (Cousins, 1948).

296 acres⁵, which was subsequently improved by the Browns into “a valuable property with many paddocks, well cultivated, well grassed, and capable of supporting four families – a model farm with a model herd” (Cousins, 1948: 111-112).

According to information sourced from a member of the Brown family (Van Boeschoten 1988): “Four new houses were built on these properties and another was modernised and three new dairies were also built and so the ‘Wollingurry Stud’ was born”.

The historical research conducted for this report could not locate any reference to property titles for the area of land occupied by the Brown family between William Browne’s 1823 grant and a mortgage made in 1912. The 1912 mortgage was taken out by the three Brown brothers, Thomas William (1857-1952), William George (1860-1953), and Albert Cole (1872-1954), for 3,000 pounds. The properties mortgaged are described as Lots 1, 2 and 8 of “Yallah Estate”. The mortgage mentions buildings, outbuildings, and fences, but does not provide a plan or specific details as to the location of any of these improvements. The mortgage document does not contain any reference to previous or succeeding land titles, nor could any subdivision plan or formal reference to a “Yallah Estate Subdivision” be located.

In 1936, Albert Cole Brown moved to Exeter. *Wollingurry* was divided into two properties, run by Clive Brown and Wilfred Brown (sons of Thomas brown and William Brown respectively). Clive Brown is said to have taken over “Wollingurry Stud” while Wilfred established another Jersey Study called “Sherbrooke” (Van Boeschoten 1988). Whether “Sherbrooke” was situated on land which was formerly part of *Wollingurry* (and therefore within the study area) is not made clear. The “Wollingurry Stud” continued after the resumption of land for Tallawarra Power Station until it was moved to Camden in 1964 (Van Boeschoten 1988).

Orthophoto maps from the mid 1970s provide the names by which some of the properties within the study area were known by. *Wollingurry* is the name given to the group of buildings adjacent to the bend in Duck Creek (Figure 7). Two properties in the south west corner of the study area are called *Roscommon* and *Beachgrove* (Figure 8).

⁵ 600 acres according to Dapto Bicentennial.

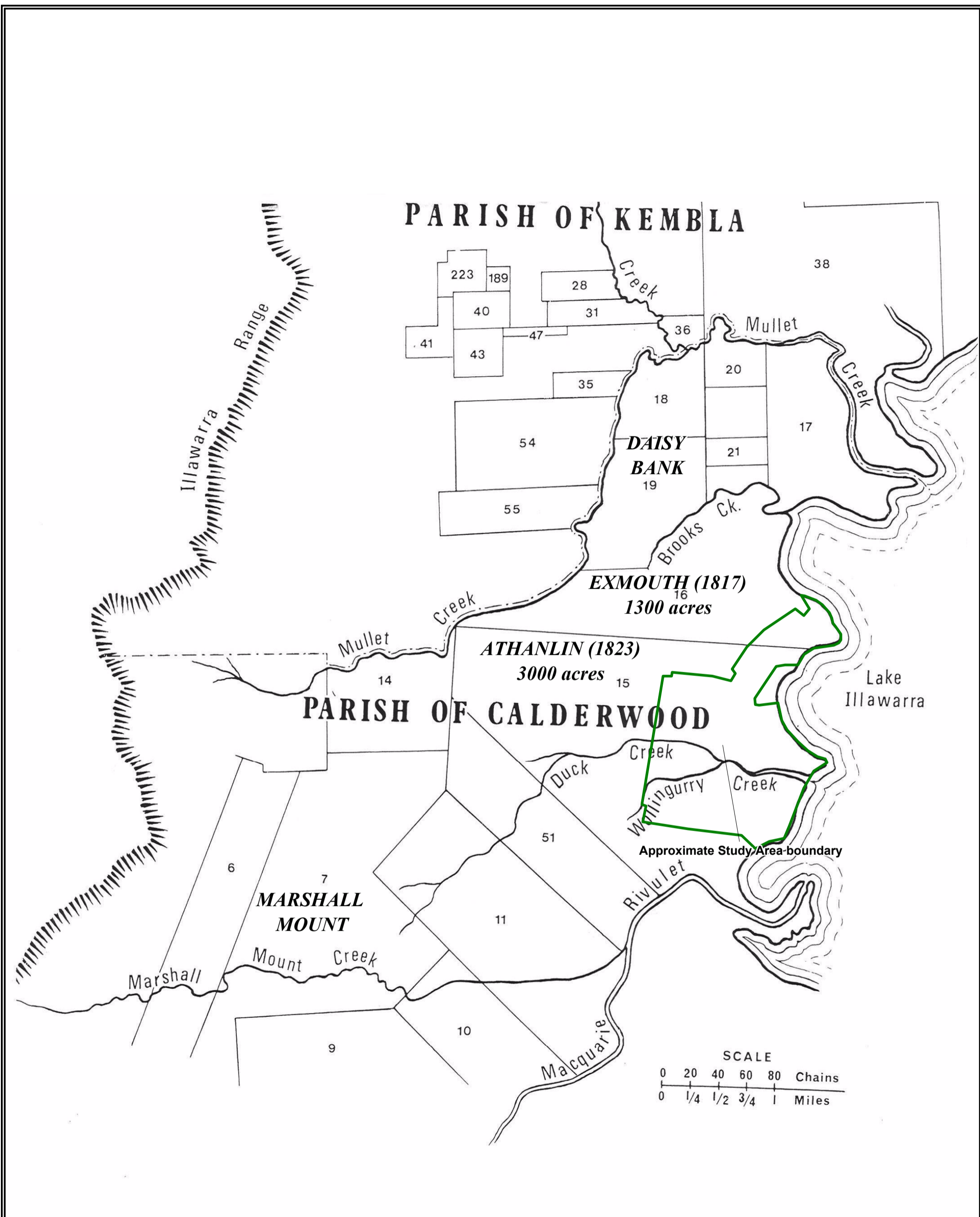


Figure 4: Land grants in the Illawarra (adapted from McDonald, 1976). The approximate boundary of the Study Area is outlined. the Study area is partly situated within porion 16, Richard Brooks' Exmouth Estate, and portion 15, William Brown's Athanlin estate.

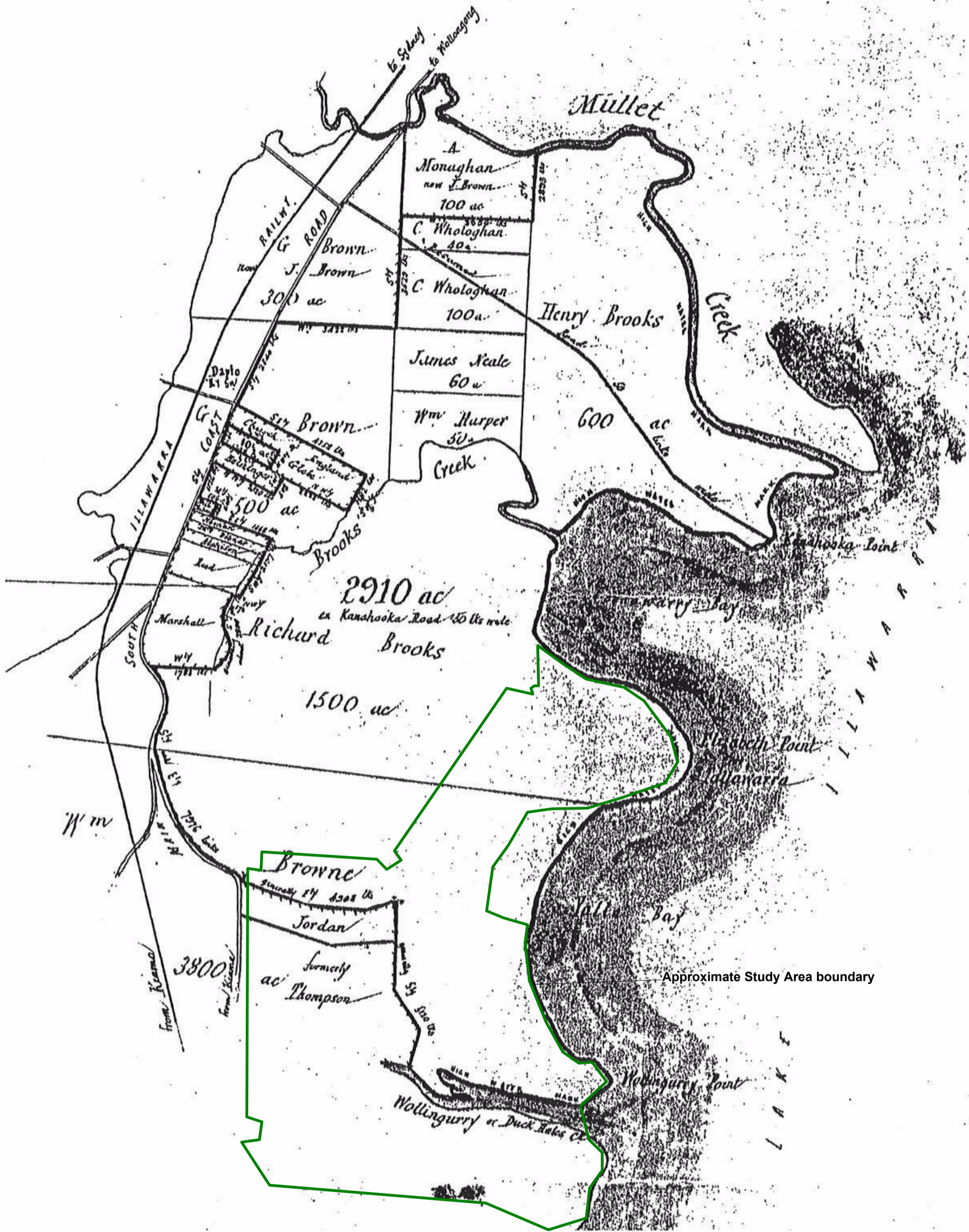


Figure 5: c. 1890's land title plan of Henry Osborne's estate (source:Wollongong City Library). The Study Area is outlined.

Law given by Walter Berkuta

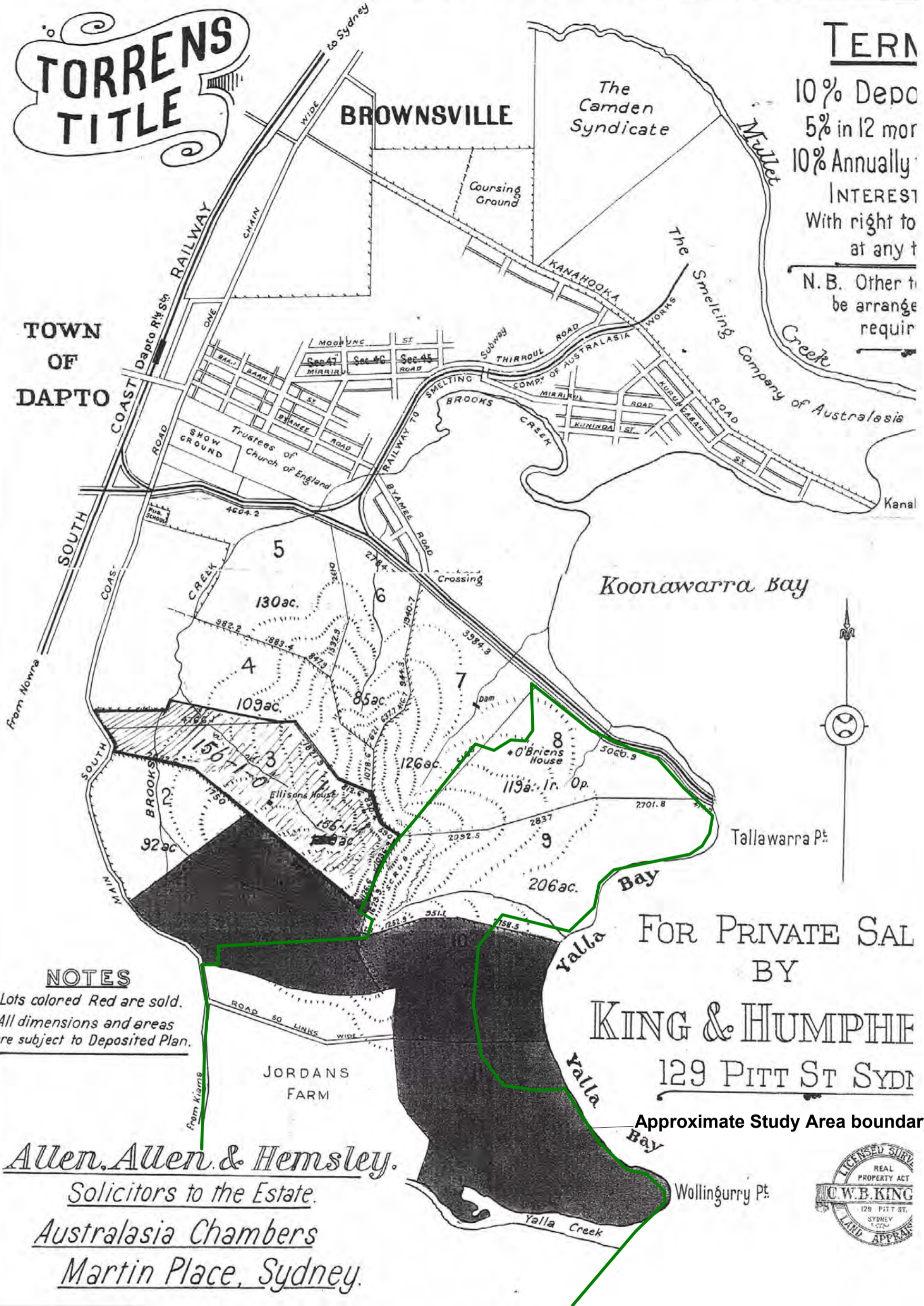
**TORRENS
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NOTES
Lots colored Red are sold.
All dimensions and areas
are subject to Deposited Plan.

Allen, Allen & Hemsley.
Solicitors to the Estate.
Australasia Chambers
Martin Place, Sydney.

FOR PRIVATE SALE
BY
KING & HUMPHREY
129 PITT ST SYDNEY



Figure 6: 1916 subdivision plan of the "Lakelands Estate" (Source Wollongong City Library). The Study Area is outlined. The plan confirms that part of the Study Area north of Duck Creek was known as "Jordans Farm" and that a building in the north part of the Study Area (which corresponds to the former riding school identified as TH1 in this report) was known as "O'briens House".

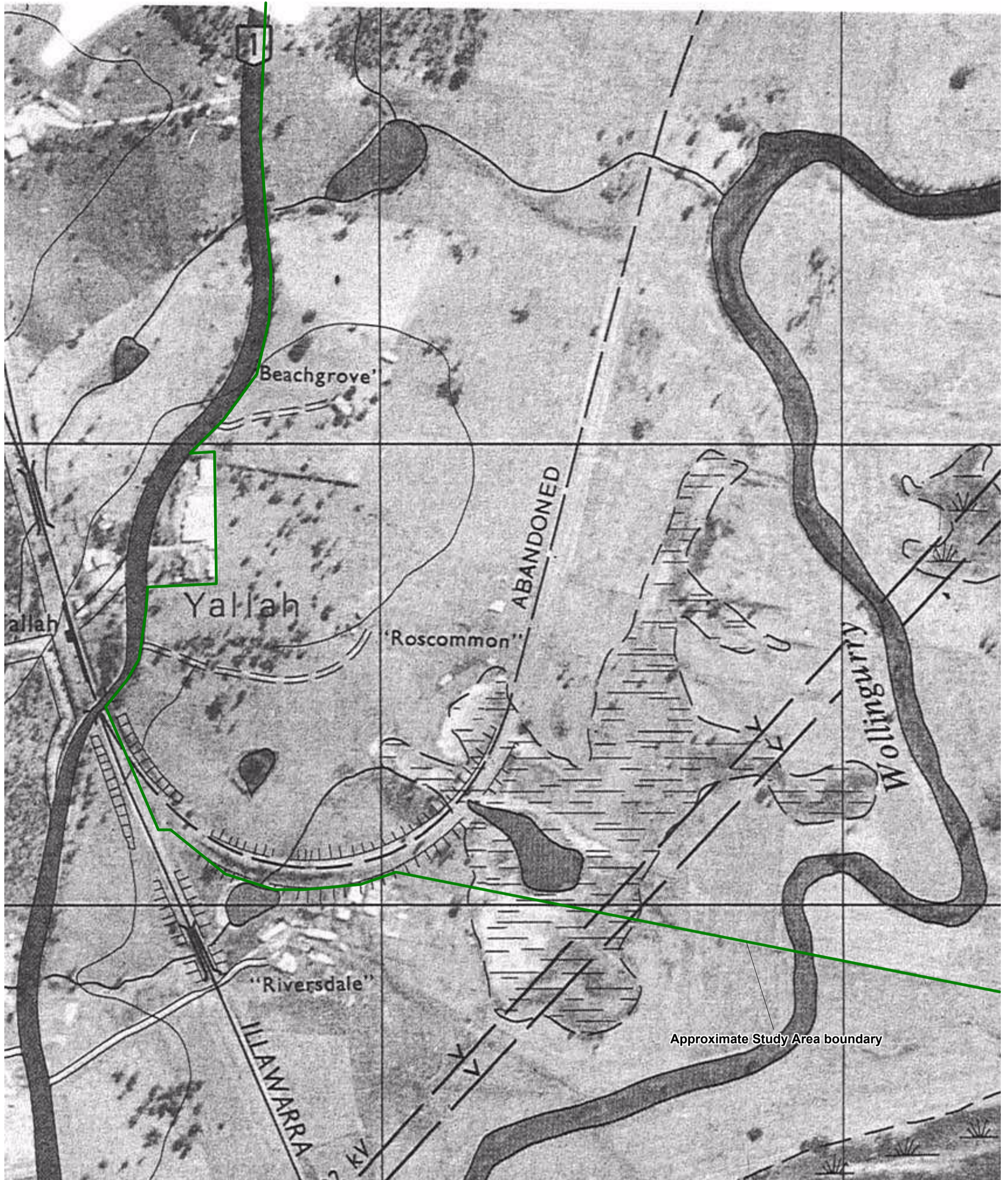


Figure 7: A 1975 Orthophoto showing the LEP Item 6437 adjacent to the Study Area as "Yallah" and identifying two properties within the Study Area as "Rosecommon" and "Beachgrove". The alignment of the "abandoned" railway line is also visible in this photograph.

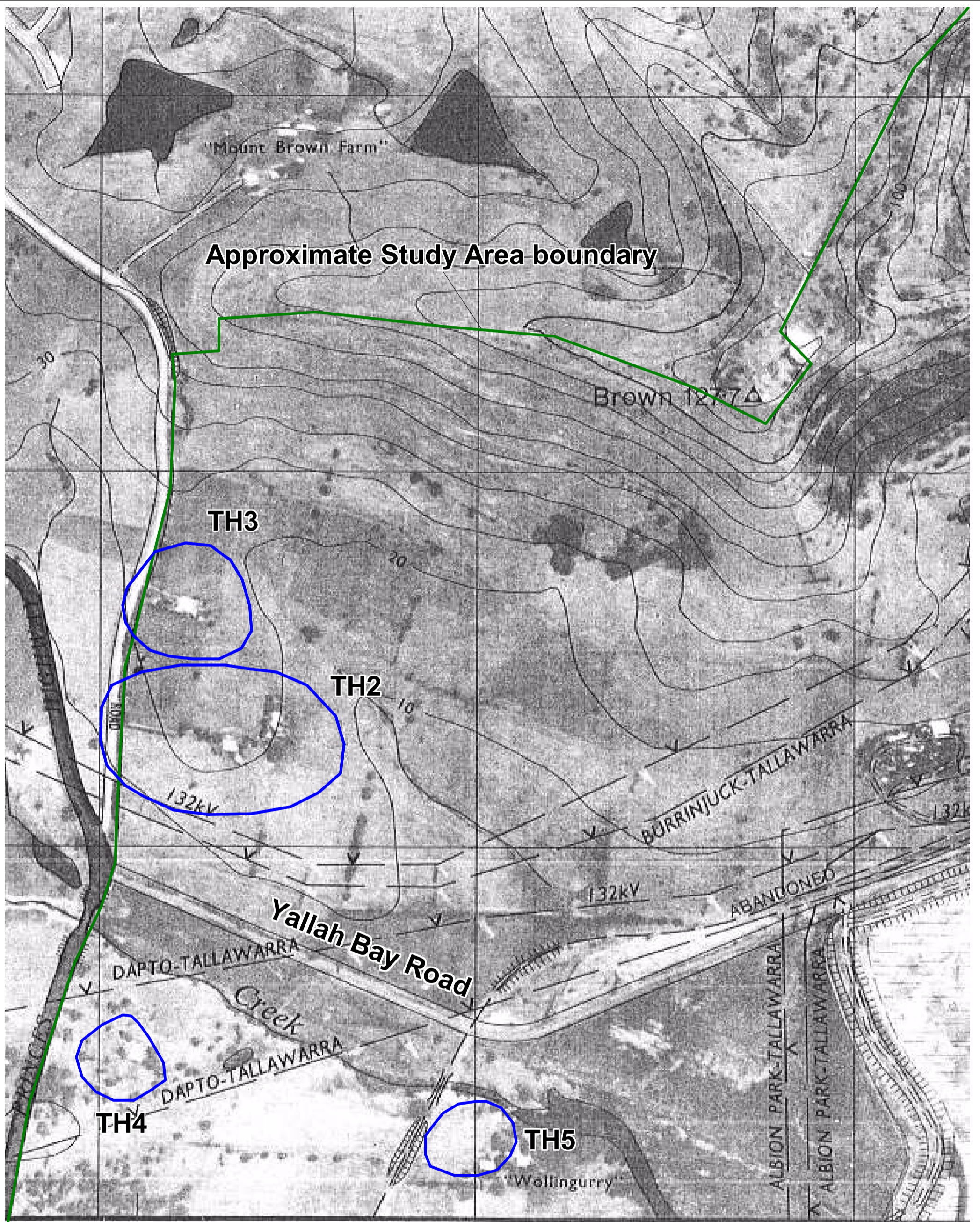


Figure 8: A 1974 orthophoto of the northern section of the Study Area (outlined). This image shows the location of the "Wollingurry" (TH5 in this report and on the south side of Duck Creek) but does not name the buildings at TH2 or TH3 (circled), which are still visible at this time. Nor does it identify TH4, which appears to have been demolished by 1974. This image shows the continuation of the "abandoned" rail line.

5.0 SITE ANALYSIS

5.1 Introduction

The Study Area was analysed using a number of means including a review of available plans, aerial photographs and a targeted site visit. In addition, historical artefacts were unearthed during the Aboriginal archaeological excavation undertaken by Biosis Research in May 2010 (draft), supporting the conclusions drawn from reviewing the aerial photographs.

5.2 Plans

The Study Area was analysed using a number of sources including historical plans, aerial photographs and a limited amount of field survey.

5.3 Aerial Photographs

A series of aerial photographs was reviewed to identify early structures on the site and to assess changes throughout the available years. The photographs date from 1948, 1955, 1966, 1977, 1987, 1993 to those representing the current situation.

The analysis below is a brief discussion of the changes in the landscape evident from the aerial photographs. Eight sites were identified within the Study Area boundary and one adjacent to the northern boundary on Elizabeth Point, through a review of the aerial photographs; these sites in addition to the items listed on the *Wollongong Local Environmental Plans*, which are identified by their LEP numbers when referred to. The sites identified are illustrated on Figure 3. The nine items are as follows:

TH1	Existing structures in the north west corner of the site, most recently a riding school. Possibly "O'Brien's House" present at least by 1916.
TH2	Potential archaeological site near a large fig tree to the west of the site and adjacent to the Princes Highway. Possibly part of "Jordan's Farm" in the late nineteenth century.
TH3	Potential archaeological site slightly to the north of TH2. Possibly part of "Jordan's Farm" in the late nineteenth century.
TH4	Potential archaeological site south of Duck Creek and adjacent to the Princes Highway. Possibly part of the Wollingurry Dairy, early 20 th century.
TH5	Potential archaeological site south of Duck Creek and east of TH4. House known as "Wollingurry" situated on Wollingurry Dairy, early 20 th century.
TH6	Former Yallah Platform. Removed to Albion Park rail museum in 1980s.
TH7	Former Smelting Company rail alignment (adjacent to the Study Area)
TH8	Pair of existing tanks at the base of Mount Brown, built c.1950.
TH9	A more widespread group of structures in the southern part of the Study Area; grouped together as the aerial photographs are unclear. Shown as "Beachgrove" in 1970s and

	possibly part of Wollingurry Dairy, early 20 th Century.
TH10	Group of structures east of TH6. Shown as “Roscommon” in the 1970s and possibly part of Wollingurry Dairy, early 20 th Century.

TH1 Possible “O’Briens House/Riding School: Aerial Photographs

1948	<p>A group of extant buildings; generally in moderate condition. Formerly a riding school, the group includes a former residential building, a number of sheds, stock yards, fences and old signage; the buildings are on Richard Brooks’ “Exmouth” grant (as shown on parish maps).</p> <p>Access to the group is from Gilba Road, which appears to run along part of the former rail alignment (TH7); it remains in this location.</p>
1955	<p>Buildings not clear in this photograph but the ground has clearly been disturbed. Based on the form of the existing buildings, it is more likely that the resolution of the photograph isn’t adequate to convey detailed information; clearing around the property has extended.</p> <p>The power station to the south is still under construction and a spit has been constructed into Lake Illawarra; power lines are visible from the air.</p>
1966	Buildings are visible with possible additions; the site appears to be better established with more vegetation surrounding the group.
1977	One small addition is seen in the western area of this small group.
1987	1987 aerial does not capture this part of the Study Area
1993	The group of buildings can be seen clearly in this photograph. Surrounding vegetation has increased in area and in size.
2010	<p>The group of buildings is visible on a Google Map (© 2010; not included in this report).</p> <p>Access is from Gilba Road.</p>

TH2 Group of Buildings north of Duck Creek: Aerial Photographs

1948	Although not absolutely clear, the aerial photograph shows features that suggest a group of buildings and plantings along fence lines.
1955	This aerial shows what appear to be structures and trees in rows in the same location.
1966	Many of the trees have been removed. The group of structures in clear as is access from the Princes Highway.
1977	The group of buildings is still present.

1987	This group appears to have been demolished by 1987. Some trees and evidence of the drive remains.
1993	Aerial photograph does not capture this part of the Study Area
2010	Vegetation lining the former access road is visible (Google Maps © 2010; not included in this report).

TH3 Group of Buildings north of Duck Creek: Aerial Photographs

1948	Appears to be a small group of buildings in proximity to and north of TH2. Access appears to be from the Princes Highway.
1955	Very clear in photograph
1966	Very clear in photograph
1977	The structures have been demolished; vegetation remains
1987	Much of the vegetation has been removed
1993	Aerial photograph does not capture this part of the Study Area
2010	As 1987 (Google Maps © 2010; not included in this report).

TH4 Group of Buildings, Possibly “Wollongong Dairy”: Aerial Photographs

1948	A sprawling group of buildings visible south of Duck Creek and on the eastern side of the Princes Highway. Two lines of trees are visible radiating from the group – one is possibly access from the highway.
1955	Structures are still visible; the surrounding trees have been thinned out.
1966	Group of structures clearly visible
1977	Structures have been removed. Vegetation remains
1987	Land appears to be vacant; more vegetation is visible
1993	Aerial photograph does not capture this part of the Study Area
2010	No sign of former structures; vegetation increasing

TH5 "Wollingurry": Aerial Photographs

1948	Group of buildings visible south of Duck Creek and approximately 500 m on the eastern side of the Princes Highway.
1955	Structures are still visible
1966	Group of structures clearly visible; access is from the west, probably from the Princes Highway
1977	Unclear but may still be extant. Access is from the Princes Highway to the west
1987	The group of buildings has been demolished
1993	Aerial photograph does not capture this part of the Study Area
2010	No sign of former structures; vegetation increasing

TH6 Yallah Platform: Aerial Photographs

1948	Not visible
1955	Not visible
1966	Not visible
1977	Not visible
1987	Not visible
1993	Not visible
2010	Not visible

TH7 Corridor of the former Smelting Company Train Line: Aerial Photographs

1948	Visible – the train line is defunct by 1948; the date when the rails were removed is not known.
1955	Visible
1966	Visible
1977	Visible
1987	Visible
1993	Visible
2010	Visible

TH8 Concrete Water Tanks: Aerial Photographs

1948	Not visible
1955	Visible
1966	Visible
1977	Visible
1987	Visible
1993	Aerial photograph does not capture this part of the Study Area
2010	Visible

TH9 “Beachgrove”: Aerial Photographs

1948	Not clear in the photograph but disturbance in the area suggests structures in the general vicinity east of the LEP listed house (ID 6437)
1955	Unclear
1966	Unclear
1977	A groups of buildings visible to the north and north east of the LEP listed house (ID 6437), which now has a large shed built adjacent.

1987	The structures have been demolished and a large detention basin has been built close by. Irregularities on the ground suggest that the site survives in archaeological form.
1993	Aerial photograph does not capture this part of the Study Area
2010	Possibly survives in archaeological form as the construction of the detention basin does not appear to have modified the western part of the affected land.

TH10 "Roscommon": Aerial photographs

1948	Not clear in the photograph but disturbance in the area suggests structures in the general vicinity east of the LEP listed house (ID 6437)
1955	Unclear
1966	Unclear
1977	A groups of buildings visible to the east of the LEP listed house (ID 6437), which now has a large shed built adjacent.
1987	The structures have been demolished and a large detention basin has been built close by. Irregularities on the ground suggest that the site survives in archaeological form.
1993	Aerial photograph does not capture this part of the Study Area
2010	Possibly survives in archaeological form as the construction of the detention basin does not appear to have modified the western part of the affected land.

Landscape

1948	Generally rural with evidence of dams and the occasional structure that could be homesteads and/or industrial buildings such as dairies. The landscape has been largely cleared of trees, including those on the slope of Mount Brown Reserve. The alignment of Duck Creek retains what can be argued is its natural course.
1955	The Tallawarra Power Station is under construction. The spit into Lake Illawarra associated with the Power Station has been built. Many more roads across the Study Area are visible; two tanks at the base of Mount Brown have been built. The Study Area retains small groups of buildings; the large water tank on Mount Brown has not been built; the air raid shelter is not visible but it has been built by now. More roads across the landscape are visible with continuations across Duck Creek, suggesting that the water courses have been bridged in some way.

1966	The Power Station is operating, as can be seen by the plumes of smoke; large towers and power lines traverse the Study Area; clearing of vegetation has taken place. Generally the landscape is changing with detention basins and modifications visible from the air; the first of the water tanks on Mount Brown have been built.
1977	By 1977 some of the structures in the vicinity of Duck Creek and the Princes Highway have been demolished; roads appear to be more formalised; still only one water tank on Mount Brown.
1987	Detention basins have been built in some parts of the Study Area; Vegetation on Mount Brown Reserve has increased as has residential development to the north of the Study Area in Koonawarra; the second water tank on Mount Brown Reserve has been built by 1987.
1993	Other than more vegetation, little change apparent from the air.
2010	Possibly survives in archaeological form as the construction of the detention basin does not appear to have modified the western part of the affected land. The decommissioned former power plan is visible in the photograph

5.4 Archaeological Survey Constraints/Factors

Several factors influence the preservation of surface indicators of historical archaeological sites, which would assist with identifying sub-surface relics. The action of ploughing can disturb the top layers of archaeological sites, as can urban developments, the creation of dams and other infrastructure. Similarly to survey for Aboriginal artefacts, ground surface visibility influences the detection of artefacts such as glass and ceramic sherds that could indicate an archaeological site. Vegetation cover and the introduction of fill are two such factors that would obscure evidence of archaeological sites. Finally, the nature of archaeology, being predominantly sub-surface creates a situation where a site may not necessarily be visible.

Other forms of landscape evidence may consist of mature exotic plantings such as bunya pines (*Araucaria* sp) in a group or an avenue, remains of earlier posts and three rail fencing and gates and mounds or hollows surrounded by weeds such as African olive (*Olea europea* subsp. *cuspidata*), privet *Ligustrum sinense* (Small leaf privet), *Ligustrum lucidum* (Large leaf privet), and blackberry (*Rubus anglocandicans*).

In general however, historical archaeological sites are detected through documentary research such as plans, historical site descriptions to gain an understanding of site development.

5.5 Survey Methodology

The aim of this investigation is to assess all known historic sites situated within the proposed development areas and to record any new heritage sites within the proposed development

boundaries. During the course of the research, a number of potential heritage sites were identified; however, not all sites were visited to ascertain their preservations (in many cases ascertaining the preservation of archaeological sites is not possible through field survey).

The survey targeted listed heritage items and existing structures within the Study Area. New heritage sites were not discovered during the targeted survey; however historical artefacts were unearthed during the recent Aboriginal archaeological excavation at TLPD Site 10 (refer Biosis Research 2010 Aboriginal Archaeological Excavations DRAFT), which corresponds with TH4 in this report.

Items listed on the Wollongong LEP 2009 that are within on directly adjacent to the Study Area were visited. In addition to listed heritage items, areas of interest were also visited. The aim of the survey was to assess potential physical and visual impacts associated with the design shown in the Concept Plan.

The areas visited during the survey include:

- House at Yallah on the Princes Highway (Lot 1, DP 156657; directly adjacent to the Study Area) (LEP Item 6437). Sometimes known in recent times as Yallah Homestead.
- Mount Brown Reserve (multiple lots; partly within the Study Area) (LEP Item 6339)
- Military Bunker, Mount Brown Reserve (Part Lot 4, DP 223746; directly adjacent to the Study Area) (LEP Item 61016)
- TH1 – Group of buildings, formerly a riding school, (Lot 22, DP 774118) (not listed)
- One possible location of TH6 – Yallah Station, identified on maps. Platform buildings removed and relocated to Albion Park. Subsequent research established that the Yallah Station was never located within the Study Area.
- TH7 – The former Smelting Company Railway alignment located outside but directly adjacent to the Study Area (possibly within the easement identified for Gilba Road).

5.6 Survey Team

The preliminary site inspection was undertaken by Pamela Kottaras with the assistance of Lloyd Townsend (TRUenergy). Peter Woodley viewed the Concrete House, otherwise known as Yallah Homestead, from the road.

5.7 Survey Results

The survey results are presented in this section and discussed with regard to potential development impacts in Section 6. Survey of the Study Area yielded the following results:

House at Yallah on the Princes Highway (Lot 1, DP 156657; directly adjacent to the Study Area) (LEP Item 6437)



Plate 1: LEP Item 6437 “Yallah Homestead”

LEP Item 6437 on an old alignment of the Princes Highway. Although not within the Study Area, the Concept Plan proposed development behind this property. View east. The walls are made of cast concrete panels possibly made around 1900. Historic photographs show the house with a tiled roof (now corrugated sheet). The form of the house, though added to, is highly suggestive of an earlier colonial homestead, in particular the roof form, its pitch and proportion, and the wide and deep post-supported veranda. It is possibly that the house was built in the early to mid nineteenth century and was later substantially renovated at the turn of the twentieth century. If it is an early homestead then it could have been associated with outbuildings and yards (now demolished) which would now extend onto the study area given its close proximity.



Plate 2: LEP Item 6437 Views from “Yallah Homestead”

Views to Lake Illawarra from the property to the rear of LEP Item 6437. The area behind the fence has been identified in the Concept Plan for the “Lakeside Residential Precinct”.

Mount Brown Reserve (multiple lots; partly within the Study Area) (LEP Item 6339)



Plate 3: LEP Item 6339 View from Mount Brown Reserve

Views down the hill from the Reserve. Elizabeth Point is visible; residential development is proposed for the north side of the Point and will cause minimal impact from Mount Brown Reserve. The area visible in this photograph has been chosen as “Conservation and recreational reserves” in the Concept Plan.



Plate 4: View to Mount Brown Reserve

Views to the north ridgeline on Mount Brown in the reserve. This area was denuded for a time in the middle of the 20th century but the rainforest has regrown. It forms part of the “Conservation and recreational reserves” in the Concept Plan. The feature in the centre of the photograph is a constructed reed filtration bed.

Military Bunker, Mount Brown Reserve (Part Lot 4, DP 223746; directly adjacent to the Study Area) (LEP Item 61016)



Plate 5: LEP Item 31013 Military Bunker

The military bunker on Mount Brown (LEP Item 61016). The item is outside but directly adjacent to the Study Area.



Plate 6: Views from the military bunker on Mount Brown Reserve to Lake Illawarra.

The land in the middle ground has been identified as “Conservation and recreational reserves” in the Concept Plan.



Plate 7: TH1 Former Homestead

One of the groups of buildings on the property identified as possibly being “O’Briens House”, later a riding school.



Plate 8: TH4 Homestead site

A potential historical archaeological site tentatively identified as part of the “Wollongong Dairy”. It is in the vicinity of the test excavations undertaken by Biosis Research for Aboriginal cultural material.



Plate 9: TH7 Surviving corridor of the former Smelting Company Train Line.

The alignment is to the north of and adjacent to the Study Area.



Plate 10: TH8 Concrete Tanks

Concrete tanks to the north west of the existing power station (c.1950). View west from the ridge in the east of the Study Area.

Photographs of TH5, TH6, TH9 and TH10 were not taken as the sites were identified through maps and plans only.



Legend
Sites Identified

- Historic Site
- Wollongong LEP 2009 (WLEP)**
- Heritage Item
- Survey Area**
- Study Area

ID	Historic_Feature
TH1	Former riding school, possibly site of "O'briens House"
TH2	Buildings shown on aerial photographs (now demolished)
TH3	Buildings shown on aerial photographs (now demolished). Possibly associated with "Jordans Farm"
TH4	Buildings shown on aerial photographs (now demolished). Possibly part of "Wollongong Dairy"
TH5	Site of "Wollingurry"
TH6	Former site of Yallah Platform
TH7	Former Smelting Company branch railway alignment
TH8	Concrete tanks (c.1950s)
TH9	Site of "Beachgrove"
TH10	Site of "Roscommon"

Figure 9: Sites identified in this report from aerial photographs and historical research.



6.0 PRELIMINARY STATEMENT OF HERITAGE IMPACT

6.1 Proposed Development

TRUenergy is seeking concept plan approval from the Minister for Planning under Part 3A for the proposed mixed use development of the 535.9 ha site.

The proposed mixed use development concept may include:

- subdivision
- employment generating commercial, industrial and retail development
- new housing and retirement living units (approximately 1,210 dwellings)
- public open space areas / new recreation facilities
- environmental management and conservation areas and riparian corridors
- new internal roads
- new pedestrian and cycle pathways
- landscaping
- power station buffer areas

6.2 Potential Impacts

6.2.1 Introduction

The assessment of potential impacts has been prepared by comparing the concept plan against potential archaeological sites and known heritage items. A concept plan identifies the location of proposed land uses and accompanying infrastructure. Its purpose is not to provide specific details of individual components such as would be required in a development application. As a result, an assessment of the impact of future development on heritage items and potential archaeological sites is necessarily limited at this stage to identifying whether, in the concept plan, these sites are located in areas proposed for future development, open space, or infrastructure. The assumptions regarding the level of impact are as follows:

- In development areas (areas to be built upon) the impact is assumed to be high;
- In open space areas (parkland and reserves) the impact is assumed to be low;
- Where infrastructure is to be situated (e.g. roads) the impact is assumed to be moderate to high.

In future stages, an assessment of the specific impacts of development will need to be accompanied by a more detailed assessment of the significance and archaeological potential of sites identified in this report. This will require further detailed research specific to individual sites.

This Statement of Heritage Impact is therefore, by necessity, preliminary with regard to potential relics within the Study Area and visual impacts to the listed heritage items located on its boundary.

6.2.2 TH1 Group of Buildings in the North Shore Precinct

Formerly a riding school, this property is now used to agist stock (Lloyd Townsend) and it is not known how many of the buildings in the group are still in use. The buildings appear to be situated in the area where a farmhouse, “O’Briens House” is illustrated on a subdivision advertisement from 1916.

Significance: Unknown

Impact: Will be demolished to make way for the residential development.

6.2.3 TH2 Possible homestead or dairy in the “Central Precinct”

Located directly north of the Duck Creek/Princes Highway junction, identification of the function of this group of buildings has not been made. It may be a residence or an industrial building such as a dairy. A long, planted avenue from the highway to the group of buildings suggests that it may have been a residence. It is beneath the western side of the Central Precinct.

Significance: Unknown

Impact: Will be demolished to make way for the residential development.

6.2.4 TH3 Group of buildings adjacent to the “Central Precinct”

Located directly north of TH2, and north of Duck Creek where it meets the Princes Highway, identification of the function of this group of buildings has not been made. It may be a residence or an industrial building such as a dairy and may be part of “Jordan’s Farm” dated to the late 19th century.

Significance: Unknown

Impact: Unknown at this stage. The site is likely to be beyond development directly associated with the Central Precinct, but as yet, landscaping and services details are not known, therefore impacts are not known.

6.2.5 TH4 Group of buildings between Duck Creek and the northern “Business office large retail” within an “Environmental and Recreation Reserve”

This site may be a former residence. The 1948 aerial photograph shows a tree-lined avenue from the Princes Highway to the group of buildings. It may be related to the Wollingurry Dairy and is likely to date to the early 20th century. Aboriginal archaeological excavation in the vicinity of this potential site was undertaken by Biosis Research in May 2010 (TLPD Site 10) and unearthed historical artefacts that are potentially relics.

Significance: Unknown

Impact: Unknown at this stage. The site is likely to be beyond development directly associated with the Central Precinct, but as yet, landscaping and services details are not known, therefore impacts are not known.

6.2.6 TH5 Group of buildings south of Duck Creek and north of the proposed location of a “Primary School” within an “Environmental and Recreation Reserve”

This former group of buildings is identified as “Wollingurry” on the 1974 orthophoto (Figure 5), a dairy farm established by the Brown (not the Browne) family in 1906. A possible issue arises at this point as descriptions of the property suggest that the buildings existed prior to the Browns taking over but were in a poor state. The information may relate to the house adjacent to the Study Area listed on the Wollongong LEP 2009 as item 6437 (that is, the concrete house by the woolshed). The confusion arises due to the naming of the site identified as TH5 in this report as “Wollingurry” in a 1974 Orthophoto.

Significance: Unknown

Impact: Unknown at this stage. The site is likely to be beyond development directly associated with the current Concept Plan, but as yet, landscaping and services details are not known, therefore impacts are not known.

6.2.7 TH6 Former Yallah Station

The original location of Yallah Station has been confirmed as being outside of the Study Area and later relocated to Albion Park Station.

6.2.8 TH7 Former Smelting Company rail alignment (adjacent to the Study Area)

The alignment of the former Smelting Company rail line is clearly visible in the landscape. It is outside the Study Area but has been mentioned in this section as a precautionary measure. Any development that may occur in association with the Tallawarra Lands development should consider this site.

6.2.9 TH8 Water Reservoirs

The water reservoirs are within an area set aside as “Environmental and Recreation Reserve” to the north west of the existing power station.

Significance: Unknown.

Impacts: Unknown but unlikely

6.2.10 TH9 “Beachgrove” Structures in the vicinity of the “Concrete” House

As yet, these structures are unidentified but the name “Beachgrove” ascribed to this group in the 1975 Orthophoto (Figure 4) suggests that it was a residence. Their proximity to the “concrete” house, identified as “Yallah” on this Orthophoto, and which is listed on the Wollongong LEP 2009

as item number 6437 suggests that they may be associated with this building. The description of the concrete house in Plate 1 raises questions as to the date of this building and introduces the possibility that its construction was part of the early historic development of the Study Area. Should an early construction date for the concrete house be established, the sites of buildings in its vicinity would require closer scrutiny to establish their function and dates.

It is noted that TH9 is located within an area that was flooded during the industrial history of the Study Area; however the treatment of the area is unknown therefore the impacts associated with the basin are also unknown and archaeological resources may survive. Their status as “relics” however, has not been ascertained.

Significance: Unknown.

Impacts: Will be impacted by part of the development of the “Business office large retail” precinct.

6.2.11 TH10 “Roscommon” Structures in the vicinity of the “Concrete” House

As yet, these structures are unidentified. However, the naming of this group as “Roscommon” suggests that it was residential (Refer 1975 Orthophoto Figure 4). Their proximity to the “concrete” house, which is listed on the Wollongong LEP 2009 as item number 6437 suggests that they may be associated with this building. The description of the concrete house in Plate 1 raises questions as to the date of this building and introduces the possibility that its construction was part of the early historic development of the Study Area. Should an early construction date for the concrete house be established, the sites of buildings in its vicinity would require closer scrutiny to establish their function and dates.

It is noted that TH10 is located within an area that was flooded during the industrial history of the Study Area; however the treatment of the area is unknown therefore the impacts associated with the basin are also unknown and archaeological resources may survive. Their status as “relics” however, has not been ascertained.

Significance: Unknown.

Impacts: Located within the “Lakeside Residential Precinct”, thus impacts are likely.

6.2.12 Mt Brown Reserve LEP Item 6339

Development within Mt Brown Reserve is proposed in the Tallawarra Lands Development Concept Plan. The western section of the North Shore Precinct will be located adjacent to the Reserve however, it is proposed to construct this section of the Precinct on the northern side of a ridge separating it from the Reserve and visual impacts are unlikely.

Significance: Local

Impacts: At this stage of the Concept planning process, visual impacts from Mt Brown Reserve are not expected. It is unknown at this stage if the construction of infrastructure will include potential impacts.

6.2.13 Military Bunker Mt Brown Reserve LEP Item 61016

The Military Bunker outside but shares a boundary with the Study Area. The site visit established that there will be no visual impacts to the item if the site is developed in accordance to the current Concept Plan.

Significance: Local

Impacts: None identified

6.2.14 The Concrete House (Yallah Homestead) LEP Item 6437

The Concrete House is posing some issues at this stage of the investigation. It is identified as an item of local significance on the Wollongong LEP 2009 (and previously in Wollongong LEP 1990 as well). Heritage studies conducted in about 1981 and in 1991 suggest respectively that the building dates from around 1900 or 1910 (Ali 1981; McDonald McPhee 1991). The inventory sheets for these heritage studies provide little additional information. They do however show that the house had a terracotta tiled roof around 1981 which was replaced with a corrugated sheet roof by 1991. It is likely that the early 20th century date was proposed due to the use of concrete in the structure. Specific historical research does not appear to have been conducted; however the c.1981 study attributes the house to the Browns who established their Wollingurry Dairy within the Study Area in 1906. It could be that the building was erected by the Browns around 1906, however the form of the building suggests that it could in fact be an earlier homestead which was substantially renovated by the Browns (including the replacement of weatherboard cladding with cast concrete panels and the addition of a terracotta tiles to the roof). In this scenario, the building could potentially have been constructed as early as the first half of the 19th century (refer Plate 1 for more detailed description).

While the house is not situated within the boundary of the Study Area and therefore would not be impacted on physically by the development of Tallawarra Lands, the issue is its close proximity to the study area. The building is likely to have been associated with outbuilding and yards which could have been situated within the Study Area. If the building does in fact have its origin earlier in the 19th century, then the location and nature of archaeological remains of buildings and other activity in the vicinity of the homestead needs to be assessed. Further research is required in order to determine the historical origins of this building.

Significance: Local (established in the Wollongong LEPs 1990 and 2009). Possibly will require re-assessment with regard to the potential that it is early and had structures associated with it that may survive as relics within the Study Area.

Impacts: Physical impacts to the item and its curtilage are not proposed as it is outside the Study Area. However, the question as to the historical origin of this house needs to be further investigated

in order to be able to make an informed assessment of the impact of specific development proposals in the vicinity. This further investigation should be conducted as part of the next stage following concept plan approval.

Legend

Sites Identified

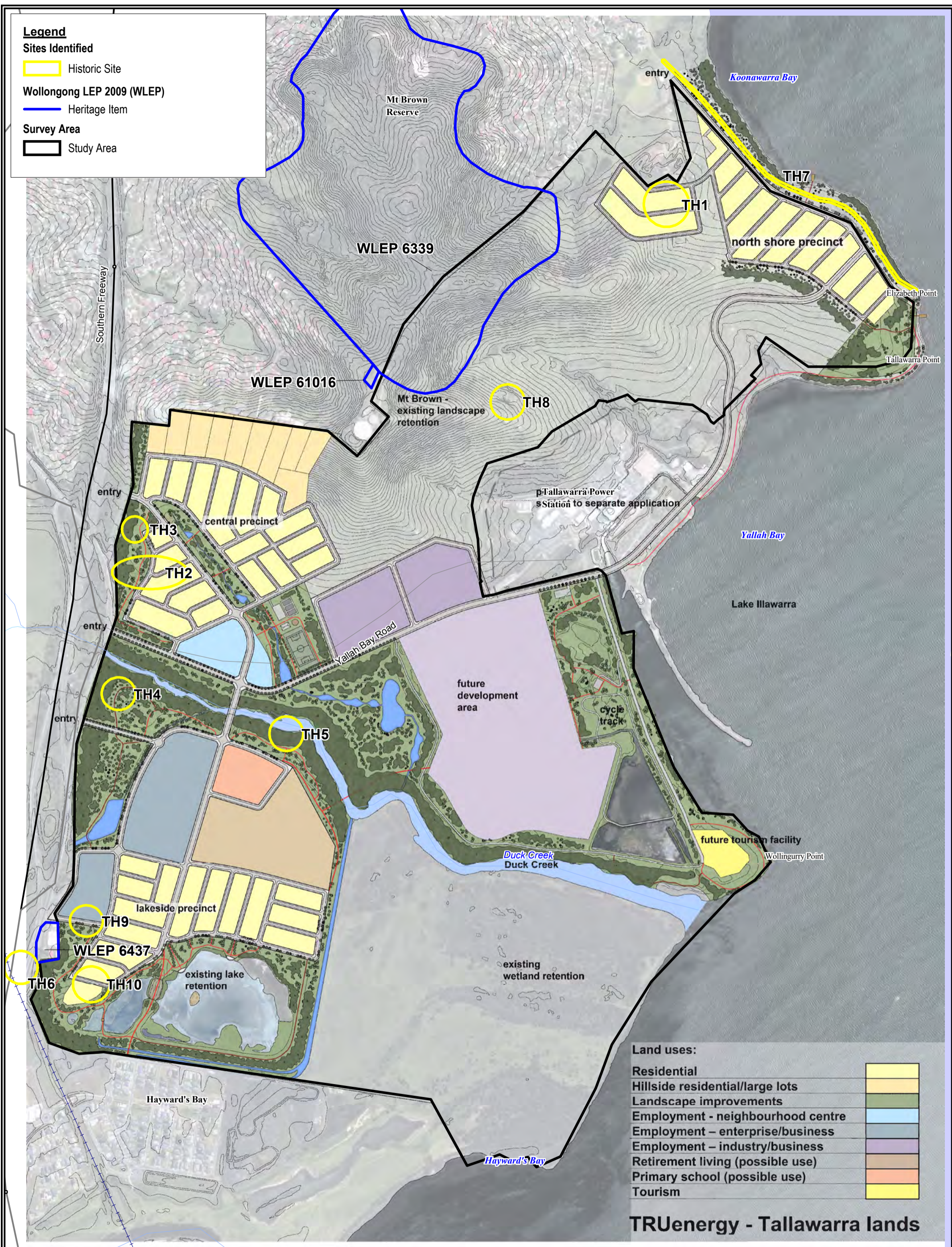
Historic Site

Wollongong LEP 2009 (WLEP)

Heritage Item

Survey Area

Study Area



Land uses:

Residential	
Hillside residential/large lots	
Landscape improvements	
Employment - neighbourhood centre	
Employment - enterprise/business	
Employment - industry/business	
Retirement living (possible use)	
Primary school (possible use)	
Tourism	

TRUenergy - Tallawarra lands

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BIOSIS RESEARCH

Acknowledgements:
 Warren Lee Urban Design Pty Ltd
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Figure 10: The Tallawarra Lands Concept Approval showing the location of listed and potential heritage items.

Date: 21 December 2010	Drawn by: ANP
File number: S5749	Checked by: PK
Location: ...\\Venus\new_projects\N5000s\N5700s\N5749\Historical Report\ Mapping\S5749 F10_Historic_Concept Plan.WOR	

0 110 220 330 440 550
 Metres

Scale: 1:11,000 at A3
 Map Projection: Universal Transverse Mercator
 Horizontal Datum: Geodetic Datum of Australia 1994
 Map Grid: Map Grid of Australia Zone 56

Figure 10

7.0 CONCLUSIONS & RECOMMENDATIONS

7.1 Conclusions of this report

The research conducted for this report has revealed that there were a number of buildings located within the study area during the twentieth century and each of these was most likely associated with dairying. However, it is not known at this stage whether any of these buildings was erected in earlier, in the nineteenth century, and whether they have any connection to the early colonial phases of development. Historical sources suggest that it is highly likely that stockmen's huts, at the least, were situated within the Study Area during the 1820s and 1830s, and possibly more substantial quarters such as an overseer's residence, were also constructed. Evidence from the 1890s suggests there was at least one farm (Jordan's) within the study area. The specific location of any archaeological relics which might be associated with such activity (pre-1900) may or may not be able to be determined through further research and detailed field survey.

Of further interest is the LEP listed heritage item (No. 6437) located just outside the southwest corner of the site next to the former Yallah Woolshed and sometimes known in modern times as Yallah Homestead. The Heritage Study which led to the listing of the house suggests it was built around 1900. However, the form and proportions of the house are highly suggestive of an earlier colonial homestead such as would have been built prior to 1850. It is possible that this house is an early homestead which was substantially renovated around the turn of the century. If this is the case then it would have been associated with outbuildings and yards which, given the close proximity of the site to the boundary of the study area, could have been situated within the study area. Further research may or may not identify an early building on this site. A detailed inspection of the building would assist but is likely to be outside the scope of this project given that the building is under separate ownership to land within the Study Area.

Research has been difficult due to the often inaccurate and contradictory nature of secondary local history sources. It has however been made especially difficult owing to the great gap in land title records between the original land grants of 1817 and 1823 and the issuing of new titles in only the last 30 years. While it is known that the study area was occupied and farmed for much of its history, and these activities are visible in aerial photographs, there is no clear chain of land titles going back from the present which, in usual circumstances, would result in the ready identification of individual properties and their owners over time. The local history collection at Wollongong City Library and readily available maps, plans and photographs have been exhausted in order to try to fill in these gaps.

Further research as part of subsequent stages in the approvals process may or may not answer outstanding questions concerning the history of the site. Options available for further research include early colonial surveyors' notebooks (which might indicate the location of buildings), a more exhaustive search of land titles and associated transactions (mortgages, wills, probates), historical newspaper archives, and enquiries to local historians or family descendants as well as archaeological excavation.

The most important focus for any future research is to try to identify the specific location of early buildings and activities, either through maps and plans or detailed contemporary descriptions. The assessment of archaeologically sensitive areas should be conducted as early as possible following concept plan approval so that any resulting constraints can inform the design, and so that the Proponent can factor in any additional stages of investigation as early as possible. It is also particularly important in relation to approvals under Part 3A of the *Environmental Planning and Assessment Act* as the requirement for an excavation permit under the *Heritage Act 1977* is overridden. If sensitive sites are not identified before approval of future stages is given, then mitigation of impacts may be difficult once development activity is actually underway. The management of relics, particularly any that reach the State significance threshold, should be an important factor in the Tallawarra Lands Development project.

7.2 Recommendations

The following management recommendations have been formulated for the Study Area:

1. In the first instance, where practicable, avoid impact to all identified heritage items and archaeological sites. Those sites have been identified as: TH1, TH2, TH3, TH4, TH5, TH9 and TH10. The area to the east of the Concrete House (LEP Item 6437) may also be archaeologically sensitive.
2. Prepare an archaeological assessment for each potential archaeological site (including the area around the Concrete House) if impacts are unavoidable. This would include areas which are not built upon but will be affected by landscape works, infrastructure, road making, etc, depending on impacts to the landscape and ground levels. The appropriate stage for the preparation of archaeological assessments would be after Project Application and prior to construction commencing.
3. There is existing road and rail corridor infrastructure on the site which can inform the location of new roads through the development. It is recommended that when designing the street layout and street hierarchy of the development the reuse of these alignments are considered.
4. There are historical road and boundary alignments which are no longer visible on the ground (for example the boundaries and road through “Jordan’s Farm”) which could also inform the layout of streets and blocks within the study area.
5. If significant variations occur, for example a significant increase in or relocation of development areas, then a reassessment of the impact of the development may be required. Depending upon the location any such variations, additional archaeological survey and assessment by a qualified heritage consultant may be required.
6. Consult with the cultural heritage specialists if intending to do any invasive work on site (eg geotechnical investigation) in areas identified as heritage items or as potential archaeological sites.

7. Determine an interpretation strategy (location, content, design) as part of the subsequent detailed project application.

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