The background of the cover is a landscape photograph of Tarwyn Park and Iron Tank, showing rolling hills, a small settlement, and a field of tall grass in the foreground. Overlaid on this are several geometric shapes: a large dark teal square on the right, a smaller dark teal square in the top right, and a white square on the left. White lines form a stepped path from the top left towards the center, and another line forms a corner shape around the large teal square.

Conservation Management Plan for Tarwyn Park and Iron Tank

BYLONG COAL PROJECT
Response to PAC Review Report

Hansen Bailey
ENVIRONMENTAL CONSULTANTS

Tarwyn Park and Iron Tank



DRAFT Conservation Management Plan

DRAFT

Tarwyn Park and Iron Tank

DRAFT Conservation Management Plan

Client: Hansen Bailey Pty Ltd

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15-Jan-2018

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Document Tarwyn Park and Iron Tank and Iron Tank





Ref 60546430

Date 15-Jan-2018

Prepared by Dr Susan Lampard

Reviewed by Dr Darran Jordan

Revision History

Rev	Revision Date	Details	Authorised	
			Name/Position	Signature
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2	10-Nov-2017	Draft for WorleyParsons and MUSEcape review	Darran Jordan Senior Heritage Consultant	
3	15-Nov-2017	Revised Draft for WoreleyParsons and MUSEcape review	Darran Jordan Senior Heritage Consultant	
4	19-Dec-2017	Final Draft for WoreleyParsons and MUSEcape review	Darran Jordan Senior Heritage Consultant	
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Tarwyn Park and Iron Tank History. Prepared by Terry Kass

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Executive Summary

This Draft Conservation Management Plan (CMP) has been prepared to provide the framework for the conservation and management of the Tarwyn Park and Iron Tank properties, Bylong, NSW. These properties are now owned by KEPCO Bylong Australia Pty Ltd (KEPCO), having been purchased on 14 February 2014. This CMP has been commissioned by Hansen Bailey on behalf of WorleyParsons Services Pty Limited (WorleyParsons) who is appointed by KEPCO as the project managers of the Bylong Coal Project (the Project).

The objective of this CMP is to provide for the on-going conservation of the heritage values of Tarwyn Park and Iron Tank. This is based on a robust historical context and significance assessment of the Tarwyn Park and Iron Tank properties in accordance with the Office of Environment and Heritage (OEH) Heritage Division guidelines for *Assessing Heritage Significance* (NSW Heritage Office, 2001a), the Burra Charter (ICOMOS (Australia), 2013); and *Conservation Plan: A Guide to the preparation of Conservation Plans for Places of European Cultural Significance* (Kerr, 2013, 7th ed.). This significance assessment builds on the assessment provided in *Bylong Coal Project: Historic Heritage Impact Assessment* (AECOM Australia Pty Ltd, 2015), together with the points raised in *Bylong Coal Project: Heritage Review* (GML Heritage Pty Ltd, 2017) and *Peer Review Response to Bylong Coal Project Heritage Review Report prepared for Planning Assessment Commission by GML Heritage May 2017* (MUSEcape, 2017). Being based on the most rigorous physical and historical analysis of the properties to date, this significance assessment supersedes all previous assessments.

The land now identified as Tarwyn Park was first granted to William Lee in 1829. Lee continued to acquire strategic parcels of land to control access to good grazing and water sources. The land passed to Lee's son John in 1840, who established a thoroughbred horse stud and continued to expand his property holdings. The lands were transferred to Hugh Cameron in 1908. Cameron on-sold the land quickly to John Morrissey, who also did not retain the property for long - selling it to a syndicate. In 1919, the land was purchased by brothers Herbert Stanley Thompson and James Cyril Thompson. In 1923 James sold his half share to Herbert, who became the sole owner. Herbert commissioned the construction of Tarwyn Park Homestead, to the plans of Mudgee architect Harold Hardwick. Construction was completed in 1920. Herbert established a thoroughbred horse stud, which was renowned in its day. In 1943 Herbert fell seriously ill. The expense of maintaining Tarwyn Park as well as the drain on his finances caused by prolonged medical attention depleted his income. Tarwyn Park was sold to Thomas Fleming in 1951. After getting into financial difficulty, Fleming auctioned the property in three portions. The core portion, containing Tarwyn Park Homestead was purchased by Harold Howes in 1961. In 1974, Howes transferred the property to Imijt Pty Ltd, a company of Peter and Anne Andrews. Peter Andrews was a noted horse breeder and trainer from South Australia, who acquired the property with the expressed purpose of trialling the land management system to become known as Natural Sequence Farming (NSF) (Andrews, 2006:28). In 1999, the Andrews' son Stuart and his wife Meghan purchased the property and operated a cattle farm under the NSF principles. The land was purchased by KEPCO in 2014 and leased back to the Andrews until 31 July 2016.

Presently, Tarwyn Park and Iron Tank consists of approximately 610 hectares (1507 acres) identified as Lot 1 and 2 of Deposited Plan (DP 1094509), Lots 9, 10, 15, 17, 49 and 50 of DP 755420 and Lot 16 of DP 1109210. It is noted that this property description does not reflect the historical boundaries of Tarwyn Park (refer to Section 2.0). The major components of the site include Tarwyn Park Homestead (1920), Tarwyn Park Stables, various outbuildings associated with Tarwyn Park Homestead, two weatherboard cottages (referred to within this CMP as Farm House 1 and Farm House 2) and features associated with the pioneering farming technique known as Natural Sequence Farming (NSF). Areas of archaeological potential have also been identified within the property. Since the 1970s Tarwyn Park has also included a property formerly known as Zora, or more recently, Iron Tank. Features associated with Iron Tank include a House (c1870s) and a shed. Archaeological evidence includes a pad thought to be associated with a small sandstone structure. These built elements sit within a cultural and natural landscape. This Draft CMP provides for the conservation and management of these features, including the cultural landscape.

Tarwyn Park Farm Complex (comprised of the elements described above) is assessed as holding local significance under the historical, associative, aesthetic, social and technical criteria Iron Tank holds local significance under the historical and representativeness criterion. Grounded in the heritage

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significance of the properties, this Draft CMP contains information and policies for the owners and managers of Tarwyn Park and Iron Tank as they care for and protect the heritage significance of the properties. This care is within the context of the proposed Bylong Coal Project (the Project), which is subject of an application for State Significant Development Consent (SSD 14_6367) under the *Environmental Planning and Assessment Act 1979* and would be developed in close proximity to the Tarwyn Park Homestead Complex and Iron Tank. This Draft CMP has been prepared to fulfil the relevant requirement as specified within Condition 46(c)(ii) of Schedule 4 of the Draft Recommended Development Consent prepared by Department of Planning and Environment (DP&E) within their Assessment Report dated March 2017. This Draft CMP has currently been prepared in support of the Government's assessment process for SSD 14_6367 and will be adjusted to reflect any Development Consent determined in relation to the Project and the formal consultation process.

This Draft CMP identifies that Tarwyn Park Homestead, a Vernacular Concrete Structure, the Sandstone Stables and Farm House 2 (including associated sandstone structure), together with Iron Tank House, should be retained, maintained and conserved/restored as required. Policies are provided that direct the conservation and restoration actions for these structures. Separate policies direct how non-significant or contributory heritage items should be recorded prior to demolition, if necessary. Additionally, policies are provided to manage the archaeological significance of the properties.

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1.0 Introduction

1.1 Background

This Draft Conservation Management Plan (CMP) has been prepared to provide the framework for the conservation and management of Tarwyn Park and Iron Tank, Bylong, NSW. Tarwyn Park and Iron Tank are owned by KEPSCO Bylong Australia Pty Ltd (KEPCO) and were purchased in February 2014. This CMP has been commissioned by Hansen Bailey on behalf of WorleyParsons Services Pty Limited (WorleyParsons) who is appointed by KEPSCO as the project managers of the Bylong Coal Project (the Project).

Tarwyn Park and Iron Tank sit within the Local Government Area (LGA) of the Mid-Western Regional Council. The properties fall within the County of Phillip and the Parish of Bylong. Tarwyn Park Homestead is located approximately four kilometres south east of Bylong township, while the former village of Upper Bylong is located approximately 1.5 kilometres to the south west of the Homestead (Figure 1). Presently, Tarwyn Park and Iron Tank consist of approximately 610 hectares (1507 acres) identified as Lot 1 and 2 of Deposited Plan (DP 1094509), Lots 9, 10, 15, 17, 49 and 50 of DP 755420 and Lot 16 of DP 1109210 (Figure 2). It is noted that this property description does not reflect the historical boundaries of Tarwyn Park (refer to Section 2.0). The major components of the site include Tarwyn Park Homestead (1920), Tarwyn Park Stables, various outbuildings associated with Tarwyn Park Homestead, two weatherboard cottages (referred to within this Draft CMP as Farm House 1 and Farm House 2) (Figure 3) and features associated with the pioneering farming technique known as Natural Sequence Farming (NSF). Areas of archaeological potential have also been identified within the property. Since the 1970s Tarwyn Park has also incorporated a property formerly known as Zora, or more recently, Iron Tank. Features associated with Iron Tank include a house (c1870s), a shed and archaeological evidence which includes a pad thought to be associated with a small sandstone structure (Figure 4). These built elements sit within a cultural and natural landscape. This draft CMP provides for the conservation and management of these features, including the cultural landscape, within the context of the Project.

1.2 The Project

In December 2010 KEPSCO Bylong Australia Pty Ltd (KEPCO) acquired A287 and A342. Since this time, extensive exploration and mine planning work has been undertaken to reflect contemporary environmental considerations and to determine the most socially responsible and economically viable mine plan to recover the known coal resources within the two Authorisations.

In 2014 KEPSCO commissioned WorleyParsons Services Pty Ltd (WorleyParsons) to manage the Project exploration activities, mine feasibility study planning, environmental approvals and ongoing environmental monitoring for the Project.

The Project is located wholly within A287 and A342 which are located within the Mid-Western Regional Council (MWRC) Local Government Area (LGA). The closest regional centre is Mudgee, located approximately 55 km south-west of the Project Boundary. The Project is approximately 230 km by rail from the Port of Newcastle.

KEPCO is seeking State Significant Development Consent under Division 4.1 of Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) for the development and operation of the Project. The State Significant Development Application is supported by an Environmental Impact Statement (EIS) prepared by Hansen Bailey and submitted in 2015.

Following an initial positive Assessment Report in March 2017, the Minister requested that the PAC undertake a review of the project on 9 January 2017. Following public hearings and a review of submissions, the PAC produced a review report dated 25 July 2017. That report concluded that “doubt persists about the potential benefits and impacts of the Bylong Coal Project” (NSW Government Planning Assessment Commission, 2017). As a result, further assessments and studies were commissioned to address the PAC concerns.

The Project life is anticipated to be approximately 25 years, comprising a two-year construction period and a 23 year operational period, with underground mining operations commencing in Year 7. Various

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rehabilitation and decommissioning activities will be undertaken both during the course of, and following the 25 years of, the Project. It is noted that further mineable coal resources exist within both A287 and A342.

The Project development will include:

- The initial development of two open cut mining areas with associated haul roads and Overburden Emplacement Areas (OEAs), utilising a mining fleet of excavators and trucks and supporting ancillary equipment;
- The two open cut mining areas will be developed and operated 24 hours a day,
- 7 days a week over an approximate 10 year period and will ultimately provide for the storage of coal processing reject materials from the longer term underground mining activities;
- Construction and operation of administration, workshop, bathhouse, explosives magazine and other open cut mining related facilities;
- Construction and operation of an underground coal mine operating 24 hours a day,
- 7 days a week for a 20 year period, commencing mining in around year 7 of the Project;
- A combined maximum extraction rate of up to 6.5 Million tonnes per annum (Mtpa) Run of Mine (ROM) coal;
- A workforce of up to approximately 665 during the initial construction phase and a peak of 470 full-time equivalent operations employees at full production;
- Underground mining operations utilising longwall mining techniques with primary access provided via drifts constructed adjacent to the rail loop and Coal Handling and Preparation Plant (CHPP);
- The construction and operation of facilities to support underground mining operations including personnel and materials access to the underground mining area, ventilation shafts, workshop, offices and employee amenities, fuel and gas management facilities;
- Construction and operation of a CHPP with a designed throughput of approximately 6 Mtpa of ROM coal, with capacity for peak fluctuations beyond this;
- The dewatering of fine reject materials through belt press filters within the CHPP and the co-disposal of dewatered fine and coarse reject materials within OEAs and final open cut voids (avoiding the need for a tailings dam);
- Construction and operation of a rail loop and associated rail load out facility and connection to the Sandy Hollow to Gulgong Railway Line to facilitate the transport of product coal to the Port of Newcastle;
- The construction and operation of surface and groundwater management and water reticulation infrastructure including diversion drains, dams (clean, dirty and raw water), pipelines and pumping stations;
- The installation of communications and electricity reticulation infrastructure;
- Access road to the Project related first aid and car parking facilities from the Bylong Valley Way;
- The upgrade of Upper Bylong Road and the construction and operation of a Mine Access Road to provide access to the site facilities;
- Relocation of sections of some existing public roads to enable alternate access routes for private landholders surrounding the Project; and
- Infilling of mining voids, progressive rehabilitation of disturbed areas, decommissioning of Project infrastructure and rehabilitation of the land progressively following mining operations.

The Project will necessitate the removal of some features associated with the Tarwyn Park property, including a section of the driveway and associated plantings, four known horse burials located near the entrance, a house on Upper Bylong Road, horse training track and Farm House 1. The management of these items is addressed in the *Bylong Coal Project: Historic Heritage Management*

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Plan (AECOM Australia Pty Ltd, 2015). The Project may also result in impacts arising from blast vibrations to structures, particularly Tarwyn Park Homestead, Stables, Vernacular Concrete Structure and the sandstone structure associated with Farm House 2. The Project will also result in alterations to the visual environment, both during the life of the Project from the open cut landforms and following closure through the final landform. These impacts are variously addressed within the *Bylong Coal Project: Landscape and Visual Analysis* (AECOM Australia Pty Ltd, 2017b) (Appendix E) and the *Bylong Coal Project: Blast Management Strategy for Tarwyn Park* (Terrock, 2017) (Appendix F). These documents are referenced herein as appropriate.

1.3 Objectives

The objective of this document is to provide for the on-going conservation of the heritage values of Tarwyn Park and Iron Tank. This is based on a robust historical context and significance assessment of the Tarwyn Park and Iron Tank properties in accordance with the Office of Environment and Heritage (OEH) Heritage Division guidelines for *Assessing Heritage Significance* (NSW Heritage Office, 2001a), the Burra Charter (ICOMOS (Australia), 2013); and *Conservation Plan: A Guide to the preparation of Conservation Plans for Places of European Cultural Significance* (Kerr, 2013). Grounded in the heritage significance of the properties, it contains information and policies for the owners and managers of Tarwyn Park as they care for and protect the heritage significance of the property throughout the life of the Project.

1.4 Heritage Listings

Tarwyn Park and Iron Tank are not currently individually or collectively listed as items of local, State or National significance on any statutory register. It is understood, however, that the Tarwyn Park Homestead Complex has been nominated for consideration for listing on the State Heritage Register (SHR), as constituted under Section 22 of the *Heritage Act 1977 (as amended)*. The nomination was submitted to the Heritage Division by community group Lock the Gate Alliance on 4 October 2016. As such, this CMP has been developed with the understanding that the property may be listed on the SHR in the future.

Tarwyn Park and Iron Tank also sit within the boundary of the non-statutory National Trust of Australia (NSW Branch) Register listing of the Bylong Landscape Conservation Area. This listing poses no statutory controls on the management of Tarwyn Park and Iron Tank. Rather it is an indication of the general esteem in which the landscape of the wider Bylong Valley is held by heritage professionals and the public more generally. The Statement of Significance reads:

“The Bylong Landscape Conservation Area has significance as prime agricultural land with a rural landscape of exceptional scenic value.

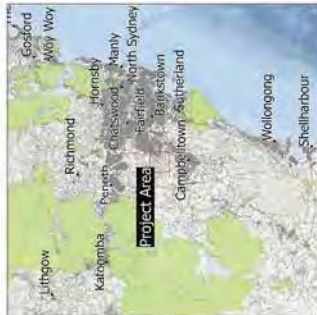
The Landscape Conservation area has scientific significance as the site of Peter Andrews’ development of his Natural Sequence Farming at Tarwyn Park based on the principle of reintroducing natural landscape patterns and processes as they would have existed in Australia prior to European settlement.

The Bylong Landscape Conservation Area has historic significance, particularly evident in the historic towns of Bylong, Baerami and Kerrabee.”

(National Trust of Australia (NSW), 2013)

Key

- Project Area
- South West Growth Centre Precincts
- LGA Boundaries
- Watercourses
- X Railway Station
- Railway Line
- NSW Towns
- Main Roads and Highways
- Streets
- National Park



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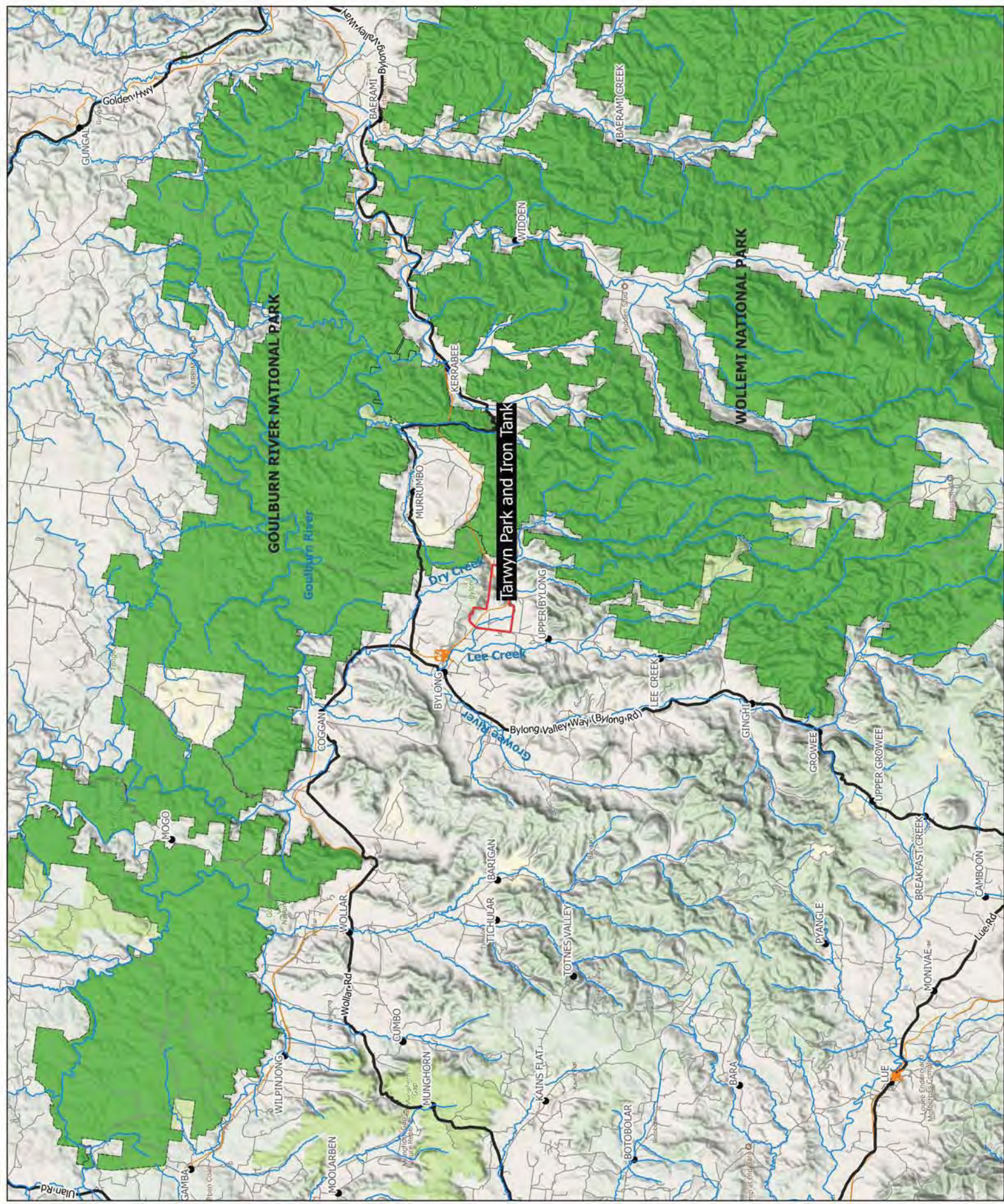


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VERSION 1

REGIONAL CONTEXT

300 Sixth Avenue
Aboriginal Heritage Assessment

Figure 1



Key

- Tarwyn Park & Iron Tank
- Property Boundary
- Cadastral Boundaries
- Roads
- Creeklines
- Railway

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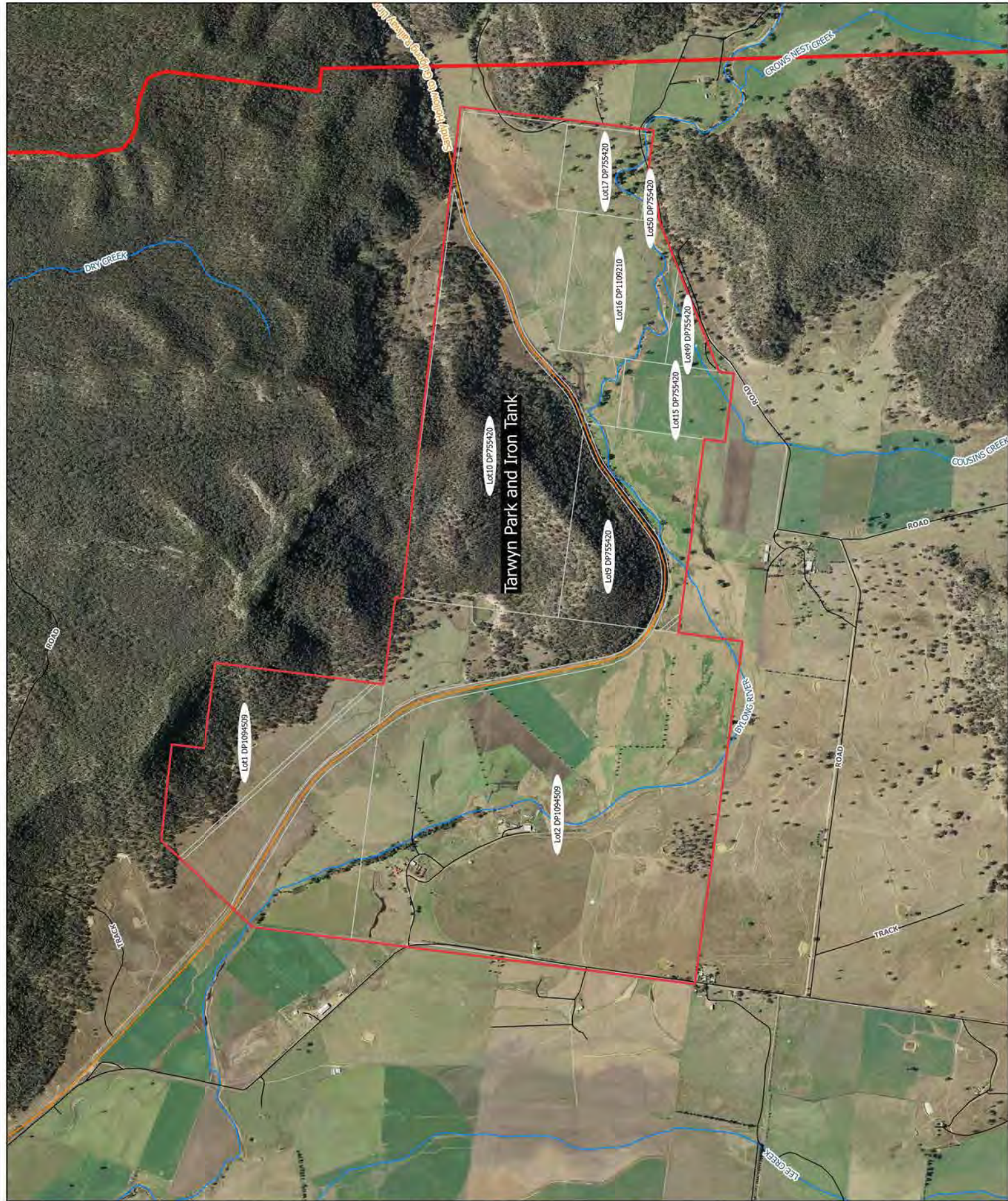


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CREATED 10-11-2017
VERSION 1

Property Boundaries

Tarwyn Park and Iron Tank
Conservation Management Plan

Figure 2



Key

- Tarwyn Park Buildings
- Tarwyn Park Property
- Roads
- Cadastre
- Creeklines
- Railway

- 1 Tarwyn Park Homestead
- 2 Vernacular Concrete Structure
- 3 Garage
- 4 Tarwyn Park Stables
- 5 Horse Ring
- 6 Corrugated Iron Shed
- 7 Corrugated Iron Stables
- 8 Machinery Shed
- 9 Swimming Pool

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 VERSION 1

Location of Tarwyn Park Elements

Tarwyn Park and Iron Tank Conservation Management Plan

Figure 3



Key

- Roads
- Cadastral
- Creeklines

- 1 Iron Tank House
- 2 Concrete Pad
- 3 Machinery Shed/Garage

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VERSION	1

Location of Iron Tank Elements

Tarwyn Park and Iron Tank
Conservation Management Plan

Figure 4



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1.5 Methodology and Terminology

This Draft CMP adheres to the guidelines set out in *The Conservation Management Plan* (Kerr, 2013, 7th ed), the *Heritage Manual* (NSW Heritage Division & NSW Department of Urban Affairs and Planning, 1996) and *The Burra Charter: Australian ICOMOS Charter for Places of Cultural Significance* (the *Burra Charter*) (ICOMOS (Australia), 2013).

1.5.1 Application of the Burra Charter

The *Burra Charter* is widely accepted in Australia as the underlying framework by which all works are undertaken to places identified as having National, State or local significance. In consideration of built fabric at Tarwyn Park and Iron Tank, the conservation principles of the *Burra Charter* will be applied.

The terminology to be used in this draft CMP, where referring to conservation processes and practices, will follow the definitions as presented in Article 1 of the *Burra Charter* provided below:

- **Place** means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.
- **Cultural significance** means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.
- **Fabric** means all the physical material of the place including components, fixtures, contents, and objects.
- **Conservation** means all the processes of looking after a place so as to retain its cultural significance.
- **Maintenance** means the continuous protective care of the fabric and setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction.
- **Preservation** means maintaining the fabric of a place in its existing state and retarding deterioration.
- **Restoration** means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.
- **Reconstruction** means returning the place to a known earlier state and is distinguished from restoration by the introduction of new material into the fabric.
- **Adaptation** means modifying a place to suit the existing use or a proposed use.
- **Use** means the functions of a place, as well as the activities and practices that may occur at the place.
- **Compatible use** means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.
- **Curtilage (or heritage boundary)** is defined as the area of land surrounding an item that is required to retain its heritage significance. The nature and extent of the curtilage will vary and can include, but is not limited to, lot boundaries and visual catchments.
- **Setting** means the area around a place, which may include the visual catchment.
- **Related place** means a place that contributes to the cultural significance of another place.

1.5.2 Nomenclature

Within this draft CMP, the land covered is variously referred to as Tarwyn Park or the properties. The structures associated with Tarwyn Park, as shown in Figure 3 are collectively referred to as the Tarwyn Park Farm Complex. The nomenclature Iron Tank is used in reference to Lots 15, 17, 49 and 50 of DP 755420 and Lot 16 of DP 1109210 only. The built structures, as shown in **Figure 4** are also referred to as Iron Tank House and the Machinery Shed/Garage. The nomenclature of the various components of the site is further elucidated in Section 3.0.

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1.6 Author Identification and Consultation

This document has been authored by Dr Susan Lampard, senior heritage consultant and archaeologist of AECOM Australia Pty Ltd (AECOM), with the historical context being prepared by historian Terry Kass. Dr Lampard was assisted in the site inspection by Dr Darran Jordan, senior heritage consultant and archaeologist. Heritage architect Malcolm Catchpole of AECOM assisted in the analysis of the physical fabric of the structures, particularly the Vernacular Concrete Structure and Garage. During the preparation of this draft CMP, Dr Lampard consulted with cultural landscape specialist Chris Betteridge of Betteridge Consulting Pty Ltd t/a **MUSEcape** (here after Musecape). The Statement of Significance (Section 5.0) was authored by Dr Lampard, with input and revision from Dr Jordan, Dr Terry Kass and Chris Betteridge and has therefore been prepared with input from all authors of the CMP.

Technical review was undertaken by Dr Jordan and figures were produced by Geordie Oakes, senior heritage consultant.

This draft CMP will be forwarded to the NSW Department of Planning and Environment, including the NSW Heritage Council, Office of Environment and Heritage (Heritage Division), Mid-Western Regional Council and other relevant local heritage groups for comment. Where appropriate, comments received will be incorporated or addressed.

1.7 Copyright and Intellectual Property

Historical sources and reference material used in the preparation of this draft CMP are acknowledged and referenced in text and in figure captions. A reference list of cited sources is provided in Section 9.0. Reasonable effort has been made to identify, contact, acknowledge and obtain permission to use material from the relevant copyright owners.

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1.8 Limitations

This report does not assess the potential for Aboriginal cultural heritage material to occur at the site or consider any Aboriginal heritage values associated with the site, as constituted under the *National Parks and Wildlife Act 1974* (NSW).

Predictions have been made within this draft CMP about the probability of subsurface archaeological materials occurring within the site, based on site inspections and historical documentation. However, it is possible that materials may occur in areas beyond those identified. As such, due care should be exercised whenever ground disturbance work is planned and should be carried out with regard to the policies outlined in Section 8.0.

A summary of the statutory requirements regarding historical heritage is provided in Section 7.4. The summary is provided based on the experience of the authors with the heritage system in Australia and does not purport to be legal advice. It should be noted that legislation, regulations and guidelines change over time and users of the draft CMP should satisfy themselves that the statutory requirements have not changed since the draft CMP was written.

This draft CMP has been prepared based on an initial assessment of the built structures in question. As a result, the assessment of the relative age and phasing of the sites and their fabric may require alteration upon further investigation.

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This draft CMP has yet to be reviewed by stakeholders and as such, their views have not been articulated within this document.

1.9 Acknowledgements

The author wishes to acknowledge the assistance of the following people and organisations during the preparation of this draft CMP:

- James Bailey and Nathan Cooper of Hansen Bailey;
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- Chris Betteridge of Musecape Pty Ltd.

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2.0 Historical Development

2.1 Preamble

In order to assess the significance of Tarwyn Park and Iron Tank and develop a framework for their long-term conservation, it is necessary to understand the historical context of the property and how they sit within the broader region. The following sections outline the history of the two properties. The history of Tarwyn Park and Iron Tank are not well documented in primary sources, possibly for a combination of factors. These factors may include the probable destruction or loss of Estate books, maps and plans as the properties changed hands multiple times, together with its distance from administrative centres, which means it does not feature on plans like an establishment in an urban environment might. Land titles do not provide any great insight into the physical development of the structures associated with the property, only the expansion and contraction of land holdings.

The following sections are an abridged version of the history of the property prepared by historian Dr Terry Kass. The original footnote referencing system has been retained for this section. The complete historical report, including the reference list, can be found in Appendix A. This report also includes outlines of the personal histories of those who have owned the properties.

2.2 Tarwyn Park – Land Ownership

William Lee, who is believed to have been born at Norfolk Island, received one of the earliest grants near Bathurst. From his base at Kelso, he found good land, and accompanied William Lawson on his journey to Mudgee. Over the years, Lee acquired numerous runs in the Bathurst and Wellington districts.¹ Settlers sought to occupy land along the Goulburn River and its tributaries, often by lease. Many also purchased land along those tributaries.² William Lee had occupied land in the Capertee Valley but was ousted by Sir John Jamison, so he took his stock north to the Bylong Valley and occupied the whole valley floor from the Growee Gulph 15 miles north to Bylong Creek.³ John Tindale also took up land nearby.

William Lee selected strategic parcels of land so that he controlled access to good grazing and sources of water. On 6 May 1829, he was granted 2,000 acres at 'Bilong' on the basis of a warrant issued on 17 May 1822 allowing him to purchase land for £500. This became the original holding in the Parish of Bylong, now Portion 2.⁴ On 10 December 1836, he was granted 840 acres, in 'County Hunter' for £210. This became Portion 80, in the Parish of Lee.⁵ Then on 16 July 1841, he was granted 640 acres for £384. This became Portion 1, Parish Bylong, the core of Tarwyn Park.⁶ The strategic positioning of these grants controlled access into the valley, which became the Parish of Bylong. For many years, these strategic purchases enabled him to control much of the prime grazing land.

About 1840, his son John Lee assumed control of the Bylong property from his father. He changed the stock mix from sheep to cattle and horses.⁷ On 2 June 1867, by a deed of Partition, John Lee, of the District of Mudgee, esquire and his brother Thomas Lee, of Woodlands, of the District of Bathurst, esquire divided the lands that their father had placed in their control.⁸ John Lee's share included the Bylong holdings.

¹ V Parsons, 'W Lee (1794? – 1870)', *ADB*, volume 2, pp 101-1-2

² 1-G665B, Crown Plan

³ D M Barrie, *Valley of Champions: The Story of the Widden Stud*, F W Cheshire, Melbourne, 1967, p 4

⁴ Grants, Vol 27 pp 95-97, LPI

⁵ Grants, Vol 64 No 164

⁶ Grants, Vol 73 No 200

⁷ D M Barrie, *Valley of Champions*, p 4

⁸ OSD, No 444 Bk 78

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Figure 5 The survey plan of William Lee's 640 acre grant that became the core of Tarwyn Park. Note that the north point is at the right hand side of the plan. Source: P.158.671, Crown Plan

On 27 October 1843, a Conveyance was signed with the following parties, 1st William Lee, 2nd Mary Lee 3rd John Dargin and Thomas Kite, and 4th Charles William Bligh.⁹ This allowed for the later distribution of land to his sons Thomas and John Lee. On 2 June 1867 by a deed of Partition, Thomas Lee, of Woodlands, of the District of Bathurst, esquire and John Lee, of the District of Mudgee, esquire divided the lands vested by their father.¹⁰ John Lee received the Bylong lands, which he used as a thoroughbred horse stud gaining a reputation for breeding fine horses.¹¹

John Lee took up numerous parcels of land in the Parish of Bylong and the Parish of Lee as Conditional Purchases. He also used Volunteer Land Orders to expand his property holdings. Lee was able to protect his grazing by using his right to pre-emptive leases that attached to his freehold land under the terms of the *Crown Land Occupation Act, 1861* (25 Vic No 2).¹² On 26 March 1867, Lee was allowed pre-emptive leases of 800 acres, 900 acres and 640 acres 'On Bylong Creek, Bylong'.¹³ This permitted him to exclude settlers from some of his grazing land. On 11 August 1874, he was given pre-emptive leases over 5 parcels of 640 acres each in Parish Bylong.¹⁴

In addition, by judicious use of his right to Conditional Purchase and the application of Volunteer Land Orders, he acquired freehold over parcels in key locations. In 1865, he applied for six portions running along the creek and incorporating low-lying swampy land in order to control access to water. Portions 15, 16 and 17 were included.¹⁵ They were finally granted to him in 1877. In 1878, using some of the

⁹ RPA 18996

¹⁰ OSD, No 444 Bk 78

¹¹ SMH, 24 Dec 1873, p 7

¹² Sec 12 (5)

¹³ NSWGG, 26 March 1867, p 788

¹⁴ NSWGG, 11 Aug 1874, p 2461

¹⁵ P.301.1524, Crown Plan

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Volunteer Land Orders he had purchased, he cemented his control of further swampy land between Portions 1 and 2, which became portions 43 and 44.

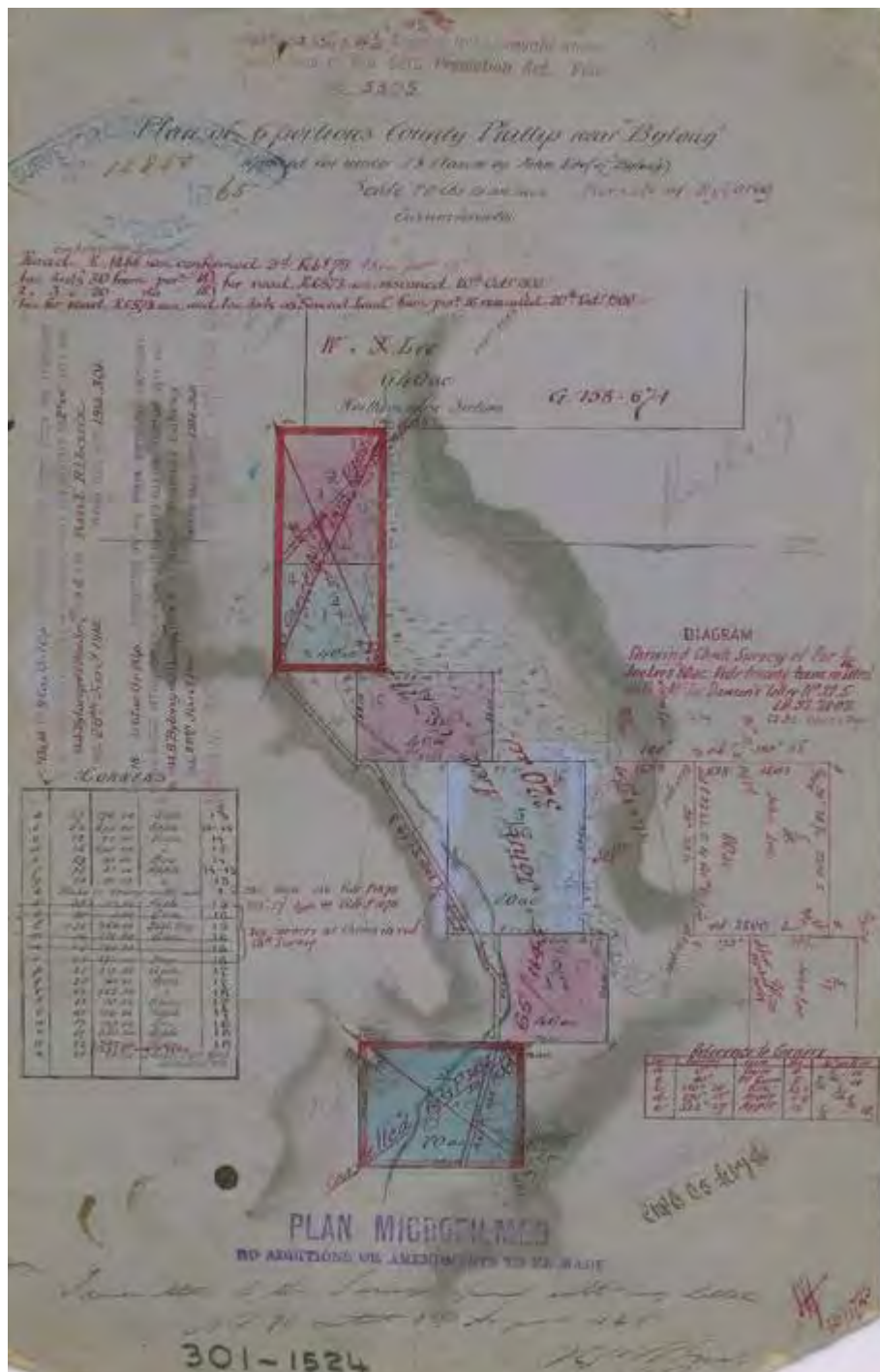


Figure 6 Crown survey of 6 Portions applied for by John Lee. It included Portions 11, 16 and 17. Source: P.301.1524, Crown Plan. North point to right of plan.

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In 1891, John Lee took a Conditional Purchase on 125 acres along Bylong Creek, immediately east of Portion 1, mostly of rough 'Barren Ridges' that became Portion 9.¹⁶ A Conditional Lease for 375 acres north of that portion was also taken at the same time, becoming Portion 10. Approximately half consisted of 'Barren Ridges', the rest included 'Rich open alluvial flat'.¹⁷ In 1900, the 375 acres became an Additional Conditional Purchase.



Figure 7 The Portion survey of Portion 9. Source: P.1877.2125, Crown Plan

¹⁷ P.1878.2125, Crown Plan

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Figure 8 The Portion survey of Portion 10. Source: P.1878.2125, Crown Plan

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In 1898 and 1899, John Lee's daughter, Ethel Constance Lee, took up Non-Residential Conditional Purchases on 244 acres 1 rood and 75 acres 3 roods north-east of Portions 43 and 44. These became Portions 48 and 51 respectively. About half of Portion 48 was ringbarked and grassy with some access to water but the rest was 'Stony ridges' and a 'High rocky range'. Portion 51 included some of the rocky range but also extensive areas of 'Well grassed slopes'.¹⁸ The rationale for selecting these parcels of land is less certain. They were not transferred to John Lee but were transferred to Hugh Cameron in 1908 when he purchased John Lee's Bylong estate. Cameron did not retain these Portions for long transferring both to James Mansfield Niall of Melbourne in 1908.

¹⁸ P.2360.2125; P.2439.2125, Crown Plans

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Figure 9 The Portion survey of Portion 48. Source: P.2360.2125, Crown Plan

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Figure 10 The Portion survey for Portion 51. Source: P.2439.2125, Crown Plan

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On 28 November 1906, the Bylong estate measuring 18,689 acres, owned by John Lee, was offered for sale by Pitt, Son and Badgery. The section in the Parish of Bylong was described as 11,400 acres 2 roods 31 perches, which was 8,949 acres 31 perches freehold, and 2,415 acres 2 roods Conditional Purchase land. The Bylong section was described by the real estate agents as being the best most fertile land with 'mountains' as natural boundaries. It was proposed to sell the whole in one lot. Additionally, it was noted that its natural fertility ensured that even a small part would 'support a family by dairying or intense forms of cultivation'. The improvements in 'Bylong proper' were described as a good stone cottage, ample out buildings, and yards, and it was divided into ten paddocks.¹⁹ It is unclear whether this refers to Bylong Station or a previous structure, now demolished, within the bounds of what is now Tarwyn Park.

The estate did not sell immediately but a year later it was included in a conveyance of 6 September 1907. The parties were John Lee, of Bathurst, grazier as vendor and the Bank of NSW as mortgagee. The purchaser was Hugh Cameron, of Orbost, Victoria, grazier. It included numerous land parcels, both Old System and Torrens Title and some held as Conditional Purchases plus Annual Leases for £32,523/18/6.²⁰ The land in the Parish of Bylong was included.

Cameron only held it briefly, selling a large part on 30 June 1910. The sale included land held under both Old System and Torrens title. The Old System Conveyance was by Hugh Cameron, of Orbost, Victoria grazier, as vendor and the Australian Mutual Provident Society as mortgagee. The purchaser was John Morrissey, of Sackville Street, Hawthorn, Victoria, gentleman. The 'Bylong Estate' measured 13,437 acres 2 roods 31 perches freehold plus 320 acres Conditionally Purchased land as well as 421 acres held under Annual Lease. The sale price was £18,998/8/11.²¹

John Morrissey had previously been a Member of Parliament in Victoria. As well as being a significant investor in cattle and station properties, he purchased large estates, subdivided and sold them to small farmers.²² This was his plan for the Bylong estate. Previously, on 30 March 1910, he had signed an agreement that apparently related to the sale of Portion 1 to Alfred McIlree.²³ John Morrissey then sold off various parts of that land. Alfred McIlree handled the sale of the Bylong Estate.²⁴

Morrissey had purchased Bylong in association with John Gerald Burke.²⁵ Burke, a Roman Catholic, acquired part of the Bylong land for himself to settle. On 15 January 1914, Burke took up a Settlement Purchase on Portion 75 of the Parish of Lee.²⁶ He later purchased freehold land in the Parish of Lee from Morrissey, financed by a mortgage to Morrissey.²⁷ John Gerald Burke became a stalwart of the Bylong Roman Catholic community playing a key role in the financing and construction of the Roman Catholic Church, which opened in August 1915. He was later buried in its cemetery.

¹⁹ ATCJ, 26 Sept 1906, p 5

²⁰ OSD, No 547 Bk 840

²¹ OSD, No 298 Bk 916

²² *Scone Advocate*, 9 July 1926 p 7; *SMH*, 1 Dec 1926 p 19

²³ Recited in RPA 18996; Contract not registered

²⁴ *Sydney Stock and Station Journal*, 8 Aug 1911, p 6; *Farmer & Settler*, 11 Aug 1911 p 2

²⁵ *Mudgee Guardian*, 11 July 1910 p 3

²⁶ NRS 18096, Tenure Card, Sett Purch 14/3 Rylstone, SANSW

²⁷ OSD, No 406 Bk 1300; No 407 Bk 1300

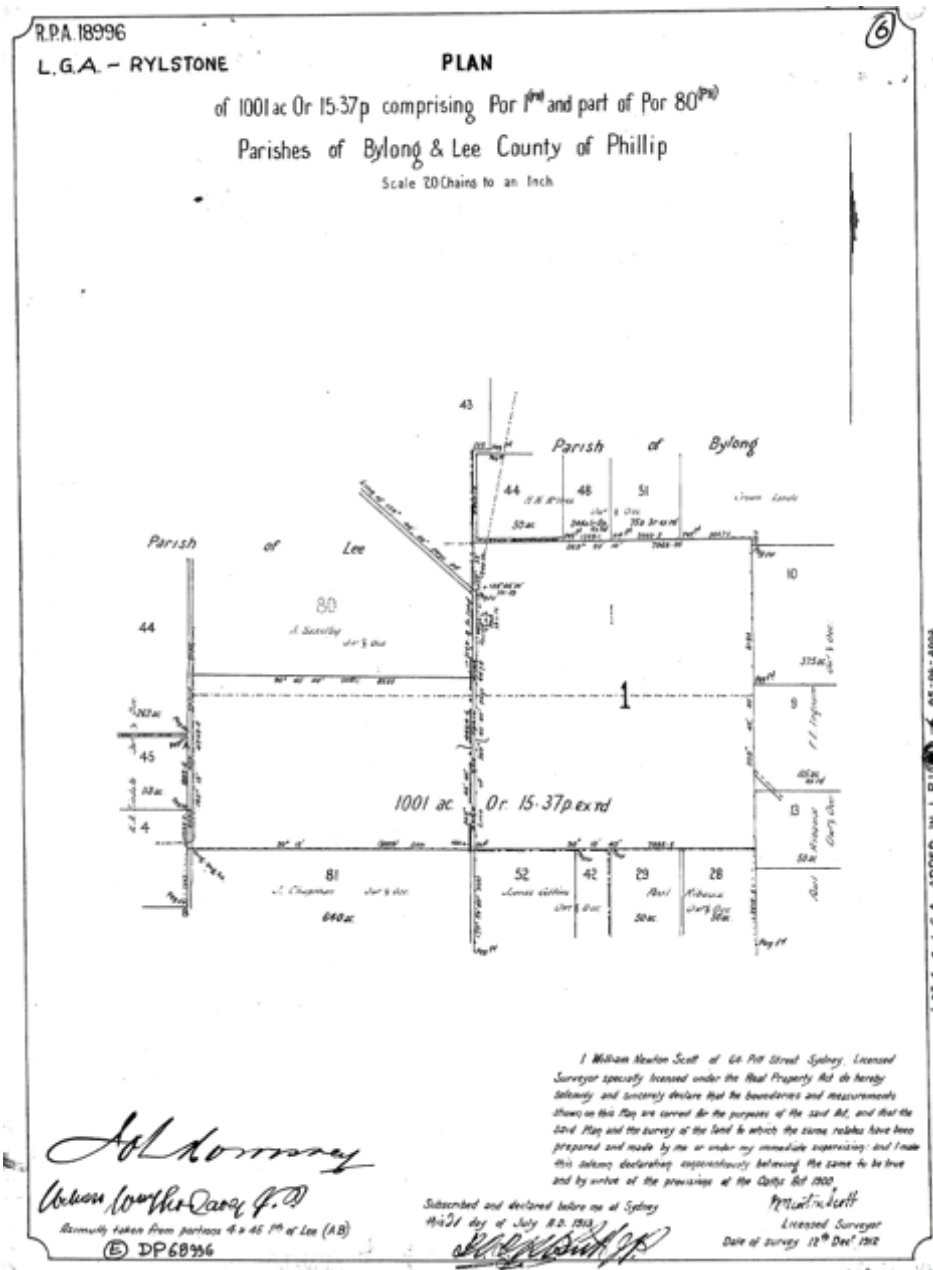
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Figure 11 The Real Property Application plan of Portion 1 and part of Portion 80, ph Lee. Source: DP 68996

When Hon John Morrissey, Sackville Street, Kew, Victoria, gentleman, signed his Real Property Application for Portion 1, Parish of Bylong and the southern part of Portion 80, Parish of Lee on 10 September 1913, it was 'occupied' by Alfred McIlree, Norwich Chambers, Hunter Street, Sydney.²⁸ Alfred McIlree, Hunter Street, Sydney, stock and station agent, was still the occupier of Portion 1 and part of Portion 80 on 24 November 1914 when he signed a declaration regarding improvements. Improvements on the land totalled £2,767/8/11 consisting of Fencing, Windmills, Wells, Clearing,

²⁸ RPA 18996

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Lucerne, Cultivation, etc at £2,013/2/1; Dwelling £472/5/8; Cow shed £127/7/10; and Dairy and sheds £154/13/4.²⁹

A Certificate of Title for that land was issued to Hon John Morrissey, Kew, Victoria, gentleman on 3 July 1915. Alfred McIlree registered a caveat on 30 June 1915, referencing his earlier contract for the sale of that land. It was withdrawn on 31 May 1916.³⁰ A backdated transfer of 19 May 1915 was registered from Morrissey to Frances Blake McIlree, St Kilda, Victoria, spinster; Margaret Elizabeth Anthoness, Mosman, wife of George Trimble Anthoness; Ella Isabella Ivens, wife of Percy Charles Martin Ivens, St Kilda, Victoria, indent agent; and Ida Ethel Evans, wife of Brindley Evans, Seddon, Victoria, bank clerk for £5,760 as tenants in common.³¹

That group of owners transferred the 1,001 acres 15¼ perches to Herbert Stanley Thompson and James Cyril Thompson, graziers of Rylstone as tenants in common for £12,013/2/11 on 26 September 1919.³² James Cyril Thompson transferred his half share to his brother on 11 September 1923.³³

By mid-1920, the Thompson brothers were building a large stone homestead at Bylong, with 22 rooms to the design of architect Harold Hardwick, of Mudgee.³⁴ Herbert Thompson made the property his home and his principal thoroughbred horse breeding establishment. The first detailed listing of 'Commercial' entries for Bylong in Sands Directory was for 1919, when it listed James C Thompson at Bylong. He continued to be listed at Bylong until 1923.³⁵ This listing may have related to his Wingarra stud. Herbert Thompson was not listed at Bylong until 1924 but James Thompson was no longer listed there.³⁶ From 1925 to 1929, both Herbert and James Cyril Thompson were both listed at Bylong.³⁷ Wise's 1936 Directory listed both Herbert and 'Cyril Thompson' at Bylong. Herbert's address was 'Bylong Stn'.³⁸

The first identified reference naming the property Tarwyn Park is dated to 21 November 1918, when the *Mudgee Guardian* ran an advertisement for a 'Gymkana, Sports & Dance' 'To be held on Tarwin [sic] Park Property' (Figure 12)³⁹. There is no indication of who was hosting the event. At this time, the land legally still belonged to the syndicate of women mentioned above. It may well be that Thompson was renting the property at this time or that the transfer of land was not registered for several years.

²⁹ Statutory Declaration, 24 Nov 1914, Alfred McIlree, Hunter Street, Sydney, stock and station agent, in NRS 17513, Land and Property Information, Primary Application Packet, RPA 18996

³⁰ Dealing A184958, LPI, NSW

³¹ CT 2586 f 99; Dealing A196725

³² CT 2666 f 52-55; Dealing A488290

³³ CT 2974 f 120

³⁴ *Mudgee Guardian*, 10 June 1920, p 8

³⁵ Sands, *Directory*, 1919, p 65A; 1920, p 65A; 1921, p 70A; 1922, p 68A; 1923, p 67A

³⁶ Sands, *Directory*, 1924, p 52A

³⁷ Sands, *Directory*, 1925, p 57A; 1926, p 61A; 1927, p 66A; 1928, p 71A; 1929, p 73A

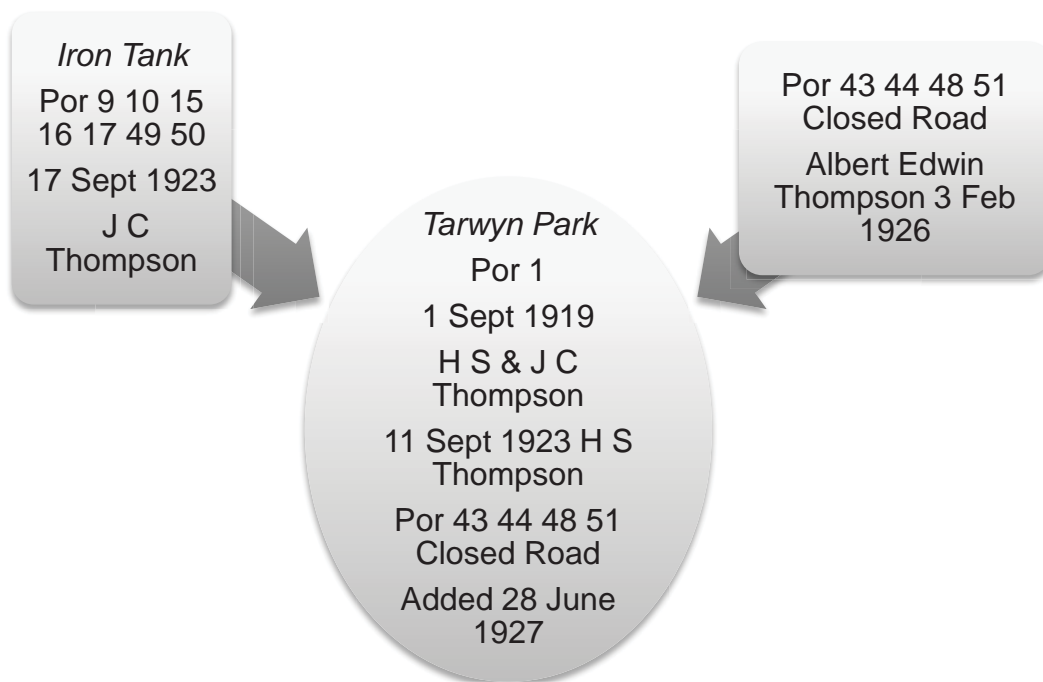
³⁸ *Wise's New South Wales Post Office Commercial Directory*, 1936, Sydney p 441

³⁹ *Mudgee Guardian*, 21 Nov 1918 p 20

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Figure 12 The earliest use of the name 'Tarwin Park'. Source: *Mudgee Guardian*, 21 Nov 1918 p 20

The following diagram shows in simplified form the process of amalgamation of Portions into Tarwyn Park and Iron Tank.



On 8 February 1926, the Mudgee press announced that Albert Thompson of Carema had sold his share in Widden stud and bought a property adjoining Tarwyn Park owned by his cousin H S

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Thompson.⁴⁰ This property extended across the Parishes of Coggan, Lee and Bylong but was mostly in the latter parish with a total area of 5,365 acres 1 rood 20¾ perches. It included Portions 43, 44, 48 and 51 held earlier by Henry Wallace McIlfree who transferred these portions to Otway Rothwell Falkiner, of Boonoke, North Widgiawa, pastoralist on 21 September 1923. Falkiner transferred the whole to Albert Edwin Thompson, of Kerrabee, grazier on 3 February 1926.⁴¹ On 28 June 1927, Albert Edwin Thompson transferred part of Portion 43, Portion 44, part of Portion 48 plus all of Portion 51 and 9 acres 2 roods being a Closed Road with a total area of 236 acre 2 roods to Herbert Stanley Thompson, Tarwin Park, Bylong, grazier, so that it became part of his holding.⁴² The combined area of Herbert Stanley Thompson's holdings was 1,236 acres 2 roods 15¼ perches so other holdings were taken into account when recording the acres he held in the Sands Directory.

Meanwhile, John Morrissey had transferred Portions 9, 10, 15, 16, 17, 49 and 50 to Francis Edward Ingram, Rylstone, grazier, on 24 May 1922. (See below) These Portions were transferred to James Cyril Thompson, Rylstone, grazier, on 17 September 1923.⁴³ The listing of James Cyril Thompson in the Sands Directory pastoral sections would relate to his Widden stud, but probably also included the acres he held in Parish Bylong near his brother Herbert.

After Herbert Thompson purchased part of John Lee's former Bylong estate, which he called 'Tarwyn Park', he continued to operate his stud at Oakleigh at Widden, which had been established by his father.⁴⁴ In 1930, H S Thompson still owned Oakleigh horse stud at Widden established by his father, plus Tarwyn Park over the hills from Oakleigh. He also owned Sunnyside, which he conducted with P C Basche, as a shorthorn cattle and sheep property.⁴⁵

On 20 April 1939, the advantages of Tarwyn Park were highlighted since 'A fine chain of wells provides a good water supply and the standard of the lucerne in its paddocks is exceptionally high. Every conceivable modern improvement has been installed and the accommodation for the stock is the most up-to-date lines.'⁴⁶ The attraction of the district to thoroughbred horse breeders was demonstrated in June 1939 when Reginald Charles Allen purchased a 700 acre property in the Bylong Valley with good lucerne next to Tarwyn Park where he would establish a horse stud.⁴⁷ He was already known as a notable breeder.

Late in 1943, Herbert Thompson fell seriously ill⁴⁸ and he became an invalid afterwards. The expense of maintaining Tarwyn Park as well as the drain on his finances caused by prolonged medical attention depleted his income. The overdraft from his bank increased. On 24 December 1952, it was reported that Thomas Langhorne Fleming had purchased Tarwyn Park of 1840 acres with possession on 28 February 1952.⁴⁹ On 23 December 1951, a press report stated that Tarwyn Park included 'a 14-room stone homestead surrounded by a well-kept garden and 1840 acres of rich grazing land'.⁵⁰ The formal transfer when Thompson transferred Tarwyn Park to Thomas Langhorne Fleming, Bylong, grazier was dated as 13 August 1951 but was not presented to the Land Titles Office until 19 August 1952 and was not entered until 3 June 1953.⁵¹ Herbert Thompson purchased a property on the Nepean River at Castlereagh on 29 February 1952.⁵² That property was managed for him whilst he remained in care in Sydney.

Thomas Langhorne Fleming had already achieved considerable notoriety. On 28 June 1951, his wife Betty died from cyanide poisoning in a car being driven by Thomas Langhorne Fleming between

⁴⁰ *Mudgee Guardian*, 8 Feb 1926 p 9

⁴¹ CT 3505 f 215

⁴² CT 3505 f 215; CT 1353 f 144; CT 4074 f 211

⁴³ CT 1390 f 30; CT 1945 f 7; CT 1945 f 8; CT 3364 f 53; CT 4638 f 178

⁴⁴ D M Barrie, *Valley of Champions*, p 28

⁴⁵ *Mudgee Guardian*, 4 April 1930, p 17

⁴⁶ *Mudgee Guardian*, 20 April 1939, p 15

⁴⁷ *SMH*, 27 June 1939 p 6

⁴⁸ *Mudgee Guardian*, 18 Nov 1943, p 2

⁴⁹ *Daily Examiner*, (Grafton), 24 Dec 1951 p 3

⁵⁰ *Truth*, 23 Dec 1951, p 3

⁵¹ CT 3535 f 152; CT 4074 f 211

⁵² C T 5539 f 199-200

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Willow Tree and his property at Mount Parry. After a sensational trial at Tamworth involving another woman, he was acquitted of his wife's murder in September 1951. He vowed not to return to his property, which was handed to his brothers.⁵³ With a new wife, he moved to Tarwyn Park, which he was converting into a cattle stud.⁵⁴ Despite that, champion racehorses, such as *Monte Carlo*, were still on the property in June 1957.⁵⁵

According to oral information collected from Stuart and Anne Andrews, Fleming was later forced to sell Tarwyn Park after being sued by a neighbour for diverting the creek (AECOM Australia Pty Ltd, 2015). Confirmation of this has not been located, but as long time local residents, their information is likely to be true. Tarwyn Park was originally offered for private sale by Dalgety and Co Ltd but this does not appear to have been successful.⁵⁶ So, on 30 October 1959, Dalgety and Co Ltd offered it at auction in three separate parcels. The second and third parcels were not part of the core property. The second parcel, the 'Church' block measured 365 acres along Lee Creek. The third, the 'Cousins Gully' block was 280 acres situated 2 miles from the homestead. The 'Homestead' block measured 844 acres (almost exactly the same as in the valuation by the Valuer-General – see below). It was described as:

COUNTRY. 250 acres of RICH LUCERNE COUNTRY, which will grow lucerne without irrigation in any season, remainder is flat to low slopes. 400 acres under cultivation, including 50 acres established lucerne, 25 acres grazing lucerne, 74 acres oats, 250 acres wheat (28 acres with lucerne), and most of the balance of the area is rich cultivable land.

WATERED by double frontage Bylong Creek, 6 wells, 1 bore, a water hole on a Spring and 1 dam.

FENCING: Netted boundary: subdivided 18 paddocks (plain wire or pig mesh)

BUILDINGS: Spacious Sandstone Homestead with all modern conveniences and comprising 4 bedrooms, etc, lounge, dining, office, foyer and large hall, bathroom, toilet, kitchen (Aga 4 oven stove). Wall to wall carpets, 32v Electric light plant, Agamatic hot water system; septic sewerage. Servants' dining room and 2 bedrooms, bathroom, etc. Three workmen's cottages. Large stone stables of 14 horse boxes, feed, harness rooms, etc, covered round yard. Shearing shed for 2 stand plant, large hay shed and other sheds, etc.⁵⁷

The following owner was Harold John Arthur Howes, Bylong, company director and grazier, to whom Tarwyn Park was formally transferred on 14 March 1961.⁵⁸ When the Valuer-General assessed the property on 16 January 1962, the improvements were recorded as a stone homestead, cottages, farm buildings, and a water supply.⁵⁹ Howes died at Woollahra on 31 March 1989.⁶⁰

Howes transferred the property to Imijt Pty Ltd, whose address was c/- Peat Marwick Mitchell & Co, Australia Square, Sydney for \$96,000 on 29 November 1974.⁶¹ Imijt Pty Ltd had previously been registered in NSW on 24 May 1974 and was deregistered in February 2002.⁶² This was apparently the company established by Peter Andrews to acquire Tarwyn Park. By June 1975, Peter Andrews was busy reviving the 'tired veins' of the property, 'clearing away the rubble of stagnancy', installing

⁵³ *Daily Advertiser*, (Wagga Wagga), 28 Jan 1952, p 1; *Northern Star*, 7 Sept 1951, p 1; *Truth*, 9 Sept 1951, pp 1, 8-10

⁵⁴ *Daily Advertiser*, (Wagga Wagga), 28 Jan 1952, p 1; *Armidale Express*, 28 Jan 1952, p 8

⁵⁵ *SMH*, 12 June 1957, p 12

⁵⁶ *SMH*, 28 Aug 1959, p 27

⁵⁷ *SMH*, 9 Oct 1959, p 21

⁵⁸ CT 6681 f 202

⁵⁹ Valuer-General, Valuation List, SANSW 3/11585, ph Bylong, No fol 69

⁶⁰ NSWGG, 18 Aug 1989, p 5815

⁶¹ CT 8299 f 14; Dealing P125788

⁶² ASIC company register search, 23 Oct 2017

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Melbourne Cup winner *Rain Lover* on the property after shifting from his Glen Acres stud, at One Tree Hill, South Australia.⁶³

Peter Andrews used Tarwyn Park to apply the principles of 'Natural Sequence Farming' to rehabilitate the degraded pastures and eroded riverbank of the property to revive the natural fertility of the land. It became a showpiece of the success of such innovative environment techniques.⁶⁴ The development of NSF is expanded upon in Section 2.4. On 26 May 1999, Peter Andrews' son, Stuart Peter Andrews and Megan Leisha Andrews became the new owners, purchasing the property from the bank following Peter Andrews' bankruptcy.⁶⁵

2.3 Iron Tank Property

John Morrissey transferred Portions 9, 10, 15, 16, 17, 49 and 50 to Francis Edward Ingram, Rylstone, grazier, on 24 May 1922.⁶⁶ Ingram appears to have had little interest in the Bylong property. He died on 1 July 1952 at Coonamble aged 87. His rural property at Coonamble was then in a rundown condition.⁶⁷

Ingram had held these portions briefly before transferring them to Herbert's brother, James Cyril Thompson, Rylstone, grazier on 17 September 1923. Those Portions remained in his hands until they were transferred to Andrew Woolley, Bylong, farmer and grazier on 2 December 1949.⁶⁸ When assessed by the Valuer-General on 21 January 1957, the property, owned by Andrew Woolley, 'Helvetia' Bylong, which also encompassed Portions 11, 52, 67, 70 and 71 included the following improvements - 2 galvanised iron cottages, with galvanised iron roofs, a fibro cottage with a galvanised iron roof, farm buildings, fencing, clearing, a water supply, and lucerne. He also held Portions 12 and 72 on Conditional Lease, with clearing, fencing and ringbarking.⁶⁹

On 11 September 1970, this property, later known as Iron Tank, was created through the transfer of a portion of land owned by Andrew Woolley, Bylong, grazier to Zivorad Jack Yagodich, Bylong Valley, farmer and grazier and his wife Alison Ann Yagodich, including Portions 9, 10, 15, 16, 17, 49 and 50.⁷⁰ Woolley died at Evans Head on 20 September 1979.⁷¹ On 23 January 1978, Zivorad (Jack) Yagodich murdered his wife Alison at their property 'Zora' at Bylong.⁷² She was cremated at Northern Suburbs Crematorium on 31 January 1978.⁷³ The inquest was held in Mudgee on 24 March 1978. The inquest papers are not available. Zivorad (Jack) Yagodich committed suicide by hanging at Long Bay Gaol on 19 June 1978.⁷⁴

The property was transferred to Peter John Andrews, Bylong, grazier on 30 November 1988. It was later transferred on 26 May 1999 to Stuart Peter Andrews and Megan Leisha Andrews.⁷⁵

2.4 Natural Sequence Farming

Shortly after Peter Andrews purchased Tarwyn Park, he began exploring ways to improve the property, which he states had salt surfacing across portions of it with parts of the banks of Bylong River being extremely eroded (Andrews, 2006:201; CSIRO, 2002:3). His then wife, Anne Andrews (Australian Story, 2005), indicated that Mr Andrews had been developing the thought process behind NSF since his childhood on a sheep station near Broken Hill where he was taught to look at the

⁶³ *SMH*, 11 June 1975, p 15

⁶⁴ Andrews, P. (2006) *Back from the Brink: How Australia's landscape can be saved*. ABC Books.

⁶⁵ CT 8299 f 14

⁶⁶ CT 4638 f 178; CT 4638 f 185; CT 6216 f 136; CT 8331 f 213

⁶⁷ NRS 13660, Supreme Court, Probate Packet, SANSW Series 4 No 399394

⁶⁸ CT 1390 f 30; CT 3364 f 53; CT 4638 f 178; CT 4638 f 185; CT 4867 f 114; CT 6216 f 136;

⁶⁹ Valuer-General, Valuation List, SANSW 3/11585, ph Bylong, No 73, 74

⁷⁰ CT 4638 f 178; CT 4638 f 185; CT 6216 f 136; CT 8331 f 213

⁷¹ Australian Cemeteries Index, Accessed 20 Oct 2017; *Northern Star*, 31 Oct 1979

⁷² Alison Ann Yagodich, Death Certificate, 1978

⁷³ *SMH*, 28 Jan 1978, p 34

⁷⁴ Zivorad (Jack) Yagodich, Death Certificate, 13878/1978

⁷⁵ CT 6216 f 136; CT 8331 f 213

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landscape by the Aboriginal station hands. Mr Andrews believed that the water system was broken, in that water was flowing through the landscape too quickly due to the loss of vegetation through clearing and overgrazing. This had resulted in the incising of creeks and rivers and the lowering of the water table. During floods, the fast-moving water within the incised streambeds would not only erode the banks, but also remove nutrients and soil. Prior to colonisation, Australian stream structure, on the whole, operated on a chain of ponds system, where water would pool in a number of interconnected ponds, which would join together to form a flowing creek or river during times of rainfall (Andrews, 2006). Water would then fan out across the associated floodplain, dispersing nutrients and adding in the creation of soil through the accumulation of biological material, while soaking into the floodplain to recharge the ground water table. The ground water table would enable vegetation, particularly ground cover, to draw water during dry periods and drought to maintain vegetation cover and prevent erosion (Newell & Reynolds, n.d.).

Mr Andrews started by battering the banks of Bylong River and planting reeds and willows to prevent erosion. He then began to use logs and other available material, including the refuse removed from the Homestead prior to their purchase of the property (see Section 3.3), to slow the flow of water along the Bylong River and to encourage the water to spread out across the floodplain (Andrews, 2006; CSIRO, 2002). These structures are now known as 'leaky weirs'. Other modifications to the property included the creation of contour banks and quasi-wetlands (CSIRO, 2002) (refer to Section 3.2.3).

Mr Andrews encountered considerable opposition from local farmers concerned about the unapproved 'damming' and diversion of Bylong River reducing flows to their properties and the introduction of declared noxious weeds. Traditional knowledge indicates that raising the water table will increase salt, rather than decrease it as proposed by Mr Andrews, and this was also a concern raised by neighbouring farmers. Government agencies made regular visits to Tarwyn Park based on the concerns of neighbours (Australian Story, 2005). It is unclear from the available evidence what, if any, action was taken by the Government agencies in question.

A second prong of the NSF technique is to promote diversity of species within pasture. During a study tour of England during the 1960s when Andrews was establishing himself as a horse breeder, he discovered that English stud managers consider a pasture of low diversity to be in decline. There is an old adage that a pasture with over 80 species is in good health and if there is less than 40 it is in decline. Andrews noted that studs with great diversity of pasture were more likely to breed Group 1 winners (Andrews, 2006:23). Within the NSF regime, diversity is to be encouraged and weeds, rather than being sprayed, should be slashed and used as mulch to encourage the growth of desirable species and to stop the loss of carbon and nutrients from the local system (Andrews, 2006).

Following the implementation of the NSF method at Tarwyn Park, Mr Andrews was convinced the method was a model of land management that could and should be implemented more widely. Mr Andrews maintained that the horses at Tarwyn Park were healthier. Andrews used his thoroughbreds as guinea pigs to test the progress of the NSF technique by bringing horses from his previous stud in South Australia to Tarwyn Park. In his book, Andrews states that horses at Tarwyn Park were not susceptible to diseases they commonly contracted in South Australia and provided the example of the yearling 'Marieazar'. 'Marieazar' had been a disappointing yearling, but had flourished at Tarwyn Park and went on to win 'numerous' races in Sydney (Andrews, 2006:34), including the Canterbury Cup in January of 1977 (*The Sydney Morning Herald*, 1 January 1977:13). Andrews attributes the health and success of his horses to the diversity within the pasture.

Andrews invested considerable time in attempting to convince academics, politicians and government departments of the veracity of NSF as a land management method and wrote two books on the subject (Andrews, 2006, 2008). NSF, Tarwyn Park and Peter Andrews have been the subject of two *Australian Story* features (Australian Story, 2005, 2015).

As an unintended consequence, the commercial operations at Tarwyn Park took a back seat with the training of racehorses for sale and maintenance of the built structures being either incomplete or unattended. The lack of an income placed considerable strain on the Andrews marriage. In 1994, the Commonwealth Development Bank of Australia (Certificate of Title 8831-213 and 8299-14) foreclosed on the property and the Andrews were forced to relocate. A group of business men provided Mr Andrews with research and development funding to continue the NSF operations at Tarwyn Park, allowing the Andrews to return after a period of six weeks (Australian Story, 2005). However, two

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years later, Mr Andrews was declared bankrupt. Around this time, the marriage between Peter and Ann Andrews also broke down (Australian Story, 2005).

2.5 Recent History

In 1999, the son of Peter and Ann Andrews, Stuart, and his wife Megan, purchased Tarwyn Park (Certificate of Title 8831-213 and 8299-14) after the property's foreclosure and used the property for the grazing of cattle. During this time, Stuart and Megan Andrews continued to use the NSF method to some extent (Australian Story, 2005).

In February 2014, Tarwyn Park and Iron Tank were purchased by KEPCO for \$14.5 million. Stuart and Megan Andrews leased the property from KEPCO until 31 July 2016. Since then, KEPCO have continued to operate the property as part of its grazing enterprise implemented on its wider landholdings, maintaining current NSF practices, whilst the proposed coal mine plans for a small part of this property have been under consideration as part of the state significant development approvals process. It is proposed that the grazing enterprise would be continued on those portions of the properties not within the open cut area under NSF.

2.6 Site Phasing

2.6.1 Tarwyn Park Homestead

It would appear from the inspections undertaken to date, that Tarwyn Park Homestead was constructed in one phase. This is supported by newspaper reports indicating the homestead constructed in 1920 was of 22 rooms, which is roughly equivalent to the number of rooms that currently comprise the Homestead. Stuart and Megan Andrews hold the original architectural plans for Tarwyn Park Homestead. A portion of this plan was available to AECOM during the preparation of this draft CMP in the form of a photograph taken through glass (Figure 13). The original functions of the rooms and some of the annotations on the plan are not sufficiently clear enough to decipher. A comparison of the original architectural drawings and the current plans indicates five areas where alterations may have been made:

- a. The rooms labelled as 9 b and 9c on Figure 14 are not shown on the original plans. This may indicate these rooms were a later extension or that alterations to the plans were made on the ground during construction. The available physical evidence is inconclusive at this time.
- b. The patio area has been modified. The steps shown on the original plans outside of what is referred to in this draft CMP as room 13, are no longer extant, having been relocated to the east, with the area between the two portions of the Homestead having been raised and tiled. The configuration of the verandah appears to be roughly consistent with the original plans.
- c. The western wall of the pantry (room 4) and kitchen (room 5) appears to have two larger windows, when compared to the current layout, which consists of one smaller window in both instances.
- d. The door between the pantry (room 4) and the kitchen (room 5) is located further to the east in the original plans than the current layout.
- e. It is evident from the fabric, as well as the original plans, that the steps on the western elevation to the side entrance hallway (room 7) are a modern modification.

The phasing is visually represented in Figure 14 with these areas of modification annotated.

2.6.2 Tarwyn Park Stables and Vernacular Concrete Structure

No detailed examination of the construction sequencing of the Stables was undertaken based on time constraints, but it would appear they were built in a single phase and no major modifications are immediately apparent.

The Stables contain a series of three feed and tack rooms to the north east, each with an eight pane single hung sash window. The construction of these windows, particularly the glazing bars, is identical to the window in the Vernacular Concrete Structure, indicating they were, more than likely, crafted by the same carpenter. On this basis, together with other evidence contained within the fabric of the Vernacular Concrete Structure, it is postulated these two structures were constructed at the same time

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and within a decade or less of the construction of Tarwyn Park Homestead (1920). The case for this hypothesis would be elaborated on in the finalised CMP.



Figure 13 Floor plan of Tarwyn Park Homestead from the original architectural plans. Source: WorleyParsons

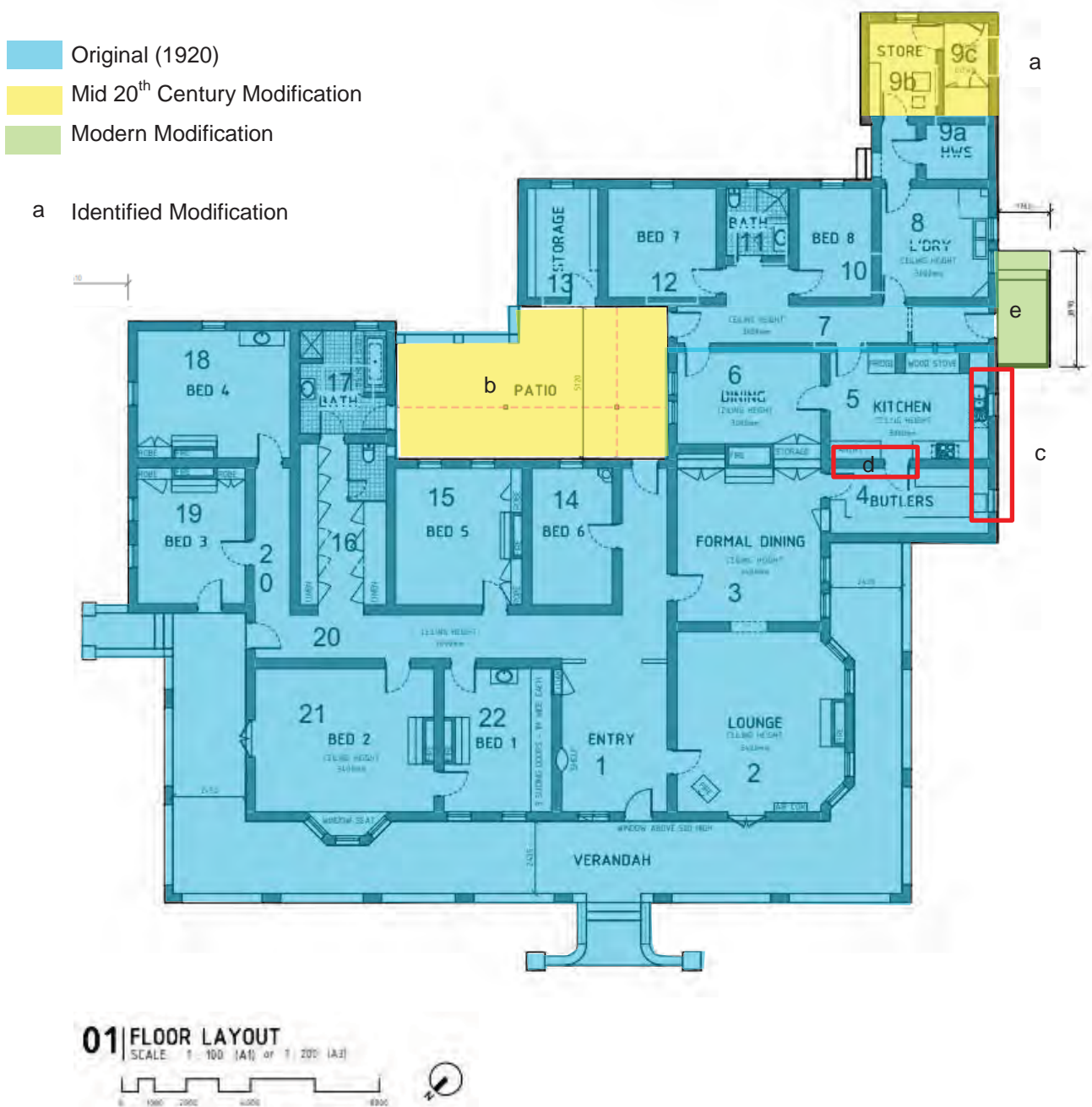
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Figure 14 Phasing of the development of Tarwyn Park Homestead

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2.6.3 Farm House 2

Farm House 2 demonstrates four possible phases of development (Figure 15). The associated sandstone structure could be the earliest phase of the development on the site. There is no date for the sandstone structure, or the Farm House itself for that matter, as it is not shown on any known plan as it sits within Portion 1, the original grant of 1829 to William Lee and therefore there were no built structures when the land was initially surveyed and there was no further necessity for survey plans. As such, it may date to the initial settlement, however, there is similarities in the sandstone masonry with the Swiss Cottage, which is dated to 1912 (AECOM Australia Pty Ltd, 2015:46).

The Farm House 2 has been developed in at least two phases, with the eastern section being constructed in advance of the western section in the Victorian Georgian style (Apperly, Irving, & Reynolds, 1989:42). This assessment is based on differences in the chimney materials – the chimney in the eastern section is of brick faced with sandstone, while the chimney in the western section is constructed of different bricks. The occurrence of sandstone also raises the possibility that the Farm House and associated sandstone structure were constructed at the same time. Further invasive investigation of the Farm House would be required to elucidate this matter.

The verandah would also appear to be a later alteration as it extends along the bathroom, which is a later addition. It is possible that the verandah was replaced/extended when the bathroom was constructed, as it is likely that the verandah replaced an earlier verandah.

Further discussion on the possible development of Farm House 2 is provided in Section 3.3.1.

2.6.4 Iron Tank

Iron Tank was constructed in three phases, based on the physical characteristics. The front (southern wing) can be stylistically dated to the late Victorian Georgian phase (Apperly, Irving, & Reynolds, 1989:42), suggesting a date of between 1840 and c.1900. This is based on the form of the roof – a steeply pitched hipped roof, the symmetry of the original façade and the materiality, specifically the corrugated iron, sash and fixed windows (Apperly et al., 1989:42). The northern wing, based on the prevalence of pressed metal on the interior, was probably constructed between 1900 and 1910. The deck and store room on the western side (room 10) are much later additions, probably during the 1960s or 1970s. This phasing is represented in Figure 16. There are no maps or plans that indicate the initial date of settlement at the site.

[illegible]

Figure 15 Phasing of the development of Farm House 2.

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Figure 16 Phasing of the development of Iron Tank House

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3.0 Physical Evidence

3.1 Introduction

Inspection of Tarwyn Park Homestead and outbuildings, Tarwyn Park Stables, Farm House 2, Iron Tank and Garage and features associated with NSF were conducted by Dr Susan Lampard and Dr Darran Jordan on 7 and 8 September 2017. Photos of the Farm House 1 were provided by Tom Frankham of WorleyParsons as time did not permit the inspection of this feature.

It is also noted that there is an additional house on the land addressed within this draft CMP. This house is located on Upper Bylong Road and has been assessed as holding no heritage significance. This house sits within the open cut area of the Project and will be archivally recorded prior to removal, under the Bylong Coal Project Historic Heritage Management Plan (AECOM Australia Pty Ltd, 2017a).

3.2 Site Description

3.2.1 Location and Setting

Tarwyn Park and Iron Tank consists of nine parcels of land within the Local Government Area (LGA) of the Mid-Western Regional Council - Lot 1 and 2 of Deposited Plan (DP 1094509), Lots 9, 10, 15, 17, 49 and 50 of DP 755420 and Lot 16 of DP 1109210. It falls within the County of Phillip and the Parish of Bylong. Tarwyn Park Homestead is located approximately four kilometres south east of Bylong township, while the former township of Upper Bylong is located approximately 1.5 kilometres to the south west of the Homestead.

The land sits between Upper Bylong Road to the west and the Bylong State Forest to the north. The Bylong State Forest encompasses the elevated areas of the Great Dividing Range, of which the property includes a small portion within Lots 9 and 10 of DP 755420. The south-eastern corner of the property sits adjacent to Woolleys Road. The property is intersected by the Bylong River, and the Sandy Hollow to Gulgong Railway Line, which skirts the rise of foothills associated with the Great Dividing Range.

The land can be characterised as alluvial flats, terraces and channel benches associated with Bylong River in the eastern portion of the site and gentle, undulating rises to the south and west of the property. The property is largely cleared, with some regeneration along the Bylong River in the vicinity of Tarwyn Park Homestead. Localised regeneration also occurs at the southern boundary, in association with a low rise and in the south-eastern portion of the site in the vicinity of Iron Tank House.

3.2.2 Views and Vistas

View lines have been identified as an important attribute of the heritage significance of the Bylong Landscape Conservation Area. The National Trust listing identifies the area as “*prime agricultural land with a rural landscape of exceptional scenic value*” (National Trust of Australia (NSW), 2013). The broader landscape is dominated by Mount Penny and associated ranges to the north-west, Tal Tal Mountain to the south, the Growee Ranges to the west and the Bylong State Forest to the east, however, these elements are not visible from all structures located in the Tarwyn Park Farm Complex. The following analysis identifies the significant views from Tarwyn Park Homestead, Tarwyn Park Stables and Iron Tank, as the three most significant built structures.

3.2.2.1 Tarwyn Park Homestead

The significant views are identified on Figure 17. The Homestead is oriented towards the northwest, and therefore views in this direction through the vegetation within the grounds of the Homestead are considered significant (View 1 of Figure 17, see Plate 1). Views from the kitchen door, located on the western side of the Homestead, are also considered to be of significance (View 2 of Figure 17, see Plate 2) as the centre of activity for the homestead. The views in both directions are across flat to gently sloping cleared paddocks, with the vegetated ranges and mountains in the distance. View 2 includes a vista towards the Lee Creek valley and the Growee Ranges in the distance.

The orientation and placement of Tarwyn Park Homestead does not make the best use of the landscape, in that the house is not oriented to make the most of views towards Mount Penny or Tal Tal

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Mountain and does not frame itself against the ranges to the east, as might be expected in the Picturesque model of house siting and neither is it sited on a rise as in the Summit model⁷⁶ (Morris & Britton, 2000). The Homestead therefore, does not make a bold statement in the landscape, but is rather recessive. This is evident when approaching the Homestead along the driveway (View 3 of Figure 17, see Plate 3), where the viewer is presented with the side of the house, rather than the front elevation as could be expected. As discussed further in Section 3.2.3, it is unclear from the available evidence whether the current driveway, which was in place by the 1950s, was the original approach to the Homestead. Other distant views of the Homestead and Stables are available from the KEPCO site office located approximately 775 metres to the northwest (View 4 of Figure 17, see Plate 4). These views are obscured by the distance and the small number of trees planted around the northern elevation of the Homestead.

⁷⁶ The Picturesque model sites a house part way up a slope or in some way frames it within the landscape. In the Summit model, the house is sited on the top of a rise in order to be highly visible and form a landmark.

- Key**
- Tarwyn Park & Iron Tank Property Boundary
 - Tarwyn Park Homestead Views
 - 1 View from Tarwyn Park
 - 2 View from Tarwyn Park to driveway
 - 3 View from driveway to Tarwyn Park
 - 4 View from KEPCO Site Office
 - View origin
 - Roads
 - Cadastral
 - Creeklines
 - Railway

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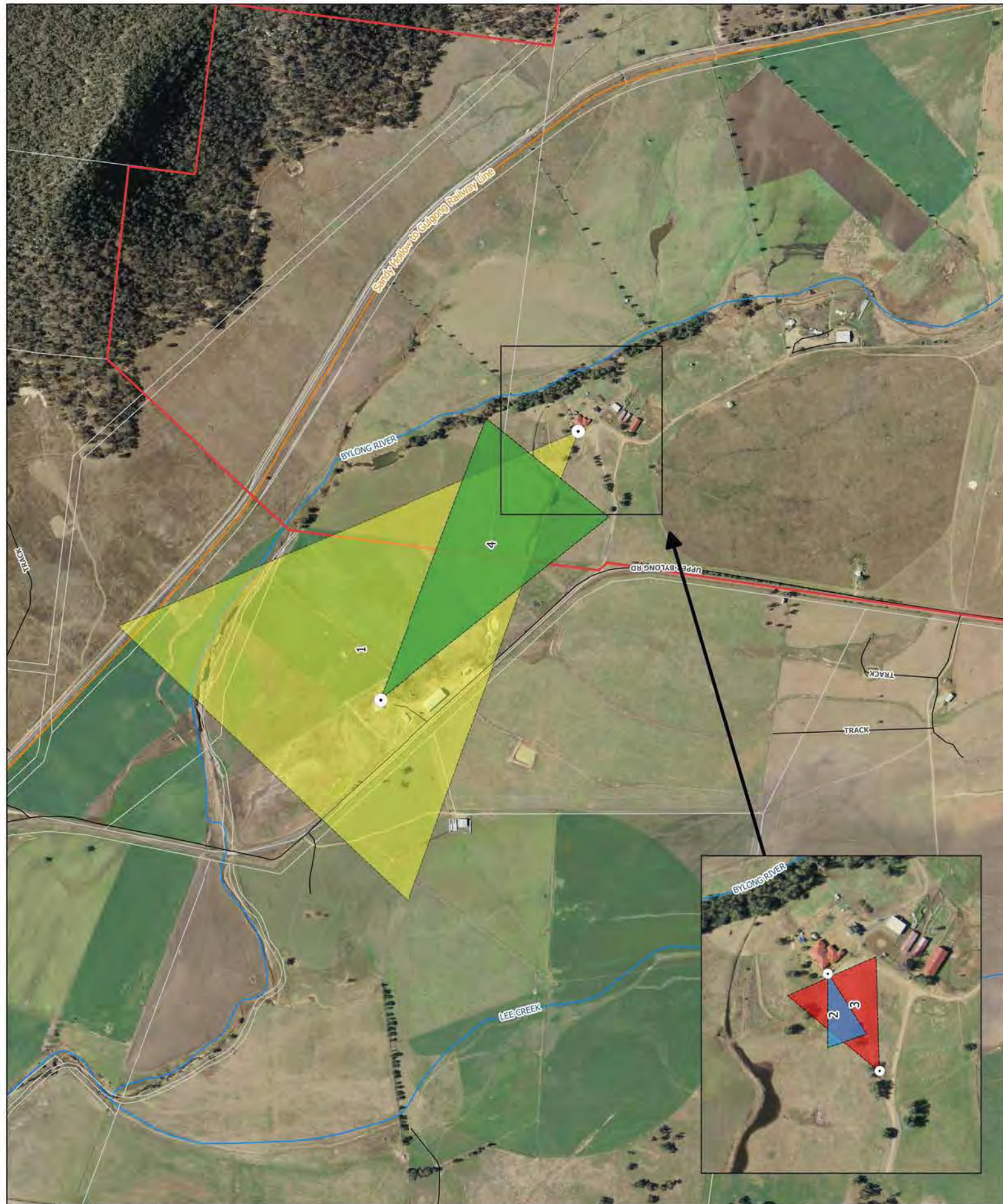


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Tarwyn Park Homestead View Lines

Tarwyn Park and Iron Tank Conservation Management Plan

Figure 17



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Plate 1 Tarwyn Park Homestead View 1

Notes: This image is taken from the front yard and is not representative of the more enclosed views that are available from the verandah. The open paddocks contribute to the significance of this view. These open paddocks should be maintained as evidence of the rural setting and as such, it is considered planting within the paddocks to provide vegetation screens is not appropriate. Planting for visual screening should be contained within the fenced front yard area of the Homestead. These plantings should seek to create a formal to semi-formal entrance to the Homestead as a historically and culturally appropriate response to the style and form of the Homestead.

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Plate 2 Tarwyn Park Homestead View 2. View west along existing driveway. Note the row of poplars (left) with the remnants of the older peppercorn trees (right) which formerly lined the driveway

Notes: The retention of the open space is the important element of this view in the long term (i.e. on mine closure), as are trees to mark the line of the driveway. A grassed earthen embankment would be appropriate during the lifespan of the mine. On the closure of the mine, reinstatement of the driveway and line of trees should be considered as an interpretive element.

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Plate 3 Tarwyn Park Homestead View 3. View east from driveway

Notes: Open views towards the Homestead from the west should be maintained within 25 metres of the house as per the known historical view.

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Plate 4 Tarwyn Park Homestead View 4. View south east from the KEPSCO Site Office towards Tarwyn Park Homestead. Location of Homestead denoted by arrow

Notes: The retention of the open paddocks is the important element of this view. The Project will maintain this view with impacts limited to minor amendments to the south (right side of image) associated with the Eastern Open Cut. This will not impact views towards Tarwyn Park Farm Complex.

3.2.2.2 Tarwyn Park Stables

As the second significant structure associated with the Tarwyn Park complex, views to and from the Stables have also been considered. Views are available from the driveway at a distance of approximately 120 m (View 5 of Figure 17, see Plate 5). The views from the doors in the northern, western and southern elevations were identified as being significant. At present, these views are of open paddocks, separated by fences.

Key

- Tarwyn Park & Iron Tank Property Boundary
- View from Stables**
 - 5 View to stables
 - 6 View northwest from north side of stables
 - 7 View southeast from south side of stables
 - 8 View south from west side of stables
- View origin
- Roads
- Cadastre
- Creeklines
- Railway

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Tarwyn Park Stables View Lines

Tarwyn Park and Iron Tank Conservation Management Plan
Figure 18



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Plate 5 Tarwyn Park Stables View 5. View east from driveway towards Stables

Notes: The retention of the open space, separated by fences is the important element of this view.



Plate 6 Tarwyn Park Stables View 6. View north from Stables

Notes: The retention of the open space is the important element of this view.

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Plate 7 Tarwyn Park Stables View 6. View south-west from Stables

Notes: The retention of the open space is the important element of this view in the long term (i.e. on mine closure). A grassed earthen embankment would be appropriate during the lifespan of the mine. This view will be affected by the Project. A draft photomontage of this view at mine closure is provided for reference. The rehabilitation and management of the landscape is addressed within the *Bylong Coal Project: Visual and Landscape Analysis* (AECOM Australia Pty Ltd, 2017b).

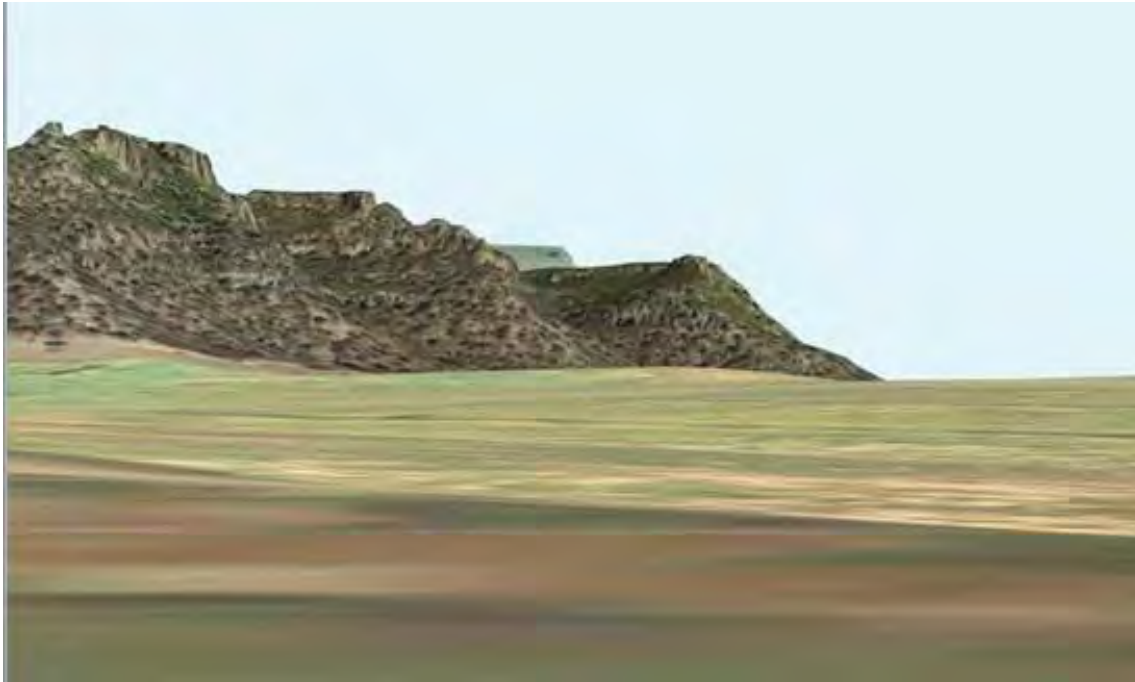


Plate 8 Tarwyn Park Stables View 6. View south-west from Stables final landform at Project closure.

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Plate 9 Tarwyn Park Stables View 6. View south from Stables

Notes: The retention of the open space is the important element of this view.

3.2.2.3 Iron Tank

Being a modest dwelling, the views to and from Iron Tank are limited in number to a view towards the house from Woolleys Road and a view from the front door towards the south and the rear door northwards. These views are shown on Figure 19. The view towards Iron Tank (View 1 of Figure 19, see Plate 10) sites the House within open rural paddocks with limited plantings directly associated with the house. The juxtaposition of the open paddocks against the native vegetation on the ranges behind creates a significant rural landscape. The views from the front door of the house, towards the south-west (View 2 of Figure 19, see Plate 11) slope upwards towards the foothills of Tal Tal Mountain. This vista is not broad and is limited by the topography. The view from the rear of the house, northward, however, is across open paddocks towards the ranges of the Great Dividing Range and the Bylong State Forest behind, which is the area of the proposed underground mining operations for the Project (View 3 of Figure 19, see Plate 12). There may be some alteration to this view associated with subsidence associated with the underground mining activities. It is considered that this will not materially effect this view as the vegetated, elevated form will remain.

- Key**
- Tarwyn Park & Iron Tank Property Boundary
 - Iron Tank Viewlines**
 - 9 View from Wooleys Road
 - 10 View from Iron Tank House near front door
 - 11 View from Iron Tank House near back door
 - View origin
 - Roads
 - Cadastral
 - Creeklines
 - Rail

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Iron Tank View Lines



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Plate 10 Iron Tank House View 1. View north from Woolleys Road towards House

Notes: The retention of the open space and the ranges behind is the important element of this view. The fencing is not sympathetic and could be removed and replaced with something of a more residential flavour.

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Plate 11 Iron Tank House View 2. View south from front door

Notes: The retention of the open space with views to the foothills of Tal Tal Mountain is an important element of this view.

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Plate 12 Iron Tank House View 3. View north-west from back door

Notes: The retention of the open space with views to the Growee Ranges in the background is an important element of this view. This view will be maintained by the Project, with some alterations occurring outside the field of vision to the south (left of image).

3.2.3 Landscape Features

A number of landscape features have been identified and these are discussed individually below.

Horse Training Track

Located to the south west of Tarwyn Park Stables is a race horse training track. This feature is absent from the 1958 aerial (refer to Figure 22), but appears in the 1977 aerial and was therefore constructed by the Andrews. Sometime between 1977 and 1999, the training track was extended to its present extent (refer to Figure 20). It is approximately 2.1 km in circumference, roughly comparable to Flemington Racecourse (2.31 km). The training track is associated with the Andrews era of occupation.

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Figure 20 Extent of race horse training track 1977 and present. Source: 1977 aerial, Department of Lands Merriwa Run 8 and Six Maps, NSW Government

Fencing

[Fencing will be further investigated and integrated into this CMP post approval. The assessment would include a typology of the fences (an initial investigation indicated there are at least two types and mapping of the fencing for inclusion in the archival recording. Further assessment of which era the fencing is likely to belong to will be undertaken as well)]

Natural Sequence Farming

The features associated with NSF include contour banks, leaky weirs, nutrient sinks, nutrient delivery areas and sundry additional items, as shown in Figure 21.

Contour banks are primarily evident on the western side of Bylong River between Farm House 2 and the Tarwyn Park Homestead (Plate 14). A second large contour bank has been formed to the north of the Homestead. This contour can be clearly seen on aerials as retaining water and forming a quasi-wetland (Figure 20), known as a nutrient sink in NSF terminology.

Leaky weirs are evident at several points along the Bylong River within the boundaries of Tarwyn Park and Iron Tank, as shown on Figure 21. These features consist of rocks, logs and other material placed across the riverbed (Plate 14 and Plate 15). The nature of the material varies between the features, which is evidently a factor of the material at hand at the time of construction. It is noted that no approval or licences were sought or given in relation to these features.

Nutrient delivery areas were expressed in the landscape on Tarwyn Park as areas where hay and or silage were placed for livestock to feed from. The decomposition of the uneaten fodder added to the release of nutrients into the soil, added by the flow of water during times of rainfall and, once incorporated into the soil, via groundwater flow. As these areas are ephemeral in nature, decomposition being part of the plan, these items are not necessarily retained over long periods of time. Plate 16 provides an indication of nutrient delivery areas as preserved in 2016 shortly following the vacation of the property by Stuart and Megan Andrews, a surveyed by (SLR Consulting Australia, 2016).

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The NSF method avoids the use of fertilisers, instead preferring natural compounds, including lime and rock phosphate. There is evidence of stockpile areas for these compounds to the south of the horse training track (Plate 17).

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Figure 21 Features associated with Natural Sequence Farming. Source: SLR Consulting 2016:16

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Plate 13 Contour feature on the western side of Bylong River, adjacent to Farm House 2



Plate 14 Dam and bridge feature north of Farm House 2



Plate 15 Leaky weir on Iron Tank property



Plate 16 Decomposing hay for nutrient delivery Source: SLR Consulting 2016:18



Plate 17 Lime/rock phosphate stockpile area south of racecourse. View north east. Source: SLR Consulting 2016:24

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3.2.4 Vegetation

Vegetation on the property consists of four main types, which are discussed separately below:

1. Native Woodland;
2. Regenerated native vegetation;
3. Cultural plantings; and
4. Cultivated land and pastures.

The occurrences of these vegetation communities are shown in Figure 23.

Native Woodland

The endemic native vegetation is limited to Lots 9 and 10 of DP 755420. It consists of Grassy and Shrubby White Box Woodland on the intermediate slopes and Slaty Box Woodland on the steep escarpment sections (Cumberland Ecology, 2015:3.55).

The Grassy White Box Woodland units are dominated by White Box (*Eucalyptus albens*) in association with an understorey of native grasses, herbs and forbs (a herbaceous flowering plant). The Shrubby White Box Woodland differs in that there are a higher proportion of shrubs within the understorey, typically including Wedge-leaf Hop-bush (*Dodonaea viscosa* var.), Blackthorn (*Busaria spinosa*), Sticky Daisy-bush (*Olearia elliptica*) and Cough Bush (*Cassinia quinquefaria*) (Cumberland Ecology, 2015:3.10).

The Slaty Box Woodland is typically dominated by Slaty Gum (*Eucalyptus dawsonii*) and Black Cypress Pine (*Callitris endlicheri*), with smaller proportions of Grey Gum (*Eucalyptus punctata*) and White Box (*Eucalyptus albens*). The mid-storey is comprised of Sticky Leaved Wattle (*Acacia ixiophylla*), Sticky Daisy Bush (*Olearia elliptica*, subsp. *elliptica*), Wedge-leaf Hop-bush (*Dodonaea viscosa* var. *cuneata*) and Cough Bush (*Cassinia quinquefaria*). Due to the density of the over and mid storeys there is limited ground cover (Cumberland Ecology, 2015:3.14).

Regenerated native vegetation

Two small patches of native vegetation were identified on the property (Figure 23). It is anticipated that these largely align with the Grassy White Box Woodland description provided above. It is noted in (SLR Consulting Australia, 2016:23) that upon taking occupation of the property in July 2016 the regenerated area of Coastal Grey Box Woodland on the central southern boundary contains a high density of African boxthorn (*Lycium ferocissimum*), a designated Weed of National Significance.

In addition, there has been some regeneration of native vegetation along the Bylong River, adjacent to Tarwyn Park Homestead, although this regeneration is mixed with exotic species including palms (*Arecaceae* sp.), Willow trees (*Salix* sp.) and Peppercorn trees (*Schinus molle* or *Schinus areira*).

Cultural Plantings

Cultural plantings are evident in association with each of the loci of occupation: Tarwyn Park Homestead, Farm House 2 and Iron Tank. In addition, there are plantings along the fence lines within Lot 1 and 2 (refer to Figure 23).

Tarwyn Park Homestead

Formal plantings at the Homestead consist of two rows of Poplar trees (*Populus* sp.) along the driveway between Upper Bylong Road and the Homestead (Plate 18). These trees were planted in 2010-2012 by the Andrews family and are yet to reach maturity.

The Poplars sit adjacent to a sporadic line of Peppercorn trees (*Schinus molle*, Syn. *S. areira*), which are the remnants of an earlier planting demarcating the line of the driveway. An aerial from 1958 shows the line of trees, assumed to be a consistent planting of Peppercorns, to be more regular (Figure 22). Further Peppercorn trees are located to the north of the stables, indicating this species was a favoured ornamental of the Thompson family.

Other plantings associated with the Thompson family include two palms (Plate 20) located adjacent to the north western corner of the Homestead, creating a portal towards the front of the Homestead.

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These palms are likely to be Mexican fan palms (*Washingtonia robusta*), which are known to have been a popular palm in Australia during the 19th and early 20th century. Despite examination of the ground to the north of the Homestead, no evidence of a turning circle or earlier formal gardens could be located. The 1958 aerial is not of a resolution that enables such details to be distinguished, however it appears that the driveway terminates near the laundry door as per the current alignment.

The vegetation to the immediate north of the Homestead appears haphazard and unplanned. It consists of an eclectic mix of unidentified species, she-oaks (*Casuarina* sp.), melaleucas (*Melaleuca* sp.) and a mandarin tree (*Citrus reticulata*) (Plate 19). These trees, based on their height and girth would appear to be less than 40 years old. Ornamental plantings associated with the Homestead are also limited to Geraniums (*Geranium pelargoniums*) flanking the entrance steps and a rose bush (*Rosa* sp.) outside of door 2 (Plate 21) on the eastern elevation.



Plate 18 View east from front gate showing line of poplars



Plate 19 Mandarin tree located adjacent to east of Homestead



Plate 20 Palm trees located adjacent to west of Homestead



Plate 21 Rose bush adjacent to eastern side of Homestead, outside door 2

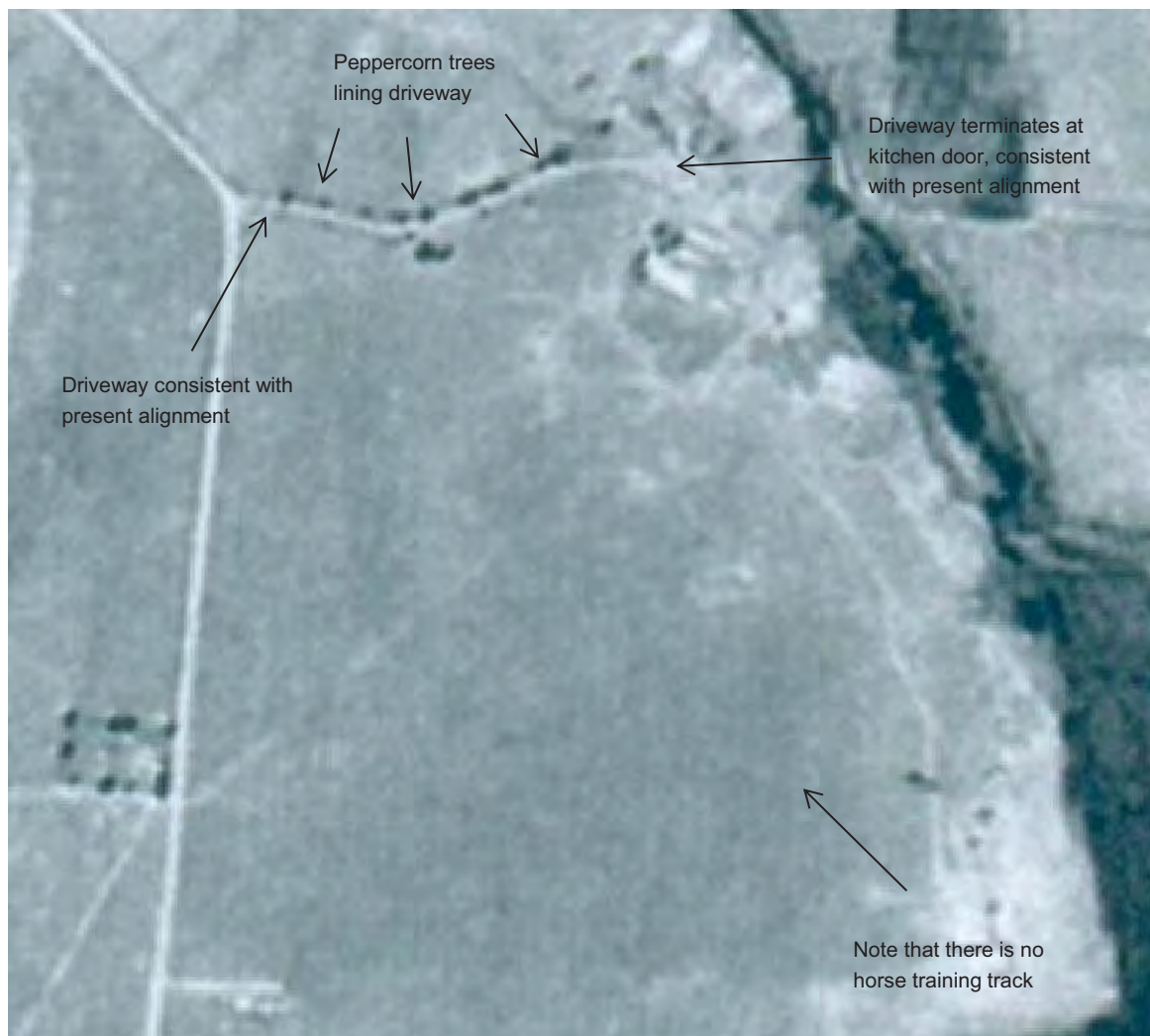
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Figure 22 Excerpt from a 1958 aerial. Features of interest labelled. Source: Department of Lands, Run 8 Merriwa November 1958

To the south east of the Homestead, behind the garage is a flat open area, which has been interpreted as a former kitchen garden, as may be anticipated to be associated with a Homestead of this size, era and prominence. Kitchen gardens were important elements in supplying rural homesteads with fresh produce in the era prior to widespread refrigerated transportation. Located on the northern side of this area a wind break of Pomegranates (*Punica granatum*).

Figure 23 identifies five fence lines that have been planted with regularly spaced trees. These trees are not apparent on the 1977 aerial of Tarwyn Park and are therefore associated with the Andrews era of occupation.

Farm House 2

Cultural plantings around Farm House 2 are also limited in nature and scope. An identified climbing vine has been trained up the verandah posts on the south, west and northern elevations. The edge of the verandah on the eastern and northern elevation is fringed with Lilly of the Valley (*Convallaria majalis*). To the east of the Cottage is an unidentified fruit tree in a protective fence. Further fruit trees surround the sandstone structure (refer to Section 3.4.5) on the northern and western sides. Beyond this, the cottage sits within cleared grazing land, up off the Bylong River floodplain.

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Plate 22 Verandah of Farm House 2 showing unidentified vine and Lily of the Valley



Plate 23 Sandstone laundry and fruit trees associated with Farm House 2



Plate 24 Fruit tree in protective enclosure to east of Farm House 2. View towards the south east

Farm House 1

The Farm House 1 is partially covered in an unidentified vine. There is no other evidence of remnant cultural plantings associated with the Farm House 1, possibly due to the long grass.

Iron Tank

The cultural plantings associated with Iron Tank also include an unidentified vine covering the sandstone chimney. Additionally, there is a row of four White Cedar trees (*Melia azedarach*) along the western side of the house.

Key

- Tarwyn Park & Iron Tank Property Boundary
 - Project Disturbance Boundary
 - Native Woodland
 - Regenerated Woodland
 - Cultural Plantings
 - Cadastre
- Cultural Plantings at Tarwyn Park**
- Mandarin (Citrus reticulata)
 - Palm (Arecaceae sp.)
 - Peach (Prunus persica)
 - Peppercorn (Schinus molle or Schinus areira)
 - Pomegranates (Punica granatum)
 - Remnant gum (Eucalyptus sp.)
 - Sheoak (Casuarina sp.)
 - Unidentified
 - Poplar (Populus sp.)

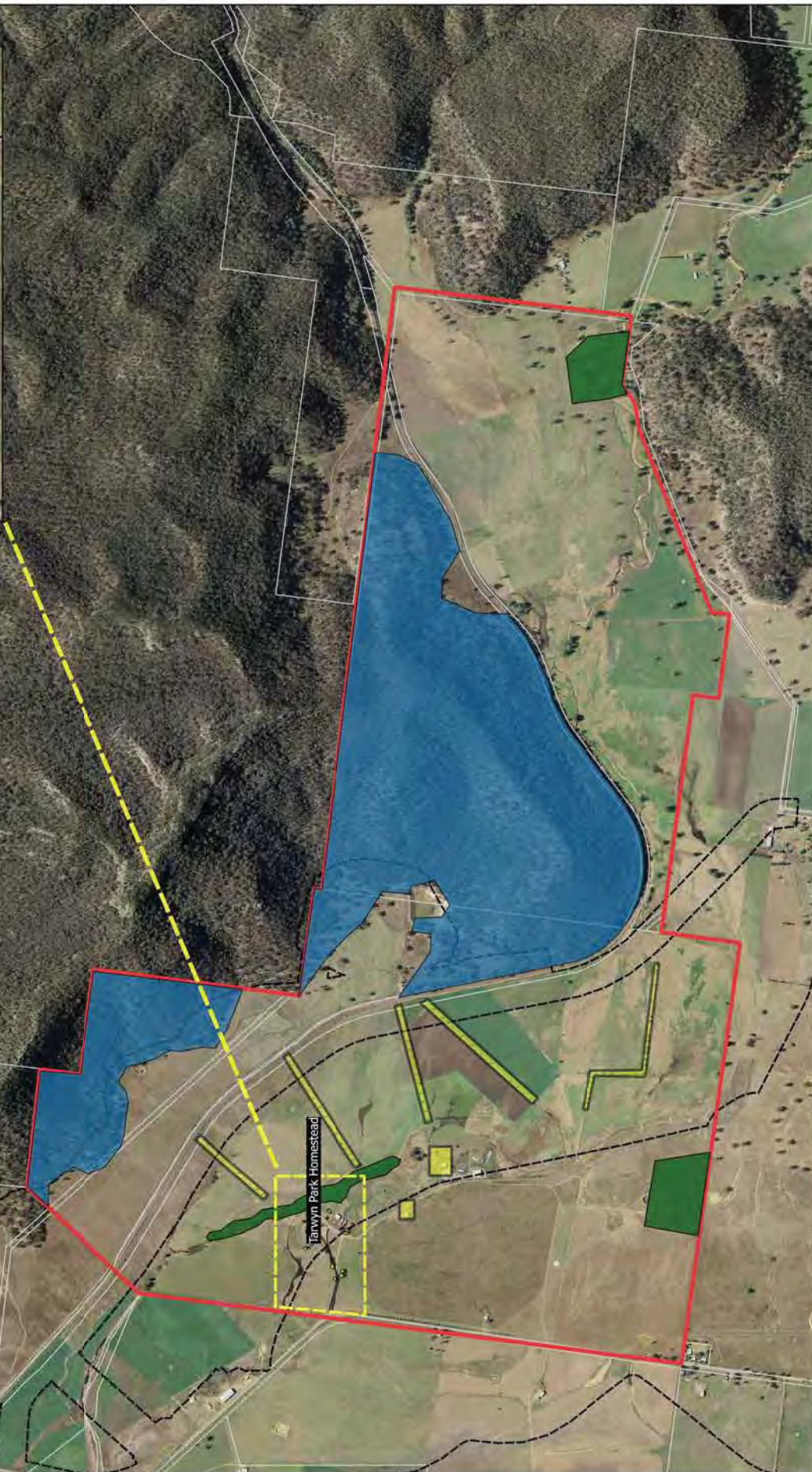
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AECOM makes no representations or warranties of any kind, in relation to the accuracy, reliability or fitness for purpose in relation to the map content.

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CREATED BY G.Oakes
CREATED 26-10-2017
VERSION 1

Vegetation Types



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3.3 Archaeology

There are no plans or maps providing an indication of the early development of the properties. The primary sources provide some indication as to the extent of development prior to the construction of Tarwyn Park Homestead. This information is discussed in Section 3.3.1. Beyond this, the discussion of the archaeological potential of the site is limited to the features that have been identified during the survey undertaken for the *Bylong Coal Project: Historic Heritage Impact Assessment* (AECOM Australia Pty Ltd, 2015) and the subsequent site inspections associated with the preparation of this draft CMP.

3.3.1 Primary Sources

In 1829, when the land was initially granted to William Lee there are no recorded improvements on the portion. The first record of improvements is dated to 1914, when the land was converted to Torrens Title under a Primary Application (PA 18996). At this time, improvements consisted of Fencing, Windmills, Wells, Clearing, Lucerne, Cultivation, etc at £2,013/2/1; Dwelling £472/5/8; Cow shed £127/7/10; and Dairy and sheds £154/13/4.⁷⁷ The Primary Application does not provide an indication of where these improvements were located within the property and it is therefore only possible to speculate as to the location of the dwelling, shed and dairy and sheds.

The sandstone structure associated with Farm House 2, as discussed in Section 2.6.3, together with the remnant original features of the Farm House (e.g. front door, bricks of living room fireplace) indicates that these structures predate the Tarwyn Park Homestead. Although it is noted that it is not clear from the available evidence as to whether the Farm House and sandstone structure were constructed concurrently or demonstrate two distinct phases of development (Section 2.6.3). It does, however, provide an earlier nucleus of settlement that can be considered a prime candidate for the dwelling mentioned in the Primary Application of 1914. The supposition that Farm House 2 predates Tarwyn Park Homestead is strengthened by anecdotal evidence collected during an oral history interview with Anne Andrews, who indicated that the Thompsons lived in a cottage on the property during the construction of Tarwyn Park Homestead. It is acknowledged that Farm House 1 may equally have been the structure occupied by the Thompsons and referenced within the Primary Application.

The location of the shed and the dairy and sheds is unclear. It would seem that the sandstone stables associated with Tarwyn Park Homestead had not been constructed at this time, despite there being some indications that they also pre-date the Homestead (refer to Section 2.6.1), as a structure of such extent would have rated a mention. The adjacent Corrugated Iron Shed and Corrugated Iron Stables (refer to Sections 3.4.2 and 3.4.3) may be the structures in question, but there is insufficient evidence to confirm this. Equally, the shed and dairy and shed may no longer be represented by an extant structure and would only be expressed as a sub-surface archaeological site in an unknown location. Should these structures be identified during works, they should be assessed and treated according to the unexpected finds procedure in the *Bylong Coal Project: Historic Heritage Management Plan* (AECOM Australia Pty Ltd, 2017a).

3.3.2 Tarwyn Park Homestead

An examination of the floorboards in the pantry and kitchen (rooms 4 and 5) where they are exposed indicates that there are no gaps in the floorboards and that there is unlikely to be subfloor deposits. Subfloor deposits can comprise small items that have slipped between gaps in the floorboards. An inspection of the underfloor cavity (Plate 25 and Plate 26), which was available via inspection holes in the pantry, kitchen and staff dining room (rooms 4, 5 and 6) confirmed that the subfloor space appeared sterile, other than small amounts of construction debris. It is considered that there is low to no subfloor archaeological potential associated with Tarwyn Park Homestead.

⁷⁷ Statutory Declaration, 24 Nov 1914, Alfred McIlree, Hunter Street, Sydney, stock and station agent, in NRS 17513, Land and Property Information, Primary Application Packet, RPA 18996

DRAFT**Plate 25** Subfloor cavity beneath the pantry (room 4)**Plate 26** Subfloor cavity beneath the kitchen (room 5)

Heavy grass cover reduced ground surface visibility over much of Tarwyn Park and Iron Tank during the site inspection. As such, a survey for historical archaeological features was limited. The following discussion is based on the available historical documentation, aerial photographs and oral histories.

Ann Andrews, when interviewed during the preparation of the EIS, provided the location of a dump area to the south of Tarwyn Park Homestead, adjacent to Bylong River. Mrs Andrews stated that when they inspected the property prior to the purchase, they noted a large pile of material in the paddock adjacent to Bylong River to the south of the Tarwyn Park Homestead. This pile contained items cleared out of the Homestead by the previous owners, some of which the Andrews identified as being useful. However, following settlement, they discovered that the pile had been pillaged and all the useful items removed. The remaining material was bulldozed into Bylong River to form one of the earliest NSF leaky weirs on the property. The material could be expected to date from the previous owner's era, being Harold Howes, who owned the property from 1961 until 1974. Investigation of the river bank in the area indicated by Mrs Andrews indicated that there was an archaeological expression in the form of an artefact scatter. The scatter included building materials, being pieces of sandstone, brick and terracotta tile, together with domestic refuse, being pieces of ceramic plates and cups and glass bottles. Given the formation process of the deposit, there is no opportunity for stratigraphy to be preserved. The archaeology of this area would consist of un-stratified material, mixed with local sediment, which may be highly fragmented on the basis that it has been bulldozed into the river. This artefact scatter would hold local significance, having the potential to elucidate access and preference for goods in rural NSW during the 1960s and early 1970s. However, information on this area may also be available from oral histories.

An examination of the area in front of the Homestead (i.e. to the north) did not indicate evidence of a formal carriage circle or other formal garden features. The early aerials of the property are not of sufficient quality to indicate whether this is because these features never existed or whether they have been obscured by later activities. It is considered, however, that this area holds high archaeological potential to contain the answers to these questions.

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Section 3.2.4 identified an area to the south east of the Homestead, behind the garage and in association with a wind break of Pomegranates (*Punica granatum*), as being a possible location for a former kitchen garden. Archaeological investigation of this area, particularly archaeo-botanical investigations, could validate this theory. The information would be of local significance and could yield information with regard to rural kitchen garden layout and species planting from the 1920s onwards.

In addition to the above, it is acknowledged that the property is sited in a rural location and as such would not have had refuse collection until relatively recently. Refuse pits located within walking distance from the house are therefore considered highly probable, particularly to the south of the Homestead, being the rear of the house, with the assumption that rubbish would have been gathered from various parts of the Homestead into the kitchen before being taken outside through the kitchen door (Door 11). The extent to which these deposits may have been impacted by the creation of NSF contour banks and other features is unknown. Excavation for services or other activities to the south of the Homestead should be preceded by the preparation of an archaeological research design and method and monitoring may be warranted. Should refuse pits be located, they may contain archaeological deposits of local significance with the potential to yield information regarding access and preference for goods in rural NSW from the mid-1920s onwards.

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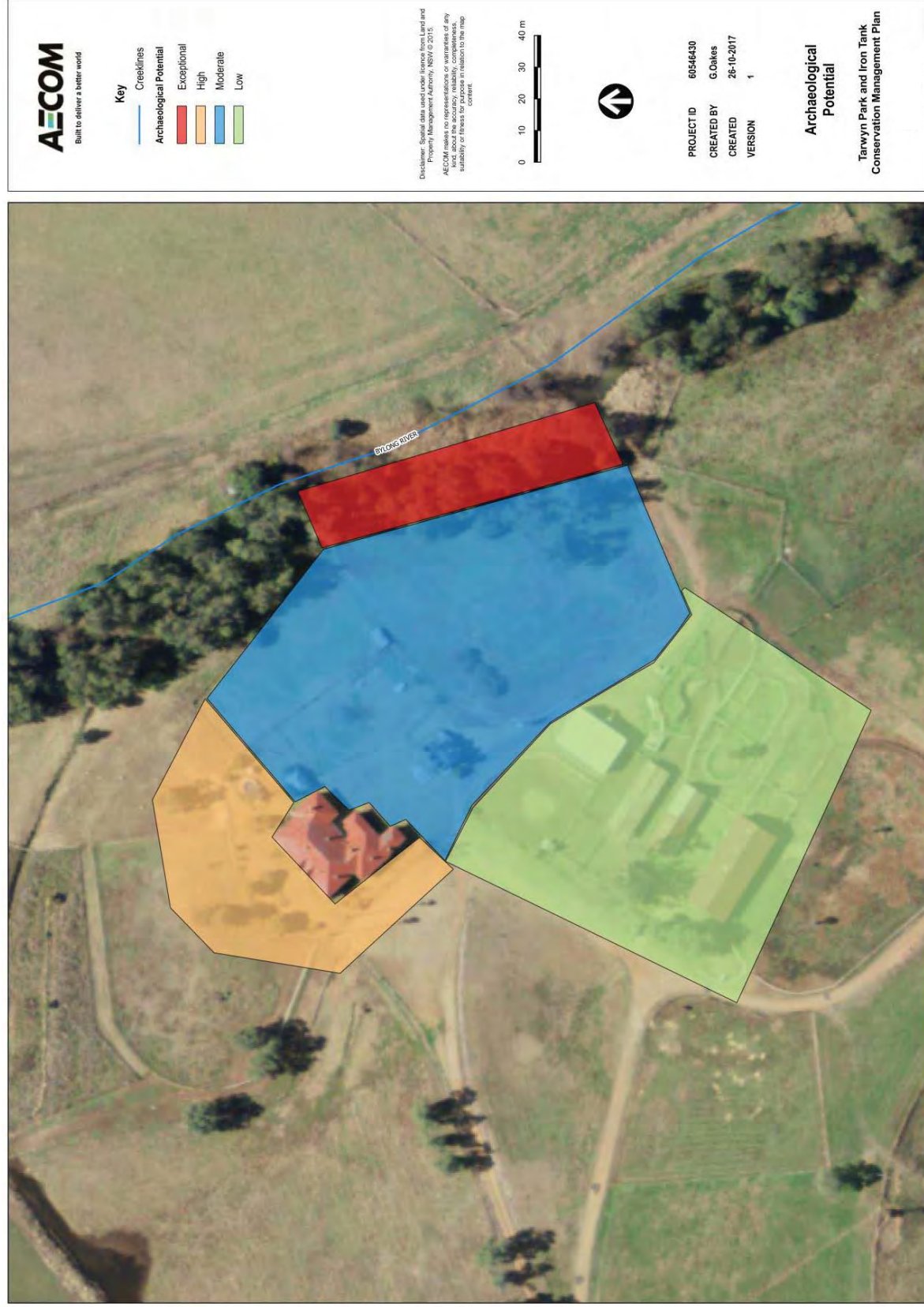


Figure 24 Features and areas of Archaeological potential associated with Tarwyn Park

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3.3.3 Farm House 2

Given the uncertainties regarding the phasing and development of Farm House 2 and the associated sandstone structure, it is considered that archaeological investigation of the Farm House, sandstone structure and any associated deposits may provide further information that would assist in clarifying these issues. The area within ten metres of Farm House 2 is considered to hold high archaeological potential associated with potential yard deposits, including rubbish pits.

3.3.4 Iron Tank

It is considered that the floorboards in Iron Tank contain sufficient gaps to have allowed small artefacts to have passed into the subfloor space. The subfloor is considered to hold high archaeological potential.

Oral testimony indicates there was formerly a sandstone structure located to the north east (rear) of the house. This is indicated as an area of exceptional archaeological potential on Figure 25. The structure was purchased by a winery in the Hunter Valley and was relocated to form part of the cellar door buildings. The probable location of the sandstone structure is identified by a concrete pad and an associated depression (Plate 27, Plate 28)..

Iron Tank House in itself could be read as an archaeological artefact, with further investigation of the fabric having the potential to yield information regarding the construction and use of the house. It would appear from initial inspection that the house consists of two structures joined together. The configuration of the house would seem to indicate that the southern four rooms (south wing) were part of the initial construction, with the kitchen, dining, bath and store rooms being added on at a later date (north wing).



Plate 27 Concrete pad thought to be associated with former sandstone building. View north



Plate 28 Concrete pad thought to be associated with former sandstone building. View west

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Figure 25 Archaeological potential associated with Iron Tank

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Revision – 15-Jan-2018
Prepared for – Hansen Bailey Pty Ltd – ABN: 17 093 597 810

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3.4 Components of Tarwyn Park Farm Complex

Tarwyn Park contains numerous structures and built features as listed below:

1. Tarwyn Park Homestead
2. Vernacular Concrete Structure
3. Swimming pool
4. Garage and former tank stand
5. Workers cottage
6. Farm House 2
7. Hayshed.

Each of these components is described in detail below.

As noted in Section 1.2, the Tarwyn Park Farm Complex also contains four known horse burials and a 3rd Farm House, located on Upper Bylong Road. These items are located within the open cut and will be impacted by the Project. Their management and mitigation is provided for within *Bylong Coal Project: Historic Heritage Management Plan* (AECOM Australia Pty Ltd, 2017a) and *Bylong Coal Project: Horse Burial Management Plan* (Edward Higginbotham & Associates Pty Ltd, 2015).

3.4.1 Tarwyn Park Homestead

Tables containing detailed condition, significance and phasing of individual elements of Tarwyn Park Homestead are contained within Appendix B. The following sections provide a brief overview.

3.4.1.1 Exterior

The Homestead is constructed of coursed rubble sandstone blocks with a hipped corrugated iron roof supported on timber joists (Plate 29). There is evidence that the corrugated iron roof is not original, but covers and earlier roof of asbestos tiles (Plate 30). The footprint has a complex form with the front, northern elevation projecting out from the body of the building, which is arrayed behind. The rear service wing of the homestead almost encloses a patio area.

The materiality of the building is consistent throughout, in that the windows, doors and frames are painted timber (Plate 31).



Plate 29 Overview of Tarwyn Park Homestead showing sandstone construction and corrugated iron roof

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Plate 30 View under eaves on southern side showing diamond laid asbestos tile roof



Plate 31 Representative window frame

Northern elevation

The northern elevation and the projecting portion of the western and eastern elevations are surrounded by a deep verandah supported on coursed rubble sandstone block columns and balustrade. The floor of the verandah consists of concrete, with the ceiling being lined with asbestos sheets.

Centred across the façade are two gables. The gables and upper portions of the verandah are framed in timber and clad with asbestos panels in the Tudor Revival style. Some of the asbestos panels were damaged and have been removed to prevent contamination. The gables are decorated with two inset moulded terracotta panels in a floral and scrollwork motif. The soffits are of timber tongue and groove panels.

The verandah is accessed via a set of three stairs on the northern elevation, the treads of which are white marble. The stairs are flanked by a curved sandstone balustrade.

The northern elevation contains the main entrance (for architectural purposes), set off centre, which consists of a standard door (Door 1), solid on the bottom third and containing lead light in an art deco floral motif on the upper third. The door sill is of white marble, to match the entrance stairs. Above the door is an awning sash hung transom of lead light in the same floral motif. Directly to the east of the door is a double casement window (Window 1) containing a similar leadlight pattern, elongated to fit the space.

To the west of the front door is a set of French doors (Door 12) on a white marble sill, which provides access to the formal living room. The doors have a leadlight glass panel in the upper quarter. Adjacent to the French doors sits an air conditioning unit with a conduit attached to the wall.

To the east of the front door there are a further two single sash windows (Windows 2 and 3) and a projecting bay window containing a further three single pane sash windows (Window 4). All these

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windows contain plain glass, rather than leadlight. Some of the windows have had a beading added, which holds fly screen mesh in place.

Eastern elevation

The eastern elevation contains three doors, located underneath the verandah in the northern portion, and three windows on the open, projecting section. The northernmost set of doors (Door 2) is identical to those associated with the living room on the northern elevation. This door provides access from the master bedroom.

The second door (Door 3) provides access from a hallway and consists of a timber framed door containing a plain glass panel in the upper third with an awning sash transom above. Door 4 provides access to a bedroom of lesser importance, as denoted by the plain three panel door.

The three windows (Window 5, 6 and 7) are all single pane sash windows with fitted fly screens.



Plate 32 Overview of eastern elevation of Tarwyn Park

Southern elevation

The southern elevation is broken by the entrance into the semi-enclosed patio, but otherwise is dominated by seven windows (Windows 8, 9, 16, 17, 18, 19 and 20). All are single pane, single hung sash windows. With the exception of Window 9, which is associated with a bathroom and contains rippled glass, all the windows contain plain glass.

Door 10 is a utilitarian timber panel door. The door is in an unprotected location, evident by the weathering apparent on the door and is perhaps indicative of the door being a replacement as it has no match throughout the rest of the Homestead.

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Plate 33 Overview of southern elevation

Western elevation

The western elevation contains an elevated brick and concrete landing, accessed via a set of steps, which lead to Door 11. Door 11 appears to have functioned as the main access to the Homestead in the recent past as it leads into the kitchen, off a corridor. To the south of Door 11 are two close set single hung sash windows (Window 21 and 22) associated with the laundry. A further two windows are located to the north of Door 11, associated with the kitchen (Window 23) and butler's pantry (Window 24). These two windows are separated by a hot water system enclosed in a metal box.

The northern most portion of the elevation is covered by the wrap-around verandah. This portion of the elevation contains two single hung sash windows with plain glass, which are associated with the dining room. To the north, is a projecting bay window containing four single hung sash windows, all containing leadlight glass. While this leadlight continues the floral motif, it is slightly different in style and execution, indicating they are possibly later in date than the leadlight on the northern and eastern elevations.

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Plate 34 Overview of western elevation

3.4.1.2 Interior

The Homestead contains 22 rooms, which are roughly grouped by function into three areas (Figure 26). The formal functions of the Homestead, including the entrance hall (room 1), formal lounge (room 2) and dining room (room 3) are located in the north-eastern corner (seen on approach from the driveway). The service centre, including the kitchen (room 4 and 5), laundry (room 8), boiler room (room 9), bathroom (room 11), storage rooms (rooms 10 and 13) and offices (room 12) are located in the south-western portion of the Homestead. The master bedroom (room 21), including a dressing room (room 22), is located in the north-eastern corner of the house, with a further four bedrooms and a bathroom located to the south.

The interior detailing of the house creates a strong impression of separation between the formal and private areas reserved for the family and those used by staff. The entrance hall, formal living room and dining room are decorated with a corbelled picture rail. In addition, the entrance hall contains a wall alcove and an impressive timber framed decorative element, which separates the hall from the living spaces. The living room contains a sandstone fireplace, dressed to match the exterior of the home. In contrast, the dining room contains a marble fire surround, finished with tiles depicting a Dutch scene of a woman in a wimple and clogs in front of a windmill. The Dutch themed tiles are also evident in a bedroom (room 19). The tiles in the Master Bedroom fireplaces reprise the floral theme evident in the leadlight windows. The balance of the fireplaces to the bedrooms (rooms 14, 15 and 18) are plain blue or green.

The dining room also contains a servery window, which opens into a butler's pantry (room 4). The difference in finishes between these two rooms is stark, as the dividing line between the formal area of the house and the service areas. It is noted, however, that while the balance of the house is not elaborate, the finishes are of a high quality. The butler's pantry contains a series of inbuilt cupboards that appear to be original, together with a sink.

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The kitchen (room 5) is located directly to the south. The room is dominated by the fire place, which contains an AGA oven (Plate 35). Despite appearances, this configuration matches the original architectural drawings (Figure 13), with the windows through to the hallway (room 7) a device to provide light to the cook. The kitchen cupboards are of timber and are a recent replacement. While the Homestead in general retains a high degree of integrity and original features, fittings and fixtures, it is evident that the kitchen has undergone the most change.



Plate 35 Former fire place showing modification to insert windows

The kitchen opens on the east into a room which contains a fireplace, from which the mantelpiece has been removed, and some built in cupboards. The cupboards post-date the house and are of a poorer quality. This room probably originally functioned as a staff dining/living room. Similarly, rooms 10, 11, 12 and 13 were likely to have been bedrooms for staff.

The bathrooms (rooms 11 and 17) also exhibit a degree of modification. Room 11 has been highly modified. The floor tiles date from the 1980s, while the vanity and toilet units probably date from the early 2000s. The alterations to room 17 are harder to distinguish. The hand basin and bath, including the faucet appear to be original, as do the wall tiles. The floor tiles, on the basis of their style, probably date to the 1970s. The toilet unit is also a replacement.

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Figure 26 Tarwyn Park Homestead internal layout and room numbering

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3.4.2 Vernacular Concrete Structure

To the south east of the Tarwyn Park Homestead is a rectangular structure, measuring approximately six metres by four metres (Plate 36). It contains a doorway in the western elevation and a single hung four pane sash window in the southern elevation (Plate 37). The roof is hipped and set on unmilled timber logs. The joists have been repaired in places with tongue and groove floor boards (Plate 38). The guttering has come away from the majority of the roof (Plate 37).

The construction of the off-form concrete structure is unusual. It is formed of homemade cement created by mixing river gravel, assumed to be from Bylong River, with a binding agent, probably Portland Cement. The builder has crudely attempted to reinforce the concrete through the use of barbed wire, which has been placed horizontally within the walls (Plate 39). The structure has then been rendered, and ashlar lines incised to give the appearance of sandstone construction.

The interior has also been rendered and fitted with a timber floor, supported on timber joists. The flooring and joists have been removed from the southern portion, in proximity to the door, at some point (Plate 40). There is no indication as to the function of this structure.



Plate 36 Vernacular Concrete Structure. View north east



Plate 37 Vernacular Concrete Structure. Window in southern elevation

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Plate 38 Vernacular Concrete Structure. Roof construction and repairs



Plate 39 Vernacular Concrete Structure. Detail of concrete construction and barbed wire 'reinforcement'



Plate 40 Vernacular Concrete Structure. View of interior

3.4.3 Garage

Located to the south of Tarwyn Park Homestead is a former elevated tank stand consisting of a platform supported on unmilled timber uprights. The space beneath the tank stand has been infilled with a weatherboard clad workshop, subsequently to which a generator room and open garage were appended. The fabric would suggest that these three infill construction phases occurred between the late 1940s and late 1960s. It is unclear from an initial inspection of the fabric as to whether the concrete garage or the generator shed came first. The northern workshop section is constructed of weatherboard (Plate 41), with a skillion roof form. The interior of this section was not accessed on the basis of safety concerns. On the western side is a small corrugated iron lean-to containing the mounting block for the generator (Plate 42). Appended to the southern side is the garage, the eastern and western walls of which are constructed of off-form concrete, which is buttressed on the western side (Plate 43). The corrugated iron roof is supported on unmilled timber posts. These posts contain brackets and hinges that indicate that swinging doors were formerly located along this façade (Plate 44). The eastern side has a small weatherboard lean-to, which may have been used for storage (Plate 46). The structure was formerly topped by three water tanks (Plate 47), but these were identified as structurally unsound by WorleyParsons and KEPCO and removed in 2016/7 to prevent a collapse, which may have resulted in the garage as a whole being destroyed.

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Plate 41 Garage. View south



Plate 42 Garage interior showing generator mounting block



Plate 43 Garage. View north east showing buttressing to western wall



Plate 44 Garage view north

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The stables are simple in form, consisting of a rectangular footprint and constructed of faced sandstone to the roofline, the gable ends being infilled with fibrous sheeting. The gable at the northern end contains a door to the internal hayloft, while the southern elevation contains a square window.

In addition, the northern elevation contains three doors, leading into three individual stalls, which are separate from the main body of the stables (Figure 27). The easternmost stall is timber lined. The other two stalls are rendered and painted in two tones – white on the upper portion and a blue-grey below. The render is in poor condition and has come away from large portions of the walls, exposing the random rubble construction underneath.

The stable can be accessed from the eastern and western sides via a single door located at the northern end of the building. The southern elevation contains a double door and is evidently the main access for horses.

The interior of the stables contains a wide central passage way with seven stalls on the western side, with a further four stalls in the south-eastern portion. There is a series of three feed and tack rooms to the north east, each with an eight pane single hung sash window. The walls of the stalls are three quarter height rendered random sandstone rubble walls. The floors throughout are of concrete to assist in cleaning.

There is a hayloft and storage area located over the three individual stalls located at the northern end of the stables. The loft is accessed via a set of stairs located within the central passageway, on the north-eastern side.

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3.4.1 Horse Ring

Located to the north east of the stables is an open sided shed, supported on unfinished timber posts. The bottom two thirds have been enclosed with timber uprights to form an enclosed ring. The floor is finished in sand.

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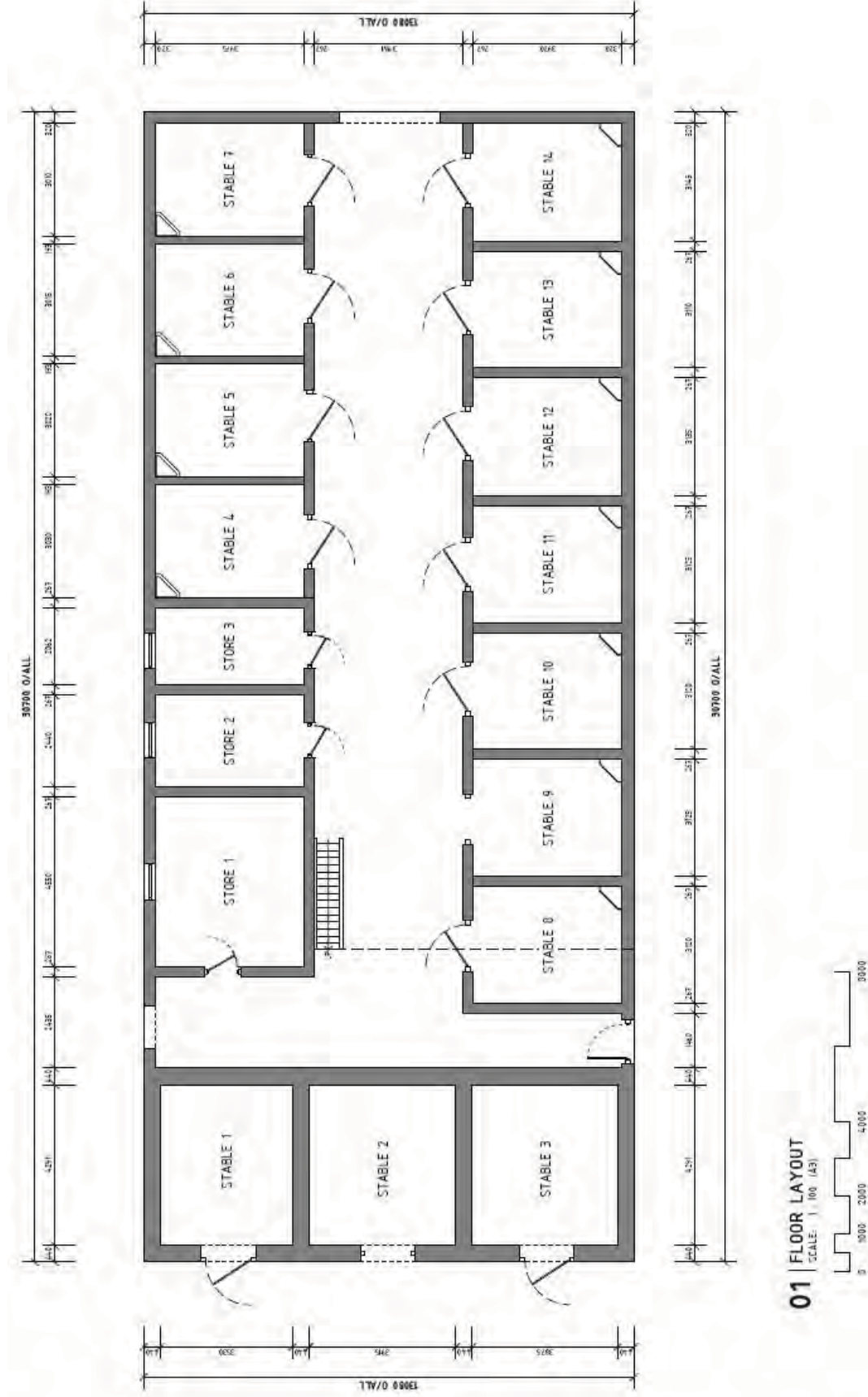


Figure 27 Floor plan of Tarwyn Park Stables

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3.4.2 Corrugated Iron Shed

Directly to the east of the sandstone stables described in Section 3.4.4, is a corrugated iron structure (Plate 48), which consists of a rectangular building supported on unfinished timber uprights. The structure is open along much of the eastern and western sides, although there is at the southern end a small enclosed space (Plate 49), possibly used to store hay or similar. The floor of the structure consists of concrete, incised with a square pattern to stop hooved animals from slipping (Plate 50).



Plate 48 Corrugated Iron Shed. View south



Plate 49 Annex at southern end of corrugated iron shed



Plate 50 Corrugated Iron Shed interior showing open sides and incised concrete floor

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3.4.3 Corrugated Iron Stables

To the east of the sandstone stables and to the south of the corrugated iron shed is a corrugated iron stable containing 14 stalls (Plate 51), separated by a breezeway (Plate 52) which divides the northern seven stalls from the seven stalls to the south. The stables are framed with dressed timber posts and beams. While the exterior is lined with corrugated iron, the interior stall divisions are of vertical timber (Plate 53). The floors are of concrete, with one of the stalls containing a horse's hoof print adjacent to a child's (Plate 54).



Plate 51 Corrugated Iron Stables. View north

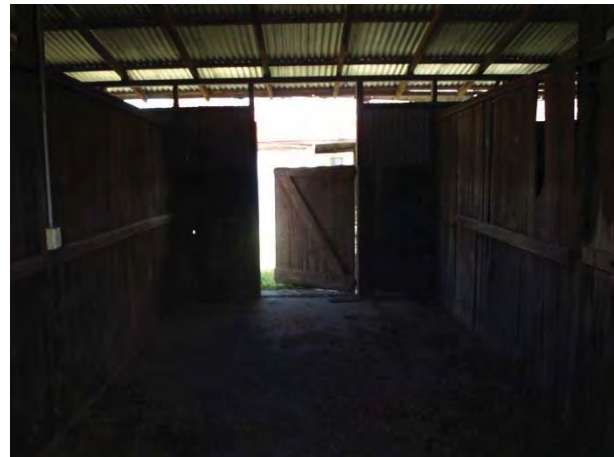


Plate 52 Central breezeway



Plate 53 Interior timber stall divisions



Plate 54 Horse hoof and child's footprint

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3.4.4 Machinery Shed

Located to the east of the Corrugated Iron Stables is a steel framed and corrugated iron clad rectangular shed used for the storage of machinery.

3.4.5 Farm House 2

Farm House 2 is located approximately 500 metres south east of Tarwyn Park Homestead. It consists of an 'L' shaped weatherboard cottage and a separate sandstone structure of a single room. The southern side presents as the 'front' containing a central door, flanked by four pane sash windows (Plate 55). Farm House 2 is constructed of timber weatherboard on a timber frame with timber doors and window frames (Plate 55). The corrugated iron roof has a hipped form and a verandah and deck that wraps around the southern and western sides (Plate 56). The verandah would appear to be a later addition.

The cottage was probably constructed in two stages, with the southern portion being the original and consisting of five rooms. The front door (Plate 58) opens into a corridor, which proceeds past bedrooms (Plate 57) to the west and east before opening into a living room to the east, with a third bedroom to the west. The living room contains a fireplace constructed of brick, which is rendered and painted, although in exceedingly poor condition (Plate 59). On the exterior, the chimney associated with this fireplace has been clad in sandstone. The fireplace is double sided and opens onto the kitchen on the other side.

The kitchen contains timber cabinetry, in keeping with the timber panelling of the walls and a vinyl floor. The fireplace has been fitted with a Meters Kookaburra stove typical of the 1940s and 1950s (Plate 61). All modern appliances have been removed from the kitchen.

The structure of the building does not appear to have been modified, with the majority of doors, including door furniture, and windows appearing to be original. This includes the front door (door 7) and the doors to bedroom 1 (Door 6) and bedroom 2 (Door 5), all of which retain their transoms, including glass. The interior walls, however have been relined with timber and a false ceiling added (Plate 57), probably in the 1970s. An examination of the ceiling in room 1 noted that the false ceiling does not clear the door frame (Plate 57), indicating that it is probable that the earlier ceiling was not removed and is preserved above. The bedrooms and living room are carpeted, which is in very poor condition. It is unclear whether the original floor is preserved beneath, but it is anticipated that this would be so.

The bathroom, located at the rear (north) of the cottage, off the kitchen, appears to have been added at a later date. It contains a shower, vanity with basin, toilet and a built-in brick wood fired copper with an associated chimney (Plate 62 and Plate 63). The brick of the copper is different in size and colour to that used to construct the fireplace in the living room/kitchen, which are of a poorer quality and appear to be earlier. The floor in the bathroom is tiled, with the walls covered in plasterboard and painted green, with a green and white frieze.



Plate 55 Farm House 2 front façade. View north

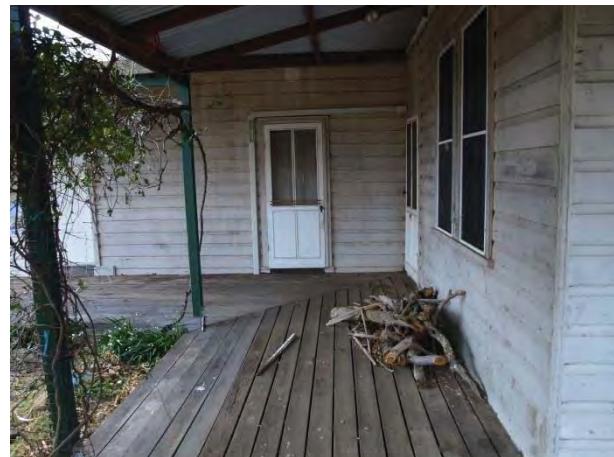


Plate 56 Farm House 2. Verandah return along northern and western sides

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Plate 57 Farm House 2. Bedroom 1 showing door 6 with transom



Plate 58 Farm House 2. Detailing of front door



Plate 59 Farm House 2. Living room fireplace showing rendered brick construction



Plate 60 Farm House 2. Living room and kitchen chimney

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Plate 61 Farm House 2. Kitchen showing Metters stove and general condition



Plate 62 Farm House 2. Overview of bathroom, including copper



Plate 63 Farm House 2. Bathroom chimney

Located to the north west of Farm House 2 is a single room structure built of dressed sandstone, which matches, in style and finish, the Tarwyn Park Stables. The structure is rectangular, measuring approximately three metres by two metres with a gabled corrugated iron roof (Plate 64). Guttering has been added at a later date, but is in poor condition, coming away on the eastern elevation. It has a wood framed doorway with a timber lintel in the eastern elevation, although the door itself has been removed. There are two small (c. 20 x 30 cm) windows under the eaves on the northern and southern elevations (Plate 65). Water pipes have been inserted in through a hole in the eastern wall to feed a laundry tub and washing machine connection located in the south-eastern corner (Plate 66).

The interior has a concrete floor, in poor condition, which contains a sawn off timber post (Plate 67). The function of this item is unclear. Likewise, the walls have been rendered, but the render is in poor condition with repairs having been made in concrete (Plate 68). Tongue and groove timber boards have been used to create a tray ceiling. This may be a later modification as the ceiling partly obscures the windows under the eaves. Electrical conduit and a florescent light tube have been fixed to the ceiling.

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Plate 64 Sandstone structure associated with Farm House 2. View west



Plate 65 Sandstone structure associated with Farm House 2. View south



Plate 66 Sandstone structure associated with Farm House 2. Laundry tub and associated pipework



Plate 67 Sandstone structure associated with Farm House 2. Interior concrete floor with sawn off timber post



Plate 68 Sandstone structure associated with Farm House 2. Interior of western wall showing repairs to the render in concrete

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3.4.6 Farm House 1

Approximately half way between Tarwyn Park Homestead and Farm House 2 is a weatherboard cottage. The cottage is oriented to the east and this elevation presents with a simple verandah supported on timber posts. The elevation contains a centralised door flanked by two single hung sash windows of 12 panes (Plate 69). The rear of the cottage is also covered with a verandah, part of which has been enclosed. Otherwise this elevation features a single door (Plate 70). The southern elevation also contains a door, plus a single window (Plate 71). The western elevation contains two single hung sash windows of 12 panes (Plate 72). The cottage has been partially clad in vinyl weatherboard – namely the front and half of the western elevation (Plate 69 and Plate 73). This weatherboard covers the corrugated iron cladding evident throughout the rest of the building, including the roof and gable ends.

[The interior of the cottage was not inspected due to time constraints. The information on the interior of the building will be updated prior to the finalisation of the CMP.]



Plate 69 Farm House 1 front elevation. View west



Plate 70 Farm House 1 rear elevation. View east



Plate 71 Farm House 1 side elevation. View north



Plate 72 Farm House 1 side elevation. View south

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3.5 Iron Tank

The Iron Tank complex consists of the house and a garage. The concrete pad thought to formerly contain a sandstone structure has been discussed in Section 3.3.4.

3.5.1 Iron Tank House

3.5.1.1 Exterior

Iron Tank House is oriented south and faces Woolleys Road. It presents a steeply hipped roof form, with a decorative dormer element of corrugated iron (Plate 73). The house consists of two four roomed houses that have been conjoined to create an eight roomed house. Each 'wing' has a separately hipped roof, the profile of which is evident when viewing the house from the east or west (Plate 74). The house is set on timber stumps. There is a flat roofed addition projecting from the western side of the front elevation. The façade would originally have been symmetrical – a central door flanked by windows, however a window was inserted in the flat roofed addition. Possibly at the same time, a verandah was added, which is supported on steel poles. The original timber weatherboards have been overlayed with vinyl weatherboards. The front door is a traditionally detailed four pane timber door, the upper two panels being fitted with glass. The windows are single hung four pane sashes (Plate 73).

The western elevation contains a sandstone chimney, which is covered in an unidentified creeper (Plate 75). The creeper would be compromising the structural integrity of the chimney and should be removed as soon as possible. This elevation is fitted with one 12 pane single hung sash window and a fixed smaller, square four pane window.

The rear (northern) façade is unsymmetrical in its arrangement, with the door being placed off-centre, with a fixed small, square four pane window on one side and two sash windows on the other (Plate 76). The door and one of the sash windows is protected by a bullnose awning, accentuating the unsymmetrical presentation. The sash windows differ in their construction, the first containing four panes, like those seen on the front elevation, while the second contains 12 panes, indicating a probable earlier date of manufacture.

The eastern elevation contains the projecting flat roofed addition. The corrugated iron was covered by vinyl weatherboards, but these have mostly been lost. The body of the house contains two windows, identical to the 12 pane window described in the northern elevation (Plate 77). The windows are set at different heights, due to an internal step in the house, used to navigate the slope of the land. There is also a timber door in this elevation, which leads to a timber deck area that has largely fallen apart. This deck would have provided access from the body of the house to the flat roofed addition, which has no internal access. This deck may also have been roofed at some point, but it is unclear from the remaining evidence.



Plate 73 Iron Tank House front elevation. View north



Plate 74 Iron Tank House viewed from Woolleys Road. Note double hipped roof form

DRAFT**Plate 75 Iron Tank House. Chimney in eastern elevation****Plate 76 Iron Tank House. Northern (rear) elevation****Plate 77 Iron Tank House. Overview of northern elevation with flat roofed addition at right of image****3.5.1.2 Interior**

The two separate wings of the house are different in their materiality and layout. The southern wing opens from the front door into a corridor (room 1, Plate 78), with two rooms opening off each side (rooms 2-5). The walls are of plasterboard, painted or decorated with wall paper (Plate 79 and Plate 80). The corridor has a standard flat ceiling, but the bedrooms, with the exception of room 2, have a tray vaulted ceiling form (Plate 81). Room 3 contains the fireplace associated with the sandstone chimney described above (Plate 82). There is no mantelpiece; it would appear that the fireplace may have been covered over with fibrous cement sheeting. The hearthstone has cracked and there are significant gaps in the structure, which is more evident from the interior.

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The internal doors have been removed from the house in this wing. The door frames are simple in their profile. The rooms with tray vaulted ceilings have no cornice. The cornice in the corridor and room 2 has a quarter round profile.

The interior of the northern wing presents entirely differently. There is a step down from the southern to the northern wing. The space in the northern wing is not regularly arranged. The corridor opens into a wide space (room 6, Plate 83), which covers approximately two thirds of the width of the structure, with a long narrow room on the western side – the kitchen (room 7, Plate 84) and two smaller rooms on the eastern side – a storeroom (room 8, Plate 85) and a washroom (room 9, Plate 86). The walls and ceilings in the northern wing are clad in pressed metal. In room 6, the pressed metal is elaborate, with a floral motif (Plate 87 and Plate 88), whereas the balance of the rooms have a simpler coffered style ceiling and standing seam walls (Plate 89). The tray vaulted ceiling form continues throughout the northern wing. Also evident throughout the interior of the house is timber flooring.



Plate 78 Iron Tank House. Corridor (room 1)



Plate 79 Iron Tank House. Rose wallpaper in room 2

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Plate 80 Iron Tank House. Horse wallpaper in room 4



Plate 81 Iron Tank House. Tray vaulted ceiling in room 2



Plate 82 Iron Tank House. Sandstone fireplace



Plate 83 Iron Tank House. Room 6 view north

DRAFT**Plate 84** Iron Tank House. Room 7 – kitchen**Plate 85** Iron Tank House. Room 8 - storeroom**Plate 86** Iron Tank House. Room 9 – washroom**Plate 87** Iron Tank House. Pressed metal ceiling in room 6

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Plate 88 Iron Tank House. Pressed metal wall in room 6. Note elaborate floral design



Plate 89 Iron Tank House. Pressed metal ceiling in room 8. Note coffered ceiling and standing seam wall designs

3.5.2 Iron Tank Machinery Shed/Garage

Located to the north east of Iron Tank House is an iron framed structure probably used as a combined machinery shed and garage (Plate 90). The structure is clad in corrugated iron, with two roller doors on the western side. The roof has a simple gabled form. Along the northern side, a skillion roofed lean-to has been constructed, supported on undressed timbers (Plate 91). The space has been enclosed with chicken wire and has been interpreted as a chicken coop.



Plate 90 Iron Tank machinery shed/garage. View east



Plate 91 Iron Tank machinery shed/garage. View south showing chicken coop

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4.0 Comparative Analysis and Discussion

4.1 Preamble

To determine the heritage significance of an item, it is necessary to compare it with other similar items or by identifying there are no similar items. This comparative analysis is also vital in determining whether an item holds State or local significance. The following discussions compare Tarwyn Park Farm Complex, Tarwyn Park Homestead and Iron Tank to similar items listed in the State Heritage Inventory (SHI). The following discussions refer to the NSW State heritage significance guidelines and the associated inclusion and exclusion guidelines. A summary of the criteria and inclusion and exclusion guidelines can be found in Section 4.5. This discussion draws on the previous analysis of the properties, including *Bylong Coal Project: Historic Heritage Impact Assessment* (AECOM Australia Pty Ltd, 2015), together with the points raised in *Bylong Coal Project: Heritage Review* (GML Heritage Pty Ltd, 2017) and *Peer Review Response to Bylong Coal Project Heritage Review Report prepared for Planning Assessment Commission by GML Heritage May 2017* (MUSEcape, 2017).

4.2 Tarwyn Park Farm Complex

In considering Tarwyn Park Farm Complex, several themes have been identified (refer to Section 5.0) within which the Farm Complex can be considered. Some of these also relate to the land now known as Iron Tank and these are identified where relevant. The identified themes relevant to this discussion include:

- Land tenure;
- Cattle breeding;
- Thoroughbred horse breeding;
- Natural Sequence Farming; and
- Associations with people of note.

4.2.1 Land Tenure

Section 2.0 set out the initial granting of land to William Lee, the expansion of Lee's holdings in the area, followed by further consolidations under the ownership of Lee's son John. In the early 1900s, John Lee's large estate was split up and sold, with the boundaries changing numerous times since the early 19th century. This is a common theme throughout NSW, but there is no indication within the current lot boundaries of earlier grants or how they have been subdivided and amalgamated over time. The boundary alterations are demonstrated in the history contained within Appendix A. This information is, however, contained within the historical documentation associated with the land, specifically the Primary Applications, Certificates of Title and Deposited Plans, and contributes to the historical significance of Tarwyn Park Farm Complex. Without the physical evidence, with the subsequent ownerships and uses obscuring the Lee tenure, it is considered that Tarwyn Park Farm Complex cannot demonstrate land tenure patterns at a State level and is therefore significant at a local level.

4.2.2 Cattle Breeding

William and John Lee were synonymous with shorthorn (formerly Durham) cattle breeding from their Bylong land holdings (Barrie, 1967:4). It is evident that the cattle breeding undertaken by the Lees is of State significance (GML Heritage Pty Ltd, 2017; MUSEcape, 2017). In Ellis' 1932 book, William Lee's Woodlands stud, near Muswellbrook, is identified as the stud of note with regard to the breeding of short horn cattle. Thus, while the land that is the subject of this draft CMP sits within the holdings of the Lee's, there is no physical connection to the Lee period of cattle breeding. It is believed that the operations of the Lees within the district were directed initially from the c1848 Homestation by William Lee and later from Bylong Station, once John Lee had taken control of the holdings (AECOM Australia Pty Ltd, 2015). Without a direct link or physical evidence, the association with the Lees and their cattle breeding endeavours cannot be assessed as meeting the threshold for State significance under the NSW State guidelines (NSW Heritage Office, 2001a). It is considered that the history of cattle breeding

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contributes to the significance of the property at a local level under the historical and associative criteria.

4.2.3 Thoroughbred Horse Breeding

The Lee family were heavily involved in the breeding of horses in the Bylong Valley (Barrie, 1967). John Lee is considered one of Australia's greatest early stud masters and produced the first ever winner of the Great Metropolitan Handicap at Randwick in 1866 with a horse named 'Bylong' (Illustrated Sydney News, 1866). It is considered probable that the horse breeding activities, like the cattle breeding, would have been run out of Bylong Station, given the substantial stables associated with that homestead (AECOM Australia Pty Ltd, 2015:35). There is no indication that the Lee's actively used the land that is now within Tarwyn Park for their horse breeding activities. While it is acknowledged that the horses may have grazed on the land now known as Tarwyn Park, this is not considered to meet the threshold for listing on the SHR as it is considered the connection is insubstantial. Without a demonstrable physical connection to this era of thoroughbred breeding, it is considered that it contributes to the historical significance of Tarwyn Park. The connections are insubstantial, only arising through the Lees ownership of the land. This historical and associative significance can be demonstrated at a local level and not a State level.

The connection between the Thompson thoroughbred horse breeding, training operations and Tarwyn Park can be demonstrated on a physical level, as well as a historical level. Tarwyn Park became famous between 1927 and 1939 as the home of the famous thoroughbred racehorse 'Heroic' and Herbert Thompson himself was well-known within the industry. Physically this era is demonstrated by Tarwyn Park Stables (refer to Section 3.4.4) and in a supporting role as the home of the Thompsons, Tarwyn Park Homestead to some degree also. The inclusion guidelines for historical significance indicate that an item may be of significance to NSW or to the local area if it shows evidence of and/or is associated with a significant human activity and/or maintains or demonstrates continuity of the activity. Tarwyn Park cannot demonstrate continuity of horse breeding – the property has been associated with horse breeding under three owners, but these were not contiguous or sustained. It is suggested that while there is physical evidence to show the association of thoroughbred horse breeding at Tarwyn Park, this is not such that it would meet the threshold for State significance – the association of the Thompson family with the racing industry is probably best demonstrated by Widden Stud (does not appear to be currently listed on the Muswellbrook LEP or the SHR) and Baramul Station (Muswellbrook LEP #1129). The legacy of Herbert Thompson with respect to horse breeding may well have been detrimentally impacted by his long illness, which commenced in 1943 and resulted in the sale of Tarwyn Park in 1951 (refer to Section 2.2).

Following an approximate hiatus of 23 years, Tarwyn Park was again associated with thoroughbred horse breeding under the ownership of Peter and Anne Andrews from 1974/5. The Andrews seem to have had early success with their thoroughbreds – Marieazar winning the Canterbury Cup in 1977 (*The Sydney Morning Herald*, 1977:13). This association with the industry is demonstrated through the horse training track, the burial of Melbourne Cup winner, 'Rain Lover' on the property in 1988 (Andrews, 2006:35), along with three other horses, and the reuse of the Stables. It is anticipated that much of the fencing dates to the Andrews era of occupation and is also evidence of the horse breeding undertaken by the family. As discussed in Section 2.4 and 2.5, the focus of Peter Andrews during his ownership of Tarwyn Park was on the development of NSF. The breeding of horses took a backseat during the latter part of the Peter and Anne Andrews tenure and does not appear to have been revived by Stuart and Megan Andrews during their ownership (Australian Story, 2005). It is unclear therefore to what extent Tarwyn Park can be considered to have made a contribution to the NSW or Australian horse racing industry during this period.

In a search of items listed on the SHR for their associations with thoroughbred breeding a number of estates/studs were identified, being:

- Bungarribee Homestead Complex, active during the 1830-40s (SHR#01428);
- Chipping Norton, active in the 1880s through to 1899 (SHR#00214);
- Wambo Homestead (SHR#00200) a stud from the 1830s until sometime in the 20th century;
- Neotsfield (SHR300216), used as a stud from the 1820s through to the 1930s or 1940s

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- Edinglassie (SHR#00170) has also had some association with the breeding of race horses, both historically and in the present day.

In addition, the following locally listed studs were identified on the Muswellbrook and Mid-Western Regional LEPs:

- Woodlands Stud (Muswellbrook LEP #115), identified as being of State significance, used intermittently for horse breeding in the 1860-70s, from 1908 for an unspecified time and then from 1971 until present;
- Baramul Station (Stud) associated with the Thompsons from the 1870s and becoming associated with horse breeding again in 1940;
- Dalmar Stud (Muswellbrook LEP #1129);
- Holbrook Stud (Muswellbrook LEP #15);
- “Wandu”, Limosin Stud (Mid-Western Regional LEP #1410)
- Leeholme Horse Stud – Exercise Yard (Penrith LEP #1232).

With regard to historical use, Tarwyn Park is comparable to these studs – none have been exclusively used for the breeding and training of horses. In relation to the physical remains associated with the breeding and training of horses, Tarwyn Park is reasonably placed. Bungarribee, Neotsfield and Dalmar have limited to no physical remains surviving, while Woodlands, Baramul, Holbrook, Wandu and Edinglassie are on-going operations. As such, these later properties are able to demonstrate a continuity and layering of historical use and historical associations.

In summary, the associations with thoroughbred horse breeding and training can be demonstrated under the ownership of Herbert Thompson and Peter and Anne Andrews, albeit with a 23 year odd gap. Historically, it is considered that Tarwyn Park meets the threshold for listing at a local level. Similarly, its associations with the horse breeding and racing industry and ability to be a representative example of a stud, is demonstrable at a local level, lacking the sustained connection and with other studs better able to demonstrate this connection to the industry.

4.2.4 Natural Sequence Farming

The development of NSF on Tarwyn Park and Iron Tank has one directly comparable listed site – Yobarnie. Yobarnie is listed on the SHR (#01826) as the site where the Keyline system was developed and demonstrated by Percival Yeomans from 1943 until 1963 (NSW Heritage Office, 2012). The Keyline system is an integrated land management technique that incorporates soil improvement, erosion control, water storage, cultivation and irrigation. It is accepted as the fore-runner to permaculture and sustainable agricultural practices and as such, the method has been taken up by farmers around the world (NSW Heritage Office, 2012). The method is considered suitable for undulating terrain. The SHR listing indicates that the evidence of the Keyline system includes 10 of the original 12 dams constructed by Yeomans, together with extensive contour banks. In comparing the Keyline method with NSF, while the overall aims are comparative – to reduce erosion, improve soil structure and reduce salinity, some distinctions are evident:

- While the Keyline system is suitable for undulating terrain, NSF is applicable within floodplains;
- While Keyline seeks to lower the water table, NSF seeks to raise it;
- Both seek to keep water on the property for as long as possible
- Both seek to improve soil structure. While the Keyline system does this through a specific ploughing regime and the planting of particular species, particularly legumes, NSF actively discourages ploughing while encouraging diversity of pasture
- Both purport to create soil.

In comparison to the Keyline system, NSF is a relatively new method and time will tell whether it becomes as wide-spread as permaculture, as it evolved from the Keyline system. It is noted that there are a number of farms that have adopted the NSF method, as outlined in Hurditch (2015:335-336):

- Tarwyn Park, Upper Bylong, NSW;

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- Baramul, Widden Valley, NSW;
- Mulloon Creek, via Bungendore, NSW;
- Spring Creek, via West Wyalong, NSW;
- Jillamatong, via Braidwood, NSW;
- Gunningrah, Bombala, NSW;
- Tallawang, Willow Tree, NSW;
- Gumlu, Rocky Ponds Creek, via Bowen, Qld; and
- Mulwarree River catchment area, via Goulburn, NSW.

Hurditch provides a summary of the outcomes of the application of NSF at each of these sites, together with references for these results. As such, it is noted that there is a growing body of research that supports NSF, beginning with the CSIRO report of 2002. It should be noted, however, that the CSIRO report supported the method in a qualified manner, questioning whether the method had broader applicability and whether it would be suitable outside of a floodplain (CSIRO, 2002:9). On the other hand, NSF has also attracted criticism. For example, SLR Consulting, when comparing the condition of Tarwyn Park to the adjacent Wallings property, found the following points of difference:

- Tarwyn Park was deficient in key nutrients essential for plant growth, particularly the calcium to magnesium ratio, nitrate nitrogen, sulfur, zinc (SLR Consulting Australia, 2017:41);
- There was no difference in the salinity ratings of the two properties (SLR Consulting Australia, 2017:37), but NSF may have increased the salinity of properties downstream (SLR Consulting Australia, 2017:37);
- Seasonal waterlogging of Tarwyn Park may have resulted in lower levels of nitrate nitrogen (SLR Consulting Australia, 2017:35);
- There was a “large weed seed bank” on Tarwyn Park that would require control to stop the spread downstream (SLR Consulting Australia, 2017:38). Note that Andrews would see this as a positive (Andrews, 2008:23);
- The best soil structure was identified on the Wallings property. SLR attribute the poorer soil structure at Tarwyn Park to seasonal waterlogging (SLR Consulting Australia, 2017:38)..

It is not the place of a CMP to comment on the validity of the method, but rather to assess the significance of the method in a historical context.

With regard to the features on site and their ability to demonstrate the operation of NSF, it is considered that the leaky weirs, landscape modifications including contour banks and plantings along Bylong River are key components of this land use. So long as these remain, noting their unlicensed and hence illegal status, they form the primary evidence of the method and its development. It is considered that at this time, the associations with NSF are of local significance.

4.2.5 Associations with Persons of Note

Tarwyn Park has been associated with a number of people of note, being:

- William and John Lee;
- Herbert Thompson; and
- Peter Andrews.

The associations with the Lee family is considered to be insubstantial with this only being a portion of the broader Lee land holdings. As discussed in Sections 4.2.1 and 4.2.2, it is acknowledged that they may well have used the land to run horses and cattle, but no evidence of this use is retained – the only improvements to the land which can be firmly attributed to the Lees would be the clearing of vegetation. It is considered that the association with the Lee family contributes to the significance of the property at a local level.

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The associations with Herbert Thompson are not insubstantial – the Thompson era is clearly demonstrable on Tarwyn Park, through the land boundaries (despite the modifications) and the Homestead and stables. The importance of Herbert Thompson to the State of NSW, even historically, is questionable and it is considered that this association is of local significance.

The association of Tarwyn Park with Peter Andrews is unquestionable. It is demonstrated through the numerous references to Tarwyn Park in Andrews' book *Back from the Brink* (Andrews, 2006), and the six *Australian Story* episodes (Australian Story, 2005, 2009, 2015). It is anticipated that Andrews is a well-known figure within NSW, as evidenced by the awarding of an Order of Australia Medal in 2011 "[f]or service to conservation and the environment through the development and promotion of sustainable farming practises" (Governor General's Office, 2011:112). Despite having vacated Tarwyn Park in 1999, Peter Andrews is still strongly identified with the property. It is considered that the association of Tarwyn Park and Peter Andrews is of State significance.

4.3 Tarwyn Park Homestead

In considering Tarwyn Park, a number of avenues for comparative analysis have been identified:

- Architectural style; and
- Association with architect Harold Hardwick.

4.3.1 Architectural style

With regard to architectural style, the Tarwyn Park homestead has been identified as being a Californian bungalow with Tudor revival elements. The results of the first of these searches, looking at Californian bungalows listed on the SHR, returned a result of four properties (Table 14 in Appendix C). Without images of these listed items, it is difficult to ascertain how comparable these sites are, but they would appear to be more compact and may have been extensively renovated internally.

With regard to the size of the Homestead, Tarwyn Park could anecdotally be considered to be above average. This is evident when one considers that the majority of Californian bungalows were constrained by suburban building allotments. They were also usually single family homes. At Tarwyn Park, given its remoteness from a regional centre, it was constructed with a view to providing onsite accommodation to the house staff.

Whether the interiors of the SHR listed bungalows are intact is difficult to gauge as those undertaking the surveys that contribute to the SHI usually do not have access to the interiors. It is evident that Tarwyn Park Homestead retains a high degree of integrity – the internal and external doors (including door locks and handles), windows, cornices, picture rails and other decorative detailing are all retained and are in a good state of preservation.

In NSW by the 1920s, the use of sandstone for residential construction had become uncommon due to the relative expense when compared to bricks, which were also more readily available in urban areas. A survey of the SHI listed Californian bungalows indicates they are predominately of brick, partially or wholly rendered and predominately roughcast rendering. Egglemont (SHR#00321) does use a small amount of sandstone for the verandah piers although the remainder appears to be rendered brick with timber shingle gables. Adjacent to Egglemont is the SHR listed Belvedere (#00320), which is constructed of rendered brick. The use of sandstone for the construction of Tarwyn Park may have been decided on the basis of a local supply of sandstone. There are numerous earlier sandstone homesteads in the vicinity, including Bylong Station and the c1848 Lee Homestation (AECOM Australia Pty Ltd, 2015) It is also speculated that there may also have been some consideration of the grandeur of the final product with the view (whether conscious or unconscious) to displaying the social and economic position of the Thompson family, both to locals and existing and prospective business partners, clients and associates of the racing industry.

In summary, it would appear that there are no similar architectural examples of a sandstone Californian bungalow listed on the SHR. A brief examination of the SHI for locally listed items also failed to find anything comparable. Architecturally, Tarwyn Park can be seen as a rare example of a 1920s Californian bungalow, particularly within a rural context and meets the rarity criterion at a local level. However, whether Tarwyn Park can demonstrate this criterion at a State level would require a survey of 1920s Californian bungalows, which is outside the scope or expected undertaking of a CMP.

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Taking a broader perspective, there are a limited number of 1920s farm homesteads/complexes listed on the SHR or local LEPs (refer to Table 15 in Appendix C). None of the associated homesteads are as extensive or as well preserved as Tarwyn Park. Tarwyn Park Homestead meets the criterion for local listing, and may also hold State significance.

4.3.2 Harold Hardwick

As an architecturally designed Homestead, Tarwyn Park was also compared to other commissions of Harold Hardwick. There are five residential properties listed on the Mid-Western Regional Council's Local Environmental Plan (2012) attributed to Harold Hardwick: "Mudgee Club", House (#1116), Doctor's surgery and dwelling (#1178), "Mudgee Club", Clubhouse (originally a residence) (#1112), Rexton, House (#152) and House (#189). All five properties are of a Federation style and are substantially smaller than Tarwyn Park. Other commissions undertaken by Hardwick include a chapel within the grounds of Menah Homestead (#1406) and St Luke's Anglican Church, Gulgong (1198) and modifications to a number of homesteads (Broadley, 2011). Tarwyn Park therefore appears to be unusual within the identified body of Hardwick's work, although Ann Andrews stated the following during an oral history recording about Tarwyn Park:

"The original design was to have a tower out front, but the tower was not put up because his wife did not like the tower on the design. That was Thompson's wife. Now I have been told they did build another house around Dunedoo from the same design and that one has the tower."

Searches of the available historical records have not identified the anecdotally mentioned twin with tower around Dunedoo.

Hardwick's commissions were, as far as is currently known, localised to Mudgee and the surrounding area. While Tarwyn Park appears to be unusual within the scope of Hardwick's work, there is no evidence to suggest that Hardwick is an architect of significance to the State of NSW. Hardwick cannot be considered a designer of State significance as his influence, as well as his commissions, was contained to the Mudgee area. It is therefore concluded that the association of Hardwick does not elevate Tarwyn Park to State significance, however, the association contributes to the local significance of Tarwyn Park to a high degree.

4.4 Iron Tank House

The following sections provide a discussion on Iron Tank House, together with a comparative analysis, to arrive at a possible date for the House and how it fits within the locally listed items.

The land on which Iron Tank House sits was originally granted in 1877 to John Lee to add to the holdings he had inherited from his father. The land was at the periphery of John Lee's holdings so it is considered unlikely that the House was constructed for Lee himself. It is likely to have been constructed for an employee or similar. As discussed in Section 3.5, the exterior of the house can be characterised as being Victorian Georgian in style (Apperly et al., 1989:42). This style dates to between c.1840 and c.1890. Based on the available information, it is considered likely that the House was constructed shortly following the land being granted in 1877.

As discussed in Section 2.6.4, the physical evidence points to the House having been constructed in three phases. It is likely the original southern wing was constructed somewhere shortly after the grant of the land in 1877. The rear wing may be datable through the extensive presence of pressed metal. Pressed metal ceilings were imported into Australia from 1889, but did not appear in a residential setting regularly until c.1900 and went out of general use during World War I due to an increase in steel prices (Lewis, n.d.:57). This was due to the cost associated with production – pressed metal was originally zinc, but by 1896, the product was also available in a composite of zinc and iron or steel (Lewis, n.d.:52), which brought the price down. Table 16 in Appendix C provides a table of 24 items listed on the State Heritage Inventory that mention pressed metal interior elements. The search was limited to rural LGAs and locally significant items to ensure a level of comparability with Iron Tank House. The majority note pressed metal ceilings, sometimes in conjunction with cornices. There are two listings that also note wall panels (Disputed Plains Homestead Listing: Richmond Valley LEP #1001; House Mumbra Listing: Byron LEP #1179). The majority of these smaller residences featuring pressed metal date to the period 1905 to 1910. Anecdotal evidence suggests that the extensive use of pressed metal in such a context is highly unusual. It is considered that on this basis that, together with

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an examination of the stylistic features of the external form, the northern wing of Iron Tank House is likely to date from a similar period.

With regard to the House, it is therefore comparable to the homesteads identified in Table 15 of Appendix C. It is evident that there are no comparable examples. Small corrugated iron cottages are an overlooked aspect of Australia's rural heritage (Moore, Burke, & Joyce, 2000:6).

The incongruity of the elaborate pressed metal in the internal spaces and the detailed tray vaulted ceilings is in stark contrast to the corrugated iron clad exterior. This speaks to an inward display of beauty, rather than an outward display that might be expected as concern for the exterior of the house. This is a very evident concession to the remote location of the cottage, where there are no passers-by who would appreciate this display of material wealth. It is also interesting to note that the areas where pressed metal are evident are those that would have been frequented by guests to the home – in a country setting it could be expected that guests would have entered through the rear door and have been entertained in the living/dining room (room 1.6) and kitchen (room 1.7). In this more informal setting, they may also have had access to the store room (room 1.9).

4.5 Discussion against Inclusion/Exclusion Guidelines

The above discussion and comparative analysis has referred to how Tarwyn Park Farm Complex, Tarwyn Park Homestead and the associated history and people compare to the heritage significance inclusion and exclusion guidelines provided in *Assessing Heritage Significance* (NSW Heritage Office, 2001a). Table 1 provides a summary of the discussion against the inclusion and exclusion guidelines. This information forms the basis of the levels of significance as assessed in Section 5.4. It is important to note that a site does not have to meet all the inclusion guidelines to be significant under a particular criterion. Similarly, fulfilling one or more of the exclusion guidelines does not necessarily mean the item cannot hold significance under that item, but may mean the item is of local rather than State significance.

DRAFT**Table 1 Summary of discussion against inclusion/exclusion guidelines (NSW Heritage Office, 2001a)**

Criteria	Inclusion/Exclusion Criteria	Discussion summary
Criterion A <i>An item is important in the course, or pattern, of NSWs cultural or natural history (or the cultural or natural history of the local area)</i>	Inclusion Guidelines <ul style="list-style-type: none"> Shows evidence of a significant human activity Is associated with a significant activity or historical phase 	<ul style="list-style-type: none"> Tarwyn Park shows evidence of the thoroughbred horse breeding industry and its connections to horse racing during the Thompson and Andrews' era of occupation. Tarwyn Park is associated with the development of NSF. The site meets this inclusion guideline
	<ul style="list-style-type: none"> Maintains or shows the continuity of a historical process or activity 	<ul style="list-style-type: none"> Tarwyn Park and Iron Tank do not maintain or show continuity of a historical process. The site does not meet this inclusion guideline.
	Exclusion Guidelines	
	<ul style="list-style-type: none"> Has incidental or unsubstantiated connections with historically important activities or processes that are of dubious historical importance 	<ul style="list-style-type: none"> Tarwyn Park and Iron Tank do not provide evidence of land tenure as there is no evidence of earlier land boundaries. At best, the initial grant to William Lee can support the historical significance of the properties. While the breeding of shorthorn cattle and thoroughbred horses by the Lee family was a significant activity, this cannot be demonstrated in any of the available physical evidence within Tarwyn Park and Iron Tank other than as part of the Lee land holdings. These values may be more likely held in respect to the c1848 Homestation and/or the c1880s Bylong Station The site is excluded under this guideline
Criterion B <i>An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW cultural or natural history (or the</i>	<ul style="list-style-type: none"> Has been so altered that it can no longer provide evidence of a particular association. 	<ul style="list-style-type: none"> Tarwyn Park Homestead, Stables and features associated with NSF retain a high degree of integrity. The site is not excluded under this guideline
	Inclusion Guidelines	
	<ul style="list-style-type: none"> Shows evidence of a significant human occupation 	<ul style="list-style-type: none"> Tarwyn Park retains evidence associated with the breeding of thoroughbred horses. Horses of note include 'Hallmark', 'Heroic' and 'Rain Lover' The site meets this inclusion guideline
	<ul style="list-style-type: none"> Is associated with a significant event, person, or group of persons 	<ul style="list-style-type: none"> Tarwyn Park is within the original land holdings of William and John Lee as the initial settlers and breeders of cattle and horses. This

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Criteria	Inclusion/Exclusion Criteria	Discussion summary
<i>cultural or natural history of the local area)</i>		<ul style="list-style-type: none"> association can be demonstrated at a local level. Tarwyn Park is associated with three persons of significance: Herbert Thompson, Harold Hardwick and Peter Andrews. This association is not incidental or unsubstantiated. The site meets this inclusion guideline
	Exclusion Guidelines	
	<ul style="list-style-type: none"> Has incidental or unsubstantiated connections with historically important people or events 	<ul style="list-style-type: none"> Tarwyn Park and Iron Tank, as former land holdings of William and/or John Lee holds unsubstantial connections with these two individuals. There is limited evidence they developed these properties to any great degree, beyond clearing the land and using it for grazing purposes.
	<ul style="list-style-type: none"> Provides evidence of people or events that are of dubious historical importance 	<ul style="list-style-type: none"> It is considered that the people identified are not of dubious historical importance: Herbert Thompson was well known within the racing/thoroughbred horse breeding circles. It is considered this association is of local significance. Likewise, Harold Hardwick is still identified as an architect of merit within Mudgee, evidenced by a road being named in his honour (Paine, 2014). Hardwick did not work outside of the local area and the connection is therefore of local significance. The connection with Peter Andrews and NSF is considered to be of State significance as demonstrated by the books and the six <i>Australian Story</i> episodes, together with Andrews' OAM awarded in 2011. The site is not excluded under this guideline
	<ul style="list-style-type: none"> Has been so altered that it can no longer provide evidence of a particular association 	<ul style="list-style-type: none"> Tarwyn Park retains evidence of the life and works of Herbert Thompson and Peter Andrews. The site is not excluded under this guideline
Criterion C <i>An item is important in demonstrating aesthetic characteristics and/or high degree of creative or technical achievement in NSW (or the local area)</i>	Inclusion Guidelines	
	<ul style="list-style-type: none"> Shows or is associated with, creative or technical innovation or achievement 	<ul style="list-style-type: none"> The NSF is considered to be a technical innovation with which Tarwyn Park is associated. Tarwyn Park Homestead demonstrates the aesthetic characteristics of a 1920s Californian bungalow Tarwyn Park Farm Complex demonstrates the aesthetic characteristics of a 1920s farm complex on a grand scale

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Criteria	Inclusion/Exclusion Criteria	Discussion summary
		<ul style="list-style-type: none"> The site meets this inclusion guideline
	<ul style="list-style-type: none"> Is the inspiration for a creative or technical innovation or achievement 	<ul style="list-style-type: none"> NSF has been adopted by other farmers The site meets this inclusion guideline
	<ul style="list-style-type: none"> Is aesthetically distinctive 	<ul style="list-style-type: none"> The elements of Tarwyn Park, individually or collectively cannot be considered to be distinctive. The site is excluded under this guideline.
	<ul style="list-style-type: none"> Has landmark qualities 	<ul style="list-style-type: none"> Tarwyn Park Farm Complex or the individual elements do not form a landmark, being visually recessive and not oriented to make the most of the surrounding landscape. The site is excluded under this guideline.
	<ul style="list-style-type: none"> Exemplifies a particular taste, style or technology 	<ul style="list-style-type: none"> The NSF elements exemplify the method Tarwyn Park Homestead exemplifies a 1920s Californian bungalow. This assessment is supported by the integrity and intactness of the interior. The site meets this inclusion guideline
	Exclusion Guidelines	
	<ul style="list-style-type: none"> Is not a major work by an important designer or artist 	<ul style="list-style-type: none"> Harold Hardwick is an important architect at a local level. The site is not excluded under this guideline
	<ul style="list-style-type: none"> Has lost its design or technical integrity 	<ul style="list-style-type: none"> Tarwyn Park Homestead retains its design integrity. The technical integrity of the NSF method has been maintained under KEPCO management The site is not excluded under this guideline
	<ul style="list-style-type: none"> Its positive visual or sensory appeal or landmark and scenic qualities have been more than temporarily degraded 	<ul style="list-style-type: none"> This statement is not true of Tarwyn Park. The scenic qualities of the property will only be temporarily altered by the Project. The site is not excluded under this guideline
	<ul style="list-style-type: none"> Has only a loose association with a creative or technical achievement 	<ul style="list-style-type: none"> Tarwyn Park has strong associations with Thompson, Hardwick and Andrews. The site is not excluded under this guideline
Criterion D <i>An item has strong or</i>	Inclusion Guidelines	
	<ul style="list-style-type: none"> Is important for its associations with an 	<ul style="list-style-type: none"> Tarwyn Park has a degree of importance to the local community as

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Criteria	Inclusion/Exclusion Criteria	Discussion summary
<i>special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.</i>	identifiable group	<ul style="list-style-type: none"> demonstrated by the nomination of the property for listing on the SHR and submissions made in relation to the Project. The site meets this inclusion guideline
	<ul style="list-style-type: none"> Is important to a community's sense of place 	<ul style="list-style-type: none"> Tarwyn Park has been identified as being important to proponents of NSF. The site meets this inclusion guideline
	Exclusion Guidelines	
	<ul style="list-style-type: none"> Is only important to the community for amenity reasons 	<ul style="list-style-type: none"> Tarwyn Park does not provide amenity to the community by virtue of being a private property. The site is not excluded under this guideline
	<ul style="list-style-type: none"> Is retained only in preference to a proposed alternative 	<ul style="list-style-type: none"> It is anticipated that a certain amount of the community interest has been garnered in direct opposition to the Project. The site is excluded under this guideline
Criterion E <i>An item has potential to yield information that will contribute to an understanding of NSWs cultural or natural history (or the cultural or natural history of the local area)</i>	Inclusion Guidelines	
	<ul style="list-style-type: none"> Has the potential to yield new or further substantial scientific and/or archaeological information 	<ul style="list-style-type: none"> Continued research into NSF at the place of its creation has the potential to yield new and further substantial scientific information regarding the long-term validity of the method Archaeological investigations of Tarwyn Park and Iron Tank may yield information about rural life and internal arrangements of domestic and public spaces. Any information would hold local significance The site meets this inclusion guideline
	<ul style="list-style-type: none"> Is an important benchmark or reference site or type 	<ul style="list-style-type: none"> Tarwyn Park and Iron Tank are important benchmark and reference sites for NSF The site meets this inclusion guideline
	<ul style="list-style-type: none"> Provides evidence of past human cultures that is unavailable elsewhere 	n/a
	Exclusion Guidelines	
	<ul style="list-style-type: none"> The knowledge gained would be irrelevant to research on science, human history or culture 	<ul style="list-style-type: none"> Continued research into NSF has the potential to provide information regarding the long-term validity of the method The site is not excluded under this guideline

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Criteria	Inclusion/Exclusion Criteria	Discussion summary
Criterion F <i>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)</i>	<ul style="list-style-type: none"> Has little archaeological or research potential 	n/a
	<ul style="list-style-type: none"> Only contains information that is readily available from other resources or archaeological sites 	<ul style="list-style-type: none"> The information regarding NSF is not readily available elsewhere; There are considered to be numerous other sites with comparable archaeological potential to Tarwyn Park and Iron Tank. The site is not excluded under this guideline
	Inclusion Guidelines	
	<ul style="list-style-type: none"> Provides evidence of a defunct custom, way of life or process 	<ul style="list-style-type: none"> None of the customs, ways of life or processes demonstrated at Tarwyn Park and Iron Tank are defunct – thoroughbred horse breeding and NSF are all still active at other sites. The site does not meet this inclusion guideline
	<ul style="list-style-type: none"> Demonstrates a process, custom or other human activity that is in danger of being lost 	<ul style="list-style-type: none"> It is considered unlikely that thoroughbred horse breeding or the implementation of NSF is in danger of being lost The site does not meet this inclusion guideline
	<ul style="list-style-type: none"> Shows unusually accurate evidence of a significant human activity 	n/a
	<ul style="list-style-type: none"> Is the only example of its type 	<ul style="list-style-type: none"> Tarwyn Park and Iron Tank are not the only examples of their type in any respect. The site does not meet this inclusion guideline
	<ul style="list-style-type: none"> Demonstrates designs or techniques of exceptional interest 	<ul style="list-style-type: none"> Tarwyn Park and Iron Tank demonstrate NSF, which could be considered of exceptional interest.
	<ul style="list-style-type: none"> Shows rare evidence of a significant human activity important to the community 	<ul style="list-style-type: none"> As the site on which NSF was developed, Tarwyn Park and Iron Tank shows rare evidence of the development of the method. The site meets this inclusion guideline
	Exclusion Guidelines	
Criterion G	<ul style="list-style-type: none"> Is not rare 	<ul style="list-style-type: none"> As the site on which NSF was developed, it is rare. The site is not excluded under this guideline
	<ul style="list-style-type: none"> Is numerous by under threat 	n/a
	Inclusion Guidelines	

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Criteria	Inclusion/Exclusion Criteria	Discussion summary
<p><i>An item is important in demonstrating the principal characteristics of a class of NSW's</i></p> <ul style="list-style-type: none"> Cultural or natural places; or Cultural or natural environments <p><i>(or a class of the local area's</i></p> <ul style="list-style-type: none"> cultural or natural places or -cultural or natural environments.) 	<ul style="list-style-type: none"> Is a fine example of its type 	<ul style="list-style-type: none"> Tarwyn Park Homestead is a fine example of a 1920s Californian bungalow. This significance is supported by the integrity and intactness of the interiors The site meets this inclusion guideline
	<ul style="list-style-type: none"> Has the principal characteristics of an important class or group of items 	<ul style="list-style-type: none"> Tarwyn Park Farm Complex has all the principal characteristics of a farming complex, being earlier dwellings (Farm House 2), a Homestead, Stables and other outbuildings which have been constructed/alterd to meet changing needs. Tarwyn Park and Iron Tank holds and probably defines, as the first trial site, the principal characteristics of the NSF method The site meets this inclusion guideline
	<ul style="list-style-type: none"> Has attributes typical of a particular way of life, philosophy, custom, significant process, design, technique or activity 	<ul style="list-style-type: none"> Tarwyn Park and Iron Tank holds all the attributes typical of the implementation of NSF The site meets this inclusion guideline
	<ul style="list-style-type: none"> Is a significant variation to a class of items 	<ul style="list-style-type: none"> The construction of a Californian bungalow in sandstone is a significant variation of the architectural style, as applied to NSW (noting stone bungalows are common in South Australia at least). This holds local significance until proven otherwise. The site meets this inclusion guideline
	<ul style="list-style-type: none"> Is part of a group which collectively illustrates a representative type 	n/a
	<ul style="list-style-type: none"> Is outstanding because of its setting, condition or size 	<ul style="list-style-type: none"> Tarwyn Park Homestead holds outstanding integrity and intactness, both externally and internally. The site meets this inclusion guideline
	<ul style="list-style-type: none"> Is outstanding because of its integrity or the esteem in which it is held 	<ul style="list-style-type: none"> Tarwyn Park Homestead holds outstanding integrity and intactness, both externally and internally. The site meets this inclusion guideline
	Exclusion Guidelines	
	<ul style="list-style-type: none"> Is a poor example of its type 	<ul style="list-style-type: none"> This is not considered to be the case. The site is not excluded under this guideline

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Criteria	Inclusion/Exclusion Criteria	Discussion summary
	<ul style="list-style-type: none">Does not include or has lost the range of characteristics of a type	<ul style="list-style-type: none">This is not considered to be the case.The site is not excluded under this guideline
	<ul style="list-style-type: none">Does not represent well the characteristics that make up a significant variation of a type	<ul style="list-style-type: none">This is not considered to be the case.The site is not excluded under this guideline

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5.0 Significance Assessment

5.1 Preamble

It is essential to understand why an item is significant, and thus worthy of being conserved, prior to determining how to conserve the site. An assessment is undertaken to explain why a particular item is significant and to enable appropriate site management principles and curtilage to be determined.

5.2 Significance Assessment Criterion

Cultural significance is defined in *The Australia ICOMOS Charter for Places of Cultural Significance 2013* (the Australian ICOMOS Burra Charter, 2013) as meaning "aesthetic, historic, scientific, social or spiritual value for past, present or future generations" (Article 1.2). Cultural significance may be derived from a place's fabric, association with a person or event, or for its research potential. The significance of a place is not fixed for all time, and what is of significance to us now may change as similar items are located, more historical research is undertaken and community tastes change.

The process of linking this assessment with an item's historical context has been developed through the NSW Heritage Management System and is outlined in the guideline *Assessing Heritage Significance*, part of the NSW Heritage Manual (Heritage Branch, Department of Planning). The *Assessing Heritage Significance* guidelines establish seven evaluation criteria (which reflect four categories of significance and whether a place is rare or representative) under which a place can be evaluated in the context of State or local historical themes. Similarly, a heritage item can be significant at a local level (i.e. to the people living in the vicinity of the site), at a State level (i.e. to all people living within NSW) or be significant to the country as a whole and be of National or Commonwealth significance.

In accordance with the guideline *Assessing Heritage Significance* (NSW Heritage Office, 2001a) and Section 33(3) of the *Heritage Act 1977*, **an item will be considered to be of State significance if it meets more than one criteria at a State level. If it only meets one criterion, it must be of such particular significance that it should be listed.** An item would be of local heritage significance if it meets one or more of the criteria outlined in Table 2. The guideline also provides inclusion and exclusion criteria, as summarised in the table. The Heritage Council requires the summation of the significance assessment into a succinct paragraph, known as a Statement of Significance. The Statement of Significance is the foundation for future management and impact assessment and can be found in Section 5.5.

Table 2 Significance assessment criteria

Criterion	Inclusions/Exclusions
Criterion (a) – an item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area).	The site must show evidence of significant human activity or maintains or shows the continuity of historical process or activity. An item is excluded if it has been so altered that it can no longer provide evidence of association.
Criterion (b) – an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local to area).	The site must show evidence of significant human occupation. An item is excluded if it has been so altered that it can no longer provide evidence of association.
Criterion (c) – an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area).	An item can be excluded on the grounds that it has lost its design or technical integrity or its landmark qualities have been more than temporarily degraded.
Criterion (d) – an item has strong or special association with a particular community or cultural group in NSW (or the local area) for	This criterion does not cover importance for reasons of amenity or retention in preference to proposed alternative.

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Criterion	Inclusions/Exclusions
<i>social, cultural or spiritual reasons.</i>	
Criterion (e) – <i>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).</i>	Significance under this criterion must have the potential to yield new or further substantial information. Under the guideline, an item can be excluded if the information would be irrelevant or only contains information available in other sources.
Criterion (f) – <i>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).</i>	An item is excluded if it is not rare or if it is numerous, but under threat. The item must demonstrate a process, custom or other human activity that is in danger of being lost, is the only example of its type or demonstrates designs or techniques of interest.
Criterion (g) – <i>an item is important in demonstrating the principal characteristics of a class of NSW's (or local area's):</i> <ul style="list-style-type: none"> • <i>Cultural or natural places; or</i> • <i>Cultural or natural environments.</i> 	An item is excluded under this criterion if it is a poor example or has lost the range of characteristics of a type.

5.3 State Historical Themes

5.3.1 Introduction to the New South Wales Historical Themes Framework

The Australian Heritage Commission developed the '*Australian Historic Themes Framework*' for use in heritage assessment and management. The Framework is designed to encourage understandings of the environment and potential communal, social and historic connections to it (Australian Heritage Commission, 2001). The consistent organising principle for the Thematic Framework is activity. By emphasising the human activities that produced the places we value, and the human response to Australia's natural environment, places are related to the processes and stories associated with them, rather than to the type or function of a place.

The NSW Historical Themes model was based on the national framework and placed 36 State themes against the National themes (Australian Heritage Commission, 2001; NSW Heritage Division, 2001b).

A heritage item with historical significance should be able to show or demonstrate relevant themes in its physical fabric. This physical fabric can then be conserved in an appropriate way so that the historical context for an item is not lost. This framework is used to highlight key themes and phases of development for particular places, and is important for the following reasons:

- 1) It ensures that the places that are identified for conservation reflect and represent the historical development of the study area.
- 2) It can provide knowledge of places of historical importance that might not otherwise come to be identified or for which there may be little if any visible evidence.
- 3) It is useful when undertaking comparative assessments of the significance of particular places.

5.3.2 Ability to Represent Historical Themes

The following table identifies the relevant state historical themes and how these themes are represented by Tarwyn Park and Iron Tank.

DRAFT**Table 3 Historical themes represented at Tarwyn Park**

National Theme	State Theme	Local Theme
1.1 Assessing scientifically diverse environments	20. Science	Development and assessment of Natural Sequence Farming
3.11 Altering the environment	9. Environment	Practice of Natural Sequence Farming
2. Peopling Australia	1. Aboriginal contact	Aboriginal culture – place names (Bylong)
5.8 Working on the Land	4. Pastoralism	Breeding sheep and cattle, including shorthorn cattle breeding by the Lee family
5.8 Working on the Land	5. Agriculture	Cultivation of crops and hay
5.8 Working on the Land	9. Environment	Development of Natural Sequence Farming
6. Educating	32. Education	Use of the property to demonstrate Natural Sequence Farming techniques
8.1.1 Playing and watching organised sports	28. Sport	Breeding and training of race horses by Thompson and Andrews families
8.12 Living in and around Australian Homes	24. Housing	Arrangement of interiors
8.14 Living in the country and rural settlements	24. Housing	1920s rural homesteads in the Californian bungalow style. Arrangement of interiors
8.14 Living in the country and rural settlements	24. Housing	Mid-19 th century rural cottage
8.12 Living in and around Australian Homes	24. Housing	Work of local architect Harold Hardwick
9. Marking the phases of life	34. Events	Place of residence of persons of influence: Thompsons, Andrews.

5.4 Significance Assessment

Table 4 assesses Tarwyn Park and Iron Tank against the NSW assessment criteria as outlined in Table 2. This significance assessment builds on the assessment provided in *Bylong Coal Project: Historic Heritage Impact Assessment* (AECOM Australia Pty Ltd, 2015), together with the points raised in *Bylong Coal Project: Heritage Review* (GML Heritage Pty Ltd, 2017) and *Peer Review Response to Bylong Coal Project Heritage Review Report prepared for Planning Assessment Commission by GML Heritage May 2017* (MUSEcape, 2017). This assessment also takes into account the National Trust listing for the Bylong Landscape Conservation Area (National Trust of Australia (NSW), 2013), as it relates to Tarwyn Park, and the preliminary assessment of Tarwyn Park prepared by the Heritage Division for the Heritage Council of NSW meeting of 2 August 2017. Being based on the most rigorous physical and historical analysis of the properties to date, this significance assessment supersedes all previous assessments.

The discussion in Section 4.0 has provided a foundation for this significance assessment, having clearly articulated how the various elements (both physical and historical) of Tarwyn Park and Iron Tank can or cannot meet the inclusion and exclusion guidelines under the criterion. The assertions made within the assessment are on the basis of that comparative analysis.

DRAFT**Table 4** Significance assessment

Criteria	Assessment
<p>Criterion A <i>An item is important in the course, or pattern, of NSWs cultural or natural history (or the cultural or natural history of the local area)</i></p>	<p>Tarwyn Park is of local historical significance for the role it played in thoroughbred horse breeding. The use of the property for this purpose was disrupted through the changes in ownership and the differing emphasis on farming enterprises the various owners had. However, at various times, Tarwyn Park Farm Complex has been strongly associated with the race and thoroughbred horse breeding industry in NSW and Australia more broadly. This is physically demonstrated by Tarwyn Park Stables and in a supporting role, Tarwyn Park Homestead as the home of the Thompsons, which, it is anticipated, was used to display wealth and prominence within the industry, as well as the horse burials on the property, including dual Melbourne Cup winner 'Rain Lover'. In a historical context, it is demonstrated through the knowledge that at least three Melbourne Cup winners (Hall Mark, Marabou and Rain Lover) were studded at Tarwyn Park as well as other horses of varying significance within the racing industry, the most prominent being 'Heroic', who has been entered into the Racing Hall of Fame.</p> <p>The land has tenuous associations with the shorthorn cattle and thoroughbred horse breeding operations of William and John Lee. These associations make limited contribution to the significance of Tarwyn Park under this criterion.</p>
<p>Criterion B <i>An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW cultural or natural history (or the cultural or natural history of the local area)</i></p>	<p>Tarwyn Park is associated with several people and their life and works. These associations can be demonstrated at a State and local level.</p> <p>Tarwyn Park, as now known, was established by Herbert Thompson, a well-known horse breeder and trainer. Thompson purchased and named Tarwyn Park in 1918. Thompson established a horse breeding stud, which became famous as the home of 'Heroic', the leading sire in Australia between 1933 and 1939 and was entered into the Australian Racing Hall of Fame in 2003. It is considered this association is of local significance.</p> <p>Tarwyn Park Homestead was designed by Mudgee architect Harold Hardwick. Hardwick is identified as an architect of merit within the local area. It is considered this association is of local significance.</p> <p>Tarwyn Park is intimately associated with Peter Andrews. Andrews received an Order of Australia in 2011 for his pioneering of the Natural Sequence Farming technique, but is also a well-known horse breeder. Andrew's association can be demonstrated at a State level through his appearance in six <i>Australian Story</i> episodes aired in 2005, 2009 and 2015, his books <i>Back from the Brink</i> and <i>Beyond the Brink</i> and his Order of Australia medal, bestowed in 2011. This association is demonstrated at a State level.</p>
<p>Criterion C <i>An item is important in demonstrating aesthetic characteristics and/or high</i></p>	<p>Tarwyn Park Homestead is of local aesthetic significance. It is a fine example of the Californian Bungalow style, albeit with some Tudor Revival elements (the half-timbered gables). However, it is the integrity of the internal spaces that is of particular significance. There does not appear to have been modifications to the internal layout</p>

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Criteria	Assessment
<i>degree of creative or technical achievement in NSW (or the local area)</i>	<p>and the internal joinery, doors and other fittings and fixtures are original. It is unusual for a homestead of this date to have such a high level of integrity. The finishes are of exceptional quality and in all, Tarwyn Park Homestead exemplifies the taste and style of the 1920s.</p> <p>Tarwyn Park Farm Complex and Iron Tank are a landscape of local aesthetic significance. Tarwyn Park demonstrates the local aesthetic characteristics of a large farm complex, being a Homestead, Stables and various outbuildings within a rural landscape, while Iron Tank represents a smaller scale, more modest farming enterprise. The cleared agricultural land within the properties provides open views to the surrounding vegetated ranges and mountains. The contrast between the two is distinctive, with the rugged, vegetated sandstone ridges that surround the properties accentuating and highlighting the cultural features, for example, the framing of Iron Tank House against the ranges to the north.</p> <p>Tarwyn Park and Iron tank are associated with a high degree of creative and technical achievement as the site at which the NSF method was developed. The method has been implemented by other farmers within NSW and Queensland (Hurditch, 2015). It is considered this aspect of the significance is demonstrable at a local level.</p> <p>Iron Tank is of local aesthetic significance. It demonstrates the taste and style of the early 1900s, including the architectural style (Victorian Georgian) as well as the siting of the House to frame it against the ranges behind. The internal pressed metal walls and ceilings are particularly demonstrative of this period of residential interior decoration. The extent of the use of this material is somewhat unusual.</p> <p>Tarwyn Park is of local social significance. It is acknowledged as the birthplace of NSF within the community, which is of particular import to proponents of the method. This is demonstrated by the community nomination of Tarwyn Park for listing on the SHR, together with the public submissions received in relation to the Project. The associations of the community are supported by the numerous <i>Australian Story</i> episodes covering Tarwyn Park as it relates to NSF.</p>
Criterion D <i>An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons.</i>	

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Criteria	Assessment
<p>Criterion E <i>An item has potential to yield information that will contribute to an understanding of NSWs cultural or natural history (or the cultural or natural history of the local area)</i></p>	<p>Tarwyn Park Homestead and Iron Tank House have the potential to yield information that will contribute to an understanding of life in rural NSW during the 1920s at a local level. In relation to Tarwyn Park, this includes information about the spatial arrangement of public and private living areas in what was the tail end of providing accommodation for house staff. This may be supplemented by archaeological investigation of the material culture of both properties.</p> <p>Additionally, as the pioneer site for the development of NSF, Tarwyn Park provides research opportunities into the long-term effectiveness of NSF. It is considered to be a benchmark and reference site for the implementation of NSF. Any significance under this criterion is held at a local level while the scientific validity, broader applicability and long-term success of the method are determined.</p>
<p>Criterion F <i>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)</i></p>	<p>As the pioneer site for the development of Natural Sequence Farming, Tarwyn Park holds significance under this criterion at a local level while the scientific validity, broader applicability and long-term success of the method are determined.</p>
<p>Criterion G <i>An item is important in demonstrating the principal characteristics of a class of NSW's</i></p> <ul style="list-style-type: none"> • Cultural or natural places; or • Cultural or natural environments (or a class of the local area's • cultural or natural places or • -cultural or natural environments.) 	<p>Tarwyn Park Farm Complex is of local significance as a representative example of a horse stud/farm complex. It retains a grand homestead, extensive stables, a horse ring and fenced paddocks and evidence of earlier houses (Farm House 1 and 2).</p> <p>Tarwyn Park Homestead is a fine example of a 1920s Californian bungalow at a local level. This significance is supported by the integrity and intactness of the interiors, which is outstanding. The construction in sandstone is, as far as the available evidence indicates, is a significant variation within NSW.</p> <p>Tarwyn Park and Iron Tank, as the place where NSF was developed, hold and define the principal characteristics of the method. The place contains all the attributes (leaky weirs, contour banks, nutrient sinks etc) that are typical of farming under the NSF method. This significance is held at a local level.</p>

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5.5 Statement of Significance

Tarwyn Park and Iron Tank is of State associative significance and local significance under the historical, associative, aesthetic/technical, social, research, rarity and representative criteria.

Tarwyn Park and Iron Tank is of State significance through its associations with Peter Andrews, the creator of NSF. It is considered that the association between the property and Andrews is of State significance as the link is not tenuous or insubstantial. Andrews is well-known within the community through his authorship of two books (Andrews, 2006, 2008), as the subject of six *Australian Story* episodes (Australian Story, 2005, 2009, 2015) and as a result of having been awarded an Order of Australia Medal in 2011 “[f]or service to conservation and the environment through the development and promotion of sustainable farming practises” (Governor General’s Office, 2011:112).

Tarwyn Park is of local historical significance for the role it played in thoroughbred horse breeding. At various times, Tarwyn Park Farm Complex has been strongly associated with the race horse and thoroughbred horse breeding industry in NSW and Australia more broadly. This is physically demonstrated by Tarwyn Park Stables and in a supporting role, Tarwyn Park Homestead as the home of the Thompsons, which, it is anticipated, was used to display wealth and prominence within the industry, as well as the horse burials on the property, including Melbourne Cup winner ‘Rain Lover’. In a historical context, it is demonstrated through the knowledge that four Melbourne Cup winners were studded at Tarwyn Park as well as other horses of varying significance within the racing industry, the most prominent being ‘Heroic’, who has been entered into the Racing Hall of Fame.

In addition to the State significant association with Andrews, Tarwyn Park Farm Complex and Homestead are of local significance for their associations with Herbert Thompson, noted horse breeder, and local architect Harold Hardwick.

Tarwyn Park Homestead is of local aesthetic significance. It is a fine example of the Californian Bungalow style, albeit with some Tudor Revival elements (the half-timbered gables). This significance is supported by the integrity of the internal spaces. It is unusual for a homestead of this date to have such a high level of integrity. The finishes are of exceptional quality and in all, Tarwyn Park Homestead exemplifies the taste and style of the 1920s.

Tarwyn Park Farm Complex and Iron Tank are a landscape of local aesthetic significance. Tarwyn Park demonstrates the local aesthetic characteristics of a large farm complex, being a Homestead, Stables and various outbuildings within a rural landscape, while Iron Tank represents a smaller scale, more modest farming enterprise. The cleared agricultural land within the properties provides open views to the surrounding vegetated ranges and mountains. The contrast between the two is distinctive, with the rugged, vegetated sandstone ridges that surround the properties accentuating and highlighting the cultural features, for example, the framing of Iron Tank House against the ranges to the north.

Tarwyn Park and Iron tank are associated with a high degree of creative and technical achievement as the site at which the NSF method was developed. The method has been implemented by other farmers within NSW and Queensland (Hurditch, 2015). It is considered this aspect of the significance is demonstrable at a local level.

Iron Tank is of local aesthetic significance. It demonstrates the Victorian Georgian architectural style as applied to a modest rural homestead, extensive use of pressed metal on the interior of the northern wing as well as the siting of the house to frame it against the ranges behind. The internal pressed metal walls and ceilings are particularly demonstrative of this period of residential interior decoration. The extent of the use of this material is somewhat unusual.

Tarwyn Park is of local social significance. It is acknowledged as the birthplace of NSF within the community, which is of particular import to proponents of the method. This is demonstrated by the community nomination of Tarwyn Park for listing on the SHR, together with the public submissions received in relation to the Project. The associations of the community are supported by the six *Australian Story* episodes covering Tarwyn Park as it relates to NSF.

Tarwyn Park Homestead and Iron Tank House have the potential to yield information that will contribute to an understanding of life in rural NSW during the 1920s at a local level. In relation to Tarwyn Park, this includes information about the spatial arrangement of public and private living areas

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in what was the tail end of providing accommodation for house staff. This may be supplemented by archaeological investigation of the material culture of both properties.

Additionally, as the pioneer site for the development of NSF, Tarwyn Park provides research opportunities into the long-term effectiveness of NSF. It is considered to be a benchmark and reference site for the implementation of NSF. Any significance under this criterion is held at a local level.

Tarwyn Park Farm Complex is of local significance as a representative example of a horse stud/farm complex. It retains a grand homestead, extensive stables, a horse ring and fenced paddocks and evidence of earlier houses (Farm House 1 and 2). Tarwyn Park Homestead is a fine example of a 1920s Californian bungalow at a local level. This significance is supported by the integrity and intactness of the interiors, which is outstanding. The construction in sandstone is, as far as the available evidence indicates, is a significant variation within NSW.

Tarwyn Park and Iron Tank, as the place where NSF was developed, hold and define the principal characteristics of the method. The place contains all the attributes (leaky weirs, contour banks, nutrient sinks etc) that are typical of farming under the NSF method. This significance is held at a local level.

As the site meets only one criterion at a State level, the site is not considered to meet the threshold for listing on the SHR as Tarwyn Park cannot be considered to be of such particular significance that listing is warranted (**Section 5.2**).

5.6 Schedule of Significance

Different components of a place may make a different relative contribution to its heritage value. Determining the relative contribution of an item or its component elements to overall significance provides a useful framework for decision making about the conservation of and/or changes to the place.

The tables, provided in Appendix B, assess levels of significance for the individual elements of each component. The various components and elements contribute differently to a place's overall heritage value. Grading reflects the contribution an element makes to the overall significance of the place and the degree to which the significance of the item would be diminished if the component were removed or altered. The components of Tarwyn Park and Iron Tank have been assessed to determine a relative grading of significance into five levels. This process takes into consideration factors including:

- original design quality;
- degree of intactness;
- relative age and authenticity (original, replaced);
- extent of subsequent alterations;
- association with important people or events; and
- ability to demonstrate a rare quality, craft or construction process.

A standard five-grade system has been applied to assess the individual contribution of each element to the overall significance of the item. To determine levels of significance the terms Exceptional, High, Moderate, Little and Intrusive are used, in line with Heritage Branch guidelines (NSW Heritage Office, 2001a), as outlined in Table 5. The various grades of significance generate different requirements for retention and conservation of individual spaces and the various elements. The summary of the significance, based on the individual elements, is provided in Table 6 and is diagrammatically represented in Figure 28 and Figure 29 for Tarwyn Park Homestead and Figure 30 and Figure 31 for Iron Tank. Figure 32 and Figure 33 provide this information for Farm House 2. Figures have not been prepared for Tarwyn Park Stables as all spaces and elevations hold uniform significance at an exceptional level.

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Grading	Justification	Status
Exceptional (E)	Rare or outstanding element directly contributing to an item's local and State significance, with a high degree of interpretability	Fulfil criteria for local or State listing
High (H)	High degree of original or early fabric. Demonstrates a key element of the item's significance. Alterations do not detract from significance.	Fulfil criteria for local or State listing
Moderate (M)	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item. The elements are capable of being interpreted.	Fulfil criteria for local or State listing
Little (L)	Alterations detract from significance. May be difficult to interpret.	Does not fulfil criteria for local or State listing
Intrusive (I)	Damaging to the item's heritage significance.	Does not fulfil criteria for local or State listing

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Application of Standard Significance Grading to components of the site	Key Elements
<p>Exceptional Significance</p> <p>Major forms, spaces, elements and fabric critical to the appreciation of the place and of outstanding interest</p> <p>Elements that provide evidence of the original construction and use of the site</p>	<p>Tarwyn Park Homestead – external form and internal layout. Integrity of fabric, particularly to rooms 1, 2, 3, 4, 16, 17, 18, 19, 20, 21 and 22 are integral to the significance of the Homestead.</p> <p>Tarwyn Park Stables – external form and internal layout.</p> <p>Sandstone Structure associated with Farm House 2 – may provide evidence of earlier occupation of the site.</p> <p>Natural Sequence Farming – elements that demonstrate the development and on-going implementation of NSF, including leaky weirs, nutrient sinks, contour banks.</p>
<p>High Significance</p> <p>Major forms, spaces, elements and fabric that have undergone alterations but are nonetheless critical to the appreciation of the place, namely the original construction and spatial configuration.</p>	<p>Tarwyn Park Farm Complex – <i>Washingtonia robusta</i> palms</p> <p>Iron Tank House – external form and internal layout. Pressed metal panelling and tray vaulted ceilings are integral to the significance of the Homestead.</p>
<p>Moderate Significance</p> <p>These are later features important to the appreciation of the place, and altered or reconstructed elements which contribute to the overall significance of the place.</p>	<p>Farm House 2</p> <p>Horse Ring</p> <p>Corrugated Iron Shed</p> <p>Corrugated Iron Stables</p> <p>Vernacular Concrete Structure</p> <p>Garage (Tarwyn Park)</p> <p>Corrugated Iron Shed</p> <p>Corrugated Iron Stables</p>
<p>Little Significance</p> <p>Altered or added spaces, elements or fabric.</p> <p>Generally elements part of a later phase of development related to the continued occupation of the place, which provide evidence of historical layering without obscuring or threatening elements of greater significance.</p>	<p>Farm House 1 (subject to inspection, indicative grading only)</p> <p>Machinery Shed</p> <p>Garage (Iron Tank House)</p> <p>Pool associated with Tarwyn Park Homestead</p> <p>Horse training track</p>
<p>Intrusive</p> <p>Features and elements that detract from the identified significance of the place or appreciation of the place.</p>	<p>Tarwyn Park Homestead - Concrete verandah floor, lack of garden.</p>

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- Exceptional
- High
- Moderate
- Little
- Intrusive

Note: the patio has been substantially altered, however, the space and form, if not the fabric, of the verandah appears to be original



Note: the form of the verandah is of exceptional significance. The concrete verandah floor is intrusive and may be causing damage to the sandstone.

Note: the areas identified as having been modified in Section 2.7, where not graded in this figure, hold high significance.

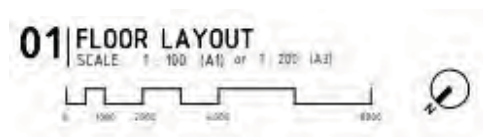


Figure 28 Significance of internal spaces of Tarwyn Park Homestead

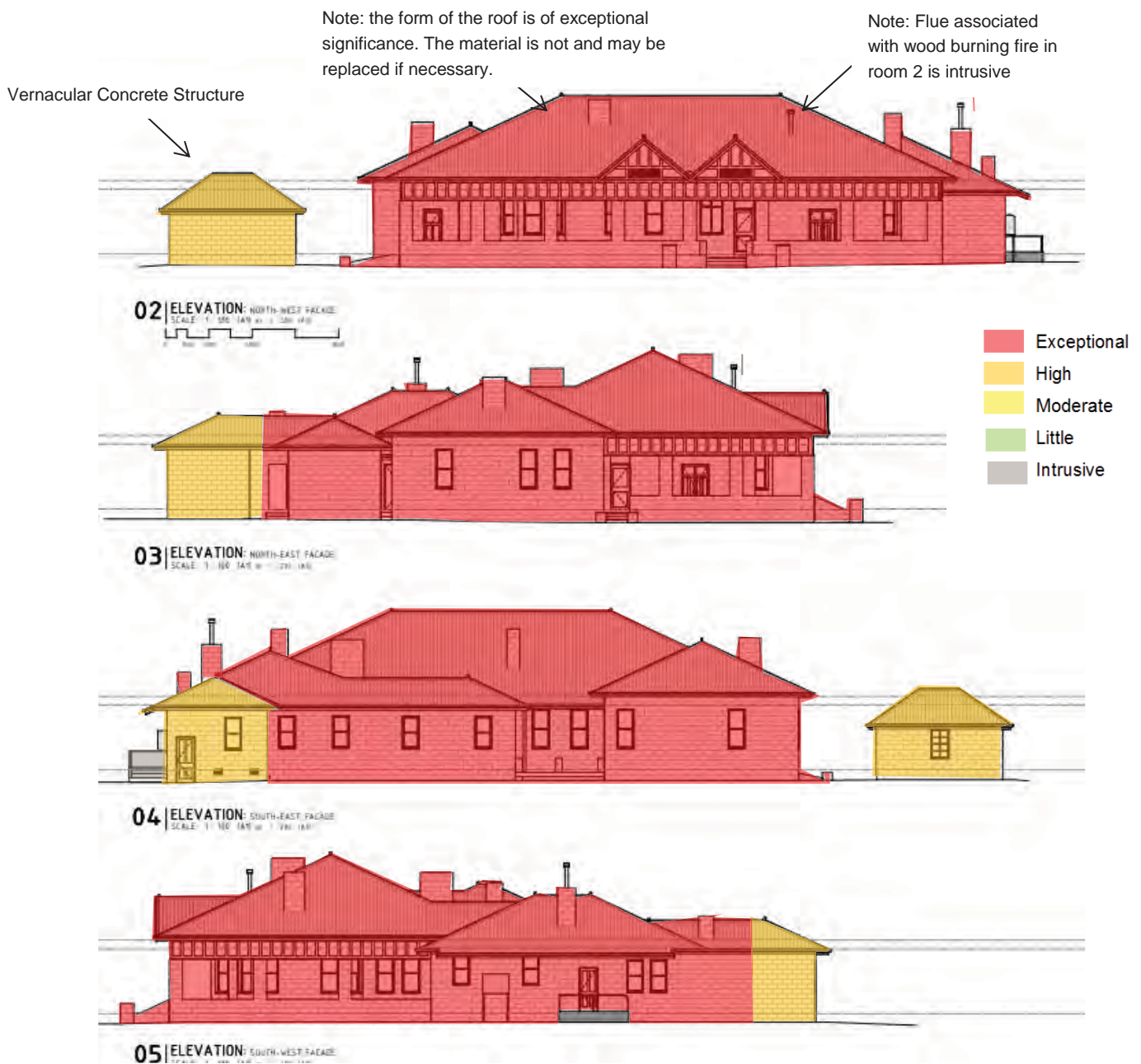
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Figure 29 Significance of the elevations of Tarwyn Park Homestead

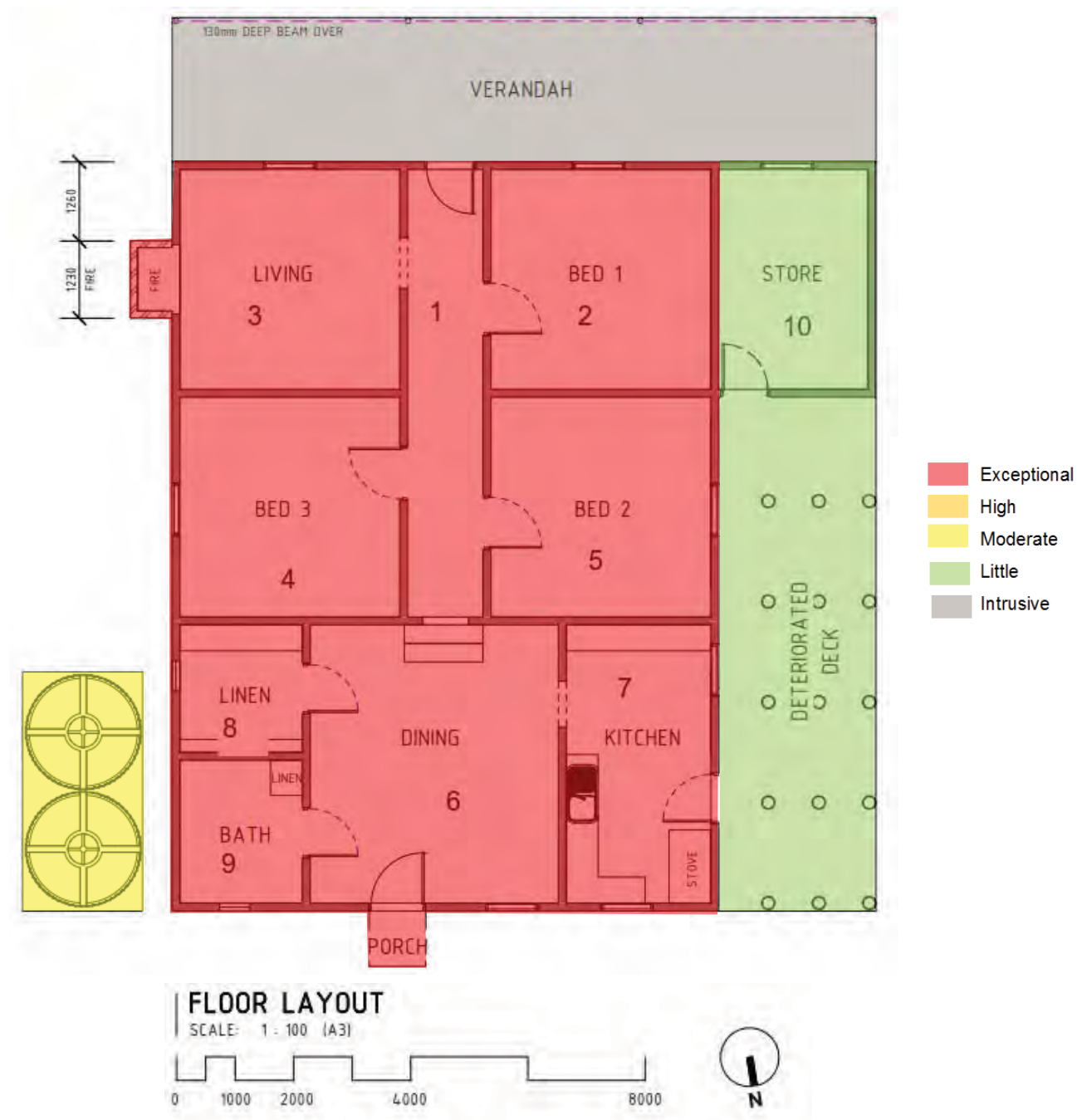
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Figure 30 Significance of internal spaces of Iron Tank House

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Figure 32 Significance of internal spaces of Farm House 2

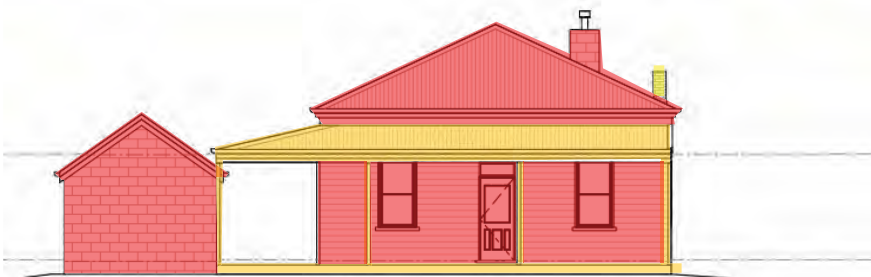
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04 | ELEVATION: NORTH-WEST FACADE
SCALE: 1:100 (A3)

Note:
Associated
Sandstone
Structure sits in
front of Farm
House 2 in this
view



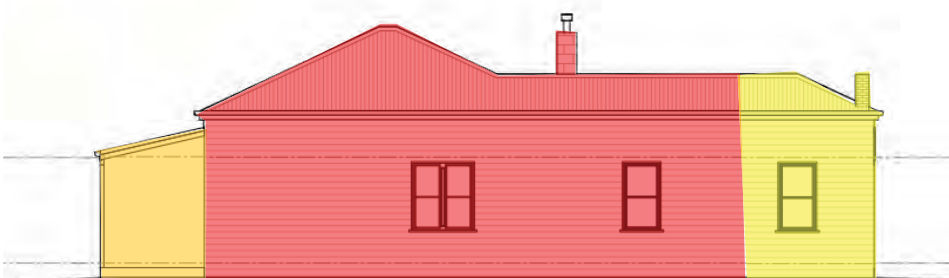
05 | ELEVATION: SOUTH-WEST FACADE
SCALE: 1:100 (A3)



02 | ELEVATION: SOUTH-EAST FACADE
SCALE: 1:100 (A3)

0 1000 2000 4000 8000

Exceptional
High
Moderate
Little
Intrusive



03 | ELEVATION: NORTH-EAST FACADE
SCALE: 1:100 (A3)

Figure 33 Significance of elevations of Farm House 2

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6.0 Priority conservation works

6.1 Preamble

The heritage significance of a place is often vested in the built structures. It is therefore important that these structures are maintained. The following sections identify works that need to be undertaken to preserve the identified heritage significance. The identification of these priority conservation works are based on observations made during the site inspections together with dilapidation surveys undertaken by WorleyParsons in November 2015 (report dated January 2016).

The following terms are used:

- urgent priority works should be undertaken within 3 months of Development Consent approval;
- high priority works should be undertaken within 12 months of Development Consent approval;
- medium priority works should be undertaken within 2-4 years of Development Consent approval;
- low priority works should be undertaken within 6 years of Development Consent approval; and
- optional works are desirable to remove intrusive elements or increase heritage significance but are not required to preserve the current heritage significance.

Items that may need attention prior to Development Consent approval have been bolded.

Table 7 Priority conservation works at Tarwyn Park Homestead

Element	Conservation Works	Timing
Exterior		
Roof	Check roof for leaks and repair as required. Repaint in same colour.	Urgent
Sandstone walls and verandah piers	Repair/stabilise sandstone blocks where possible. Replace blocks beyond repair.	High
Concrete verandah flooring	Remove concrete, which is inhibiting air flow to the subfloor space resulting in damp rot of the timber members. Replace with timber flooring.	Urgent
Half-timbering on northern, western and eastern elevations	Sand back and repaint to preserve timbers.	High
Replace panelling associated with half-timbering on northern, western and eastern elevations	Asbestos panels have been removed as they were hazardous. Panels must be replaced with a similar non-hazardous material.	High
Rear patio verandah	Inspect and repair/repaint timber members.	Medium
Interior		
Room 22 (walk-in wardrobe) – cracking to wall inside built-in wardrobe	Investigate cause of cracking and rectify root cause, if deemed to be a risk to the structural integrity (i.e. more than average foundation movement).	Urgent
Cracking walls – general	WorleyParsons noted numerous cracks in multiple rooms, but did not suggest a cause. The cause should be identified and, if feasible, rectified.	High
Find a use	Heritage buildings will deteriorate more quickly if they are empty. The Homestead is proposed to be periodically occupied as	Medium

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Element	Conservation Works	Timing
	part of its use as the Tarwyn Park Collaborative Research Centre.	
Room 2 (living room) and Hallway –	Remove the intrusive wood burning heater and flue. Repair hole in ceiling where the flue exits. Remove chimney from roof.	Optional
Room 2 (living room) carpet	Replace carpet to match – currently the room is carpeted in two types and patterns of carpet.	Optional

Table 8 Priority conservation works at Tarwyn Park Stables

Element	Conservation Works	Timing
Exterior		
Roof	Check roof for leaks and repair as required. Repaint in same colour.	Urgent
Sandstone walls	Repoint mortar between sandstone blocks where necessary. Repair/stabilise sandstone blocks where possible. Replace blocks beyond repair.	Urgent
Doors and Windows	Repair or replace with like for like to ensure the Stables are weather tight prior to boarding up for protection from blast impacts.	Urgent
Interior		
Stone walls, particularly to Stables 1, 2 and 3	Repair random rubble stone walls in Stables 1, 2 and 3. Walls may be lime-washed, if desired and following investigation of present lime wash to ensure compatibility of proposed new mortar.	High

Table 9 Priority conservation works to Vernacular Concrete Structure

Element	Conservation Works	Timing
Exterior		
Roof	Check roof for leaks and repair as required. Repaint in same colour.	Urgent
Walls	Repair/stabilise the concrete where possible. In consultation with a heritage conservation specialist, determine whether to reconstruct and render the missing sections or determine a means of stabilising the walls.	High
Doors and Windows	Repair or replace with like for like to ensure the structure is weather tight to avoid further degradation.	Urgent
Interior		
No works are proposed at this time until a use can be identified for the structure. It is deemed sufficient to make the structure weatherproof at this time.		

DRAFT**Table 10 Priority conservation works to Garage**

Element	Conservation Works	Timing
Exterior		
Roof	Check roof for leaks and repair or replace with like-for-like as required.	Urgent
Walls	Repair/stabilise the walls.	High
Doors and Windows	Repair or replace with like for like to ensure the structure is weather tight to avoid further degradation.	Urgent
Interior		
No works are proposed at this time until a use can be identified for the structure. It is deemed sufficient to make the structure weatherproof at this time.		

Table 11 Priority conservation works to Farm House 2

Element	Conservation Works	Timing
Exterior		
Roof	Check roof for leaks and repair as required. Repaint in same colour.	Urgent
Walls	Repaint existing weatherboards. Replace missing boards with like for like.	High
Doors and Windows	Check doors and windows for operability and weather tightness.	Urgent
Interior		
No works are proposed at this time until a use can be identified for the structure. It is deemed sufficient to make the structure weatherproof at this time.		

Table 12 Priority conservation works to sandstone structure associated with Farm House 2

Element	Conservation Works	Timing
Exterior		
Trees	Remove adjacent trees, which are causing damage to the structural integrity of the structure	Urgent
Roof	Check roof for leaks and repair as required. Repaint in same colour. Replace or repair guttering. If new guttering is installed, it should have a half-round profile. Ensure any downpipe does not discharge into the foundations.	Urgent
Walls	Remove concrete repairs as these are resulting in further damage. Repair with a mortar that is comparable to the original mortar in colour, composition and strength.	Medium
Doors and Windows	Check windows for weather tightness. Install a door that is historically relevant.	Urgent
Interior		
Concrete floor	Concrete floors can cause structural instability to sandstone structures. Remove	Medium

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Element	Conservation Works	Timing
	concrete floor in its entirety or cut away to leave a 10-15 cm gap from the sandstone walls.	

Table 13 Priority conservation works to Iron Tank

Element	Conservation Works	Timing
Exterior		
Roof	Check roof for leaks and repair as required. Repaint in same colour. Replace or repair guttering. If new guttering is installed, it should have a half-round profile. Ensure any downpipe does not discharge into the foundations.	Urgent
Verandah	Identify cause of verandah floor subsidence. If it is impacting on the structural integrity of the house, it should be removed and the subsidence repaired to ensure the integrity of the house. The verandah is a later addition and may be removed, together with the concrete so long as the removal does not de-stabilise the house more generally.	Urgent to optional, depending on outcome of assessment
Doors and Windows	Check windows for weather tightness. Install exterior doors that are historically relevant if necessary. Repair doors or windows wherever possible in preference to replacing the elements.	Urgent
Timber piers	Ensure soundness of timber support piers. Undertake necessary stabilisation works/repairs.	Urgent
Walls	Repaint existing weatherboards. Replace missing boards with timber boards. The vinyl boards should be removed and replaced with timber.	Medium
Sandstone Chimney	Remove creeper from the chimney. The creeper is negatively impacting the structural integrity of the chimney.	Urgent
	Investigate foundations around chimney and stabilise. Fix hole in floor to make weather tight. The chimney should be restored once the house is more generally stabilised.	Medium
Interior		
Pressed metal	Pressed metal should be retained in situ. The stockpile of pressed metal in room 6 must be retained for future conservation works.	Urgent
No further works are proposed at this time until a use can be identified for the structure. It is deemed sufficient to make the structure weatherproof at this time.		

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7.0 Opportunities and Constraints

7.1 Preamble

The following sections outline the constraints to the use of the site that arise from the significance of the property, from the proposed mining activities and the legislative requirements. It also highlights the opportunities to support and sustain the heritage significance of Tarwyn Park, within these constraints.

7.2 Constraints and Opportunities Arising from Statement of Significance

The following opportunities arise from the significance, in conjunction with the condition and integrity of the structures:

7.2.1 Tarwyn Park Homestead and associated outbuildings

The Homestead maintains a high degree of integrity and is of local significance. No alterations should be made to the room layout and no new penetrations should be made for windows or doors. Uses that maintain a residential aspect will be prioritised over purely administrative uses. A collaborative research centre, which will consist of offices with some bedrooms available for researchers is under consideration. This is considered an acceptable use of the Homestead during the life of the mine. Any modifications made to facilitate the use of the Homestead during the mining operation must be reversible. This includes wiring for lighting and telecommunications (refer to the policies in Section 8.2.1). The overall objective is for the Homestead to be returned to a residence supporting an agricultural or pastoral business following the completion of mine operations.

The Stables form an integral part of the significance of the property and will be retained and maintained throughout the life of the Project. It may be appropriate to adapt the Stables for use as offices or similar, but all works should be reversible so that it is possible to reinstate the Stables so as to be suitable for use for their original, intended use upon completion of mining. This will be the goal regardless of whether the Stables are ever used to house horses again.

The Vernacular Concrete Structure and the Horse Ring are contributory elements to the significance of the complex and will (should) be retained and maintained.

The Garage, Corrugated Iron Shed, Corrugated Iron Stables, Machinery Shed and support the significance of Tarwyn Park Homestead and the Stables by demonstrating the evolution of the property. The structures should be archivally recorded in line with the policies in Section 8.2.19 prior to demolition.

The Farm House 1 is within the Mine Disturbance Boundary and should be archivally recorded in line with the policies in Section 8.2.19 prior to demolition.

The pool to the north east of Tarwyn Park Homestead holds little significance and may be removed without further consideration, if desired.

There is an opportunity to instate the garden out the front (to the north) of the Homestead to address the visual impacts arising from the Central Coal Processing Plant.

The structures and implementation of NSF has been identified as holding significance. These elements will be maintained.

7.2.2 Iron Tank and associated outbuildings

Iron Tank house is of local significance as a good example of a modest farm house of the late 19th early 20th Century. It retains some unusual elements being the tray vaulted ceilings and the extensive use of pressed metal in the northern wing. The house should be retained, preserved and conserved.

It is understood that the history and condition of the house may constrain it's future use. However, attempts should be made to find a compatible use. It is understood any use of the house would require an upgrade to the facilities – for example, there is currently no toilet associated with the house. Any such upgrades should be developed in consultation with a heritage professional to ensure the historical and aesthetic significance of the house is not impacted. Should an extension be proposed, care must be taken with regard to the archaeological footprint identified with the former sandstone structure (refer to Section 8.2.6).

The garage associated with Iron Tank does not contribute to the heritage significance of the place and may be removed without further heritage consideration, if desired.

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7.3 Owner Requirements and Proposed Uses

Upon the receipt of the relevant approvals, KEPSCO proposes to conduct open cut and underground mining and associated activities on the Tarwyn Park and Iron Tank property and in proximity to the structures. This will constrain the use of the site in the following manner:

- Whilst KEPSCO is committed to maintaining reasonable access to the property for external study (as part of the Collaborative Research Centre proposal), there will be no direct access available to the general public to the Tarwyn Park Homestead on a daily/ad hoc basis due to the safety requirements around the operation of the mine. This does not constitute a change in access as the property has always been a private residence and operation;
- Access to the property will be limited, with all access to the Tarwyn Park Homestead requiring to sign in at the Mine Administration office. Access will be afforded via informal farm tracks and the existing crossing of Bylong River to the east of Tarwyn Park Homestead via East Link Road;
- No access to the Tarwyn Park Homestead or adjacent structures on the property will be permissible when blasting is occurring within 500 metres of these buildings;
- Any residents/users of Tarwyn Park Homestead must be made aware of the noise and air quality indicators in operation under Schedule 4, condition 20 of the Recommended Development Consent Conditions;
- Access to Tarwyn Park Homestead and Iron Tank may be impacted during times of flood (which in some events is currently the case with the Upper Bylong Road crossing of the Bylong River);
- Within the above parameters, KEPSCO intend to find a use for Tarwyn Park Homestead, which, subject to a feasibility assessment, may include:
 - Offices and or residential accommodation for mine staff;
 - A Collaborative Research facility for visiting researchers; or
 - A residence (consideration for post completion of open cut mining activities).
- KEPSCO are required to maintain or enhance the soil hydrology farming techniques (NSF) on Tarwyn Park under Draft Condition of Consent 68. This will support the identified heritage significance.
- KEPSCO are required to prepare a CMP for Tarwyn Park and Iron Tank under Draft Condition of Consent 46. This draft CMP fulfils that condition to the extent possible prior to Project approval.

7.4 Constraints and Opportunities Arising from Statutory Requirements

There are four key pieces of legislation that provide for the management of cultural heritage in NSW:

- *Environmental Planning & Assessment Act 1979*;
- *NSW Heritage Act 1977*;
- *National Parks and Wildlife Act 1974*;
- *National Construction Code*; and
- *Disability and Discrimination Act 1995 & 2005*.

The implications of each of these Acts for the management of Tarwyn Park and Iron Tank are discussed in the following sections.

7.4.1 Environmental Planning & Assessment Act 1979

The Bylong Coal Project is seeking State Significant Development Consent approval under Division 4.1 of Part 4 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). The development of the Project must adhere to the ultimate Development Consent conditions. The preparation of this Draft CMP has been undertaken in accordance with one of the Recommended Development Consent conditions as provided within the DP&E Assessment Report (May 2017).

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7.4.2 Heritage Act, 1977 (NSW)

The NSW Heritage Act 1977 (Heritage Act) was enacted to conserve the environmental heritage of NSW. As the property is not listed on the State Heritage Register (established under Section 32 of the *Heritage Act*), the *Heritage Act* is relevant only with regard to the protection of archaeological relics. Under Section 139 (1) of the Heritage Act, it is an offence to disturb or excavate any land knowing or having reasonable cause to suspect that doing so would or is likely to result in relics being disturbed. Areas of identified archaeological potential have been identified in Section 3.3 and relevant policies for their protection are provided in Section 8.2.10.

Any works associated with the Project (which will be subject of any SSD approval for the Project) will not require approval under Section 140 of the *Heritage Act* (refer Section 7.4.2) as Section 89J of the EP&A Act has the effect of switching off the *Heritage Act*. It is noted that any additional works on land owned by KEPCO which are not included as part of the SSD approval and that may impact on identified or potential archaeological relics will still require a separate approval under Section 140 of the *Heritage Act*.

7.4.3 National Parks and Wildlife Act (Aboriginal Heritage)

The NSW *National Parks and Wildlife Act 1974* (NPW Act), administered by OEH, is the primary legislation for the protection of Aboriginal cultural heritage in NSW. The NPW Act gives the Director General of OEH responsibility for the proper care, preservation and protection of 'Aboriginal objects' and 'Aboriginal places', defined under the Act as follows:

- an *Aboriginal object* is any deposit, object or material evidence (that is not a handicraft made for sale) relating to Aboriginal habitation of NSW, before or during the occupation of that area by persons of non-Aboriginal extraction (and includes Aboriginal remains).
- an *Aboriginal place* is a place declared so by the Minister administering the NPW Act because the place is or was of special significance to Aboriginal culture. It may or may not contain Aboriginal objects.

Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm them and includes a 'strict liability offence' for such harm. A 'strict liability offence' does not require someone to know that it is an Aboriginal object or place they are causing harm to in order to be prosecuted. Defences against the 'strict liability offence' in the NPW Act include the carrying out of certain 'Low Impact Activities', prescribed in Clause 80B of the *National Parks and Wildlife Amendment Regulation 2010* (NPW Regulation), and the demonstration of due diligence.

An Aboriginal Heritage Impact Permit (AHIP) issued under Section 90 of the NPW Act is required if impacts to Aboriginal objects and/or places cannot be avoided. Any works associated with the Project do not require approval under Section 90 (refer Section 7.4.2). Additional works on land owned by KEPCO, but not included in the SSD description still require approval under Section 90. An AHIP is a defence to a prosecution for harming Aboriginal objects and places if the harm was authorised by the AHIP and the conditions of that AHIP were not contravened. Consultation with Aboriginal communities is required under OEH policy when an application for an AHIP is considered and is an integral part of the process. AHIPs may be issued in relation to a specified Aboriginal object, Aboriginal place, land, activity or person or specified types or classes of Aboriginal objects, Aboriginal places, land, activities or persons. Section 89A of the NPW Act requires notification of the location of Aboriginal sites within a reasonable time, with penalties for non-notification.

Any works with the potential to impact on Aboriginal cultural heritage should be undertaken in accordance with the policies contained within *Bylong Coal Project: Aboriginal Cultural Heritage and Archaeological Management Plan*, as per Consent Condition 44.

7.4.4 National Construction Code

The National Construction Code (NCC), incorporating the Building Code of Australia (BCA) is a national set of building regulations with some state-specific variations. Compliance with the BCA is mandatory, although all requirements will apply to a given case. The NCC includes 'deemed-to-satisfy' requirements which are accepted as meeting the performance requirements. However, the NCC also makes provision for alternative solutions to meet the performance requirements, subject to satisfactory verification.

The *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) requires that all new building work be carried out in accordance with the BCA. In the case of an existing building, there is generally no requirement to comply with the BCA unless works are being carried out. An existing

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building is not required to comply with the BCA unless works, specifically alterations, additions or change of use, are proposed. On completion, the building in question will need to comply with the relevant performance requirements of the BCA (EP&A Regulation Clause 145). Where an existing building has a change of use, the structural capacity and fire safety of the building must be acceptable for the new use. Alterations to a building where the use remains unchanged must not reduce its structural capacity and fire safety (EP&A Regulation, Clause 143).

Exemption can be obtained from the requirements of the BCA under Clause 187 of the EP&A Regulation in some circumstances. However, in most cases there will be an alternative solution that satisfies the performance requirements of the BCA. As a result, applications for exemption are rarely sought. Any such application should be sought at development application stage and include advice from a qualified professional, experienced in the application of the BCA to heritage buildings.

7.4.5 Disability and Discrimination Act 1995 and 2005

The *Commonwealth Disability Discrimination Act 1995 and 2005* (DDA) makes it unlawful to discriminate against people on the grounds of their disability. Section 23 of the DDA requires non-discriminatory access to premises which the public or a section of the public is entitled or allowed to use.

Where the DDA does apply, heritage places are not exempt from it, although the Australian Human Rights Commission has advised that heritage significance may be taken into account when considering whether providing equitable access would result in unjustifiable hardship. Works proposed to be undertaken to comply with the DDA are not exempt from the need for approval under the *Heritage Act*. Any such application should be sought at development application stage and include advice from a qualified professional, experienced in the application of the DDA to heritage buildings. Further information can be found at:

<https://www.humanrights.gov.au/frequently-asked-questions-access-premises%20-%20heritage>.

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8.0 Conservation Policies

8.1 Preamble

Conservation can be regarded as the management of change by seeking to safeguard that which is significant to an item within the process. The conservation policies are intended to assist in the ongoing use, maintenance and conservation of the site, and aimed at ensuring that any proposed works respect its heritage significance.

8.1.1 The Burra Charter Approach

In Australia, the ICOMOS *Burra Charter and Practice Notes* is the pre-eminent document providing guidance for the conservation and management of places of heritage significance. The 2013 Burra Charter is available for download at <http://australia.icomos.org/publications/charters/>

The main principles of the Burra Charter include:

- A cautious approach to change - do as much as is necessary but as little as possible;
- Making use of all the skills and disciplines that can contribute to the care and study of a place;
- Preferring traditional techniques and materials for the conservation of significant fabric;
- Considering all aspects of cultural significance without unwarranted emphasis on any one value at the expense of others;
- Considering all the factors affecting the future of a place such as the owner's needs, resources, external constraints and its physical condition; and
- Policy for managing a place must be based on an understanding of its cultural significance.

8.2 Conservation Policies

8.2.1 Conservation in Accordance with Significance

Policy 1. All future works to the property must be guided by the Statement of Significance, as provided in Section 5.4, together with any additional research undertaken.

Policy 2. Significant fabric must be retained and conserved in accordance with recognised conservation principles and procedures, like those identified in the Australian ICOMOS *Burra Charter* 2013.

8.2.2 Adoption and Review of Conservation Management Plan

Policy 3. The policies in this CMP must be adopted by KEPCO as a guide to the future conservation and development of the site as proposed as part of the Bylong Coal Project.

Policy 4. This CMP must be reviewed and updated following the determination of any State Significant Development Consent for the Bylong Coal Project, following any listing of the property on the State Heritage Register or the Mid Western Regional Local Environment Plan and then every five years to ensure it remains relevant to the evolving use of the site and the progression of the Project and to ensure statutory compliance is maintained. The CMP should also be updated after significant changes to the site.

8.2.3 Minimising Impacts of Change on Significant Fabric

Change may be necessary to retain cultural significance (Burra Charter Article 15.1) and to ensure the requirements of KEPCO are fulfilled as they execute the Project as proposed under any condition of consent issued with the SSD consent. When change is being considered, a range of options should be explored to seek the solution that minimises the impact to heritage significance. Non-reversible change should only be undertaken when no other option is feasible and should not prevent future conservation. Existing fabric, use, associations and meanings should be adequately recorded before any changes are made to the place (Archival Recording – refer to the policies in Section 8.2.19).

Article 3 of the Burra Charter states that conservation is to be based on an understanding of the existing fabric of a place and must therefore involve only as much as is necessary, but as little as possible physical intervention in order not to distort the evidence embedded in the fabric of the buildings. A key objective therefore is to retain as much of the significant fabric as possible.

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Policy 5. The approach to changes to the fabric identified as of exceptional, high and moderate significance or otherwise identified for retention and conservation, requires a cautious approach of changing only as much as is necessary, but as little as possible.

Policy 6. Intervention for purposes other than conservation of the fabric must be restricted to areas of lesser rather than higher significance.

Policy 7. The graded heritage significance of the components of a place provides a basis for making conservation decisions. Refer to the schedule of significance of individual building elements in Appendix B. The following outlines permissible work, based on the significance of the component or space:

- Elements of Exceptional and High significance must be retained. The preferred conservation process to be used for fabric of Exceptional and High significance are: maintenance, preservation and restoration, in accordance with the Burra Charter;
- Elements of Moderate significance should preferably be retained. They could be adapted, as necessary. Removal may be acceptable in some special circumstances where the restoration or enhancement of an element of high or exceptional significance is restored (following archival recording);
- Elements of Little significance may be retained, adapted, or removed as necessary; and
- Intrusive elements should be removed or adapted to reduce their adverse impact on the significance of the place, as the opportunity arises.

Policy 8. Considerations of archaeological potential (refer to Section 3.3) should be incorporated into the planning stage of proposed changes, including new services, landscaping and new structures, with a view to avoiding or minimising impacts. Existing disturbed service trenches and previously disturbed areas should be used where possible to minimise disturbance. Any disturbance must be managed under the policies in Section 8.2.10.

8.2.4 Managing Change

Undertaking change must be done in a considered manner to retain the heritage significance of the place. This includes ensuring appropriate professional advice and expertise is sought.

Policy 9. Proposed changes or development beyond that contained within the State Significant Development Consent for the Bylong Coal Project must be considered within the context of the property as a whole. Piecemeal or incremental change must be avoided.

Policy 10. Relevant conservation advice from experienced practitioners must be used to assist the development of works proposals for the place, for assessment and works programs for the place, grounds and archaeological remains, for carrying out conservation and related works on significant elements and fabric and for updating the CMP.

Policy 11. Any repair, conservation or reconstruction works to significant elements or facades must be undertaken with appropriate direction by a suitably qualified heritage consultant, architect and/ or relevant materials specialist/s or conservator and with reference to historical documentation.

Policy 12. All work shall be carried out by suitably qualified tradespersons with practical experience in conservation and restoration of similar heritage items.

Policy 13. New work should be readily identifiable as such, but must respect and have minimal impact on the cultural significance of the place.

Policy 14. Reconstruction is appropriate only where a place is incomplete through damage or alteration, and only where there is sufficient evidence to reproduce an earlier state of the fabric. In some cases, reconstruction may also be appropriate as part of a use or practice that retains the cultural significance of the place. Reconstruction should be identifiable on close inspection.

Policy 15. Future maintenance of the site's landscape and plantings must be based on an understanding of the significance of the elements of the curtilage. See Section 8.2.11.

Policy 16. Change management must include the development and implementation of mitigation measures that are commensurate with the scale and scope of the works. Changes should be managed to mitigate adverse physical impact on the fabric of elements of

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exceptional, high and moderate significance and visual impacts on the setting of the place, by means such as:

- Adoption of the principle of reversibility;
- Avoid permanent physical damage to fabric and finishes;
- Avoid use on incompatible materials and finishes adjacent to significant fabric and finishes; e.g.: that cause staining; that cause erosion of masonry; that introduce dissimilar metals;
- Interruption of significant views and vistas, beyond those contained within the State Significant Development Consent for the *Bylong Coal Project: Visual and Landscape Analysis*.
- Interruption of significant views and vistas beyond those contained within the State Significant Development Consent for the Bylong Coal Project; and
- Compartmentation of significant spaces.

8.2.5 Joinery

Policy 17. Any joinery identified as being early or original must remain intact and extant.

Policy 18. Where joinery needs to be added to or relocated within significant spaces, it should match adjacent earlier joinery while being on close inspection distinguishable from the original. Wherever possible, existing joinery which can be demonstrated to have been moved from its first place of installation should be returned to that place.

8.2.6 Inappropriate Works

Policy 19. Previous changes, maintenance or repair works using inappropriate materials or methods should be replaced, when practicable or necessary, using materials and methods which replicate the original, or otherwise retain the significance of the fabric as a whole. This policy applies to intrusive elements such as fluorescent light fittings and electrical switches cut into architraves, if relevant.

Policy 20. The concrete used to repair the sandstone structure associated with Farm House 2 should be removed and the stonework repaired with a mortar that is comparable with the original mortar.

8.2.7 Masonry and Brickwork

Policy 21. Original and early stone masonry and brickwork should be retained intact and maintained. If new stone is required, a durable stone of suitable colour and texture should be used. Where brick repairs are required, the original bricks should be reused wherever possible, or recycled bricks of the same size and shape as the originals.

Policy 22. Masonry units should be laid with mortar of matching appearance, strength and composition to the original. Where previous repairs in synthetic stone or cement are causing the original materials to deteriorate, they should over time be replaced using the original material. Consolidants or sealants should not be used. Sandstone masonry repairs and repointing shall only be undertaken using lime mortar.

Policy 23. Original pointing and mortar material should be retained wherever possible. Repointing if required should be carried out to match existing work without widening of existing masonry joints, in a mortar of similar appearance and strength to the original. Areas of previous pointing using inappropriate materials or methods should be removed and reconstructed. Remove any previous repointing in cement rich and/or mismatching mortar.

Policy 24. Exterior sandstone facework should only be cleaned if it is necessary to remove deposits that are causing damage to the masonry surface. Cleaning methods should be gentle and non-abrasive and undertaken at mains pressure only. Great care should be taken during cleaning to preserve tooling marks and pointing.

8.2.8 Floors

Policy 25. Where evidence of stone flooring is present or discovered, any timber or concrete over floors should be recorded and removed, and the stone flooring should be retained and conserved or reconstructed. This is most likely relevant to the Tarwyn Park Stables only.

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Policy 26. Original timber floor boards should be retained in situ, and should be scrubbed rather than sanded so as to prolong their life. If clear floor finishes are to be applied, these should be traditionally formulated from natural oils and waxes. Modern hard synthetic finishes such as polyurethanes and epoxies should not be used.

8.2.9 Painting

Policy 27. All exterior and interior unpainted surfaces (including polished finishes) originally intended to be unpainted should remain unpainted. Exposed surfaces originally intended to be unpainted that have subsequently been painted, should when practicable be returned to their original state.

Policy 28. Exposed surfaces that were previously painted and originally intended for painting as a preservative measure should be repainted when needed bearing in mind technical and heritage requirements. Sound painted surfaces should be repainted without disturbing the original decorative surfaces underneath.

Policy 29. Research should be undertaken into the original and early decorative treatments of the interior of Tarwyn Park Homestead, Farm House 2 and Iron Tank. This research should be undertaken prior to any major removal of unsound old paint for redecoration or alteration. Significant early finishes should be preserved and interpreted at the place. Where appropriate, significant spaces should be repainted in a way which reflects the character of the original paint colour scheme.

8.2.10 Archaeological Management

Policy 30. The historical archaeological potential of the site must be conserved *in situ* where possible, including in the wall cavities, sub-floor areas and inter-floor, roof cavities and those areas identified as being of high and moderate archaeological potential as shown on Figure 24 and Figure 25.

Policy 31. An archaeological assessment by a suitably qualified historical archaeologist, must be carried out as part of the assessment process prior to Heritage Council of NSW approval of any works within the areas identified on Figure 24 and Figure 25. No assessment is required outside of these areas, unless further information has come to light indicating the probability of archaeological relics being extant within the proposed works area.

Policy 32. The aim of this archaeological assessment is to gather information about the previous layouts and character of the specified area to inform future conservation, interpretation and upgrading work, and determine if works will have an archaeological impact or whether further archaeological investigation is likely to be required.

Policy 33. An acceptable on-site investigation strategy (an archaeological methodology and research design) must be prepared and submitted to the Heritage Council of NSW as supporting documentation for any applications for excavation on this property.

Policy 34. All ground disturbance associated with future development of the site in areas not previously investigated through archaeological excavation must be undertaken consistent with the proposed archaeological methodology and any conditions of the archaeological approval. Recovered archaeological resources should be considered for use in interpretive programmes (see Section 8.2.18)

Policy 35. The progress of such excavation work must be appropriately documented (in written and photographic form).

Policy 36. Suitable clauses must be included in all contractor and subcontractor contracts to ensure that on-site personnel are aware of their obligations and requirements in relation to the archaeological provisions of the *Heritage Act 1977*. Contractor and subcontractor contracts must also specify obligations which need to be in compliance with the *National Parks and Wildlife Act 1974* relating to Aboriginal objects or places.

Policy 37. In the event that historical archaeological relics are exposed on the site, they must be appropriately documented according to the procedures outlined in the archaeological methodology accompanying the application for an excavation under the *Heritage Act 1977*. If not already the subject of a section 140 application that specifically addresses exposing, recording and removal of relics, approval under section 140 will be required.

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Policy 38. Should any unexpected archaeology be uncovered during excavation works, the Heritage Council of NSW must be notified in accordance with section 146 of the *Heritage Act 1977*. Works must stop and a suitably qualified archaeologist must be brought in to assess the finds. Depending on the results of the assessment, additional approvals may be required before works can recommence on site. It may be preferable that the relics are preserved *in situ* and the development modified to avoid or reduce impacts.

Policy 39. Where works are proposed to be carried out in close proximity to known or probable archaeological relics, strategies must be put in place to ensure that construction work and/or heavy machinery do not disturb or damage those relics.

8.2.11 Setting, landscaping, views and vistas

The landscape setting of Tarwyn Park contributes strongly to the heritage significance of the place as a whole. All new work (excluding that identified within the Bylong Coal Project EIS and associated approvals documentation) needs to avoid adverse impacts to significant views and the localised setting of the Tarwyn Park Homestead.

Potential impacts, beyond those associated with the Bylong Coal Project, on the setting of Tarwyn Park Homestead and Stables and key views to and from the site will need to be carefully considered in a heritage impact assessment process, as outlined in Policy 17 and 18. The significant views provided in Section 3.2.2 are to be conserved and the consideration of potential impacts of the proposed development will need to be included in development applications.

Policy 40. Impacts associated with the Bylong Coal Project to the setting, views and vistas are to be managed in accordance with the *Bylong Coal Project: Visual and Landscape Analysis* found in Appendix E.

Policy 41. Should vegetation screening be required between Tarwyn Park Homestead and views to the north, a formal to semi-formal garden within the current fenced area to the north of the Homestead would be appropriate subject to research of documentary and physical evidence for possible reconstruction or recreation. Planting trees in the paddocks is not appropriate as it will diminish the rural landscape setting.

Policy 42. Should screening be required to the west of Tarwyn Park Homestead and the Stables, a grassed earthen embankment that mimics the rolling hills would be appropriate. Fences similar to those extant on the property should be retained or instated to reinforce the rural nature of the views.

Policy 43. The extant fencing should be retained wherever possible as evidence of the former land use and as they break up the views.

Policy 44. Future designs for and work to garden areas must take into account available documentary, physical and/or archaeological evidence of earlier layouts, character and detailing, and interpret these as part of the conservation, adaptation and upgrading of these areas.

Policy 45. Re-landscaping, or introducing new landscaping, is acceptable provided it does not damage building fabric (for example the activity of tree roots, trunks and limbs, the raising of soil levels, and increased moisture and salts due to watering) or significant views.

Policy 46. Landscape works must be preceded by an archaeological investigation of the substrate. This is particularly pertinent as there is no documentary or physical evidence in relation to the former gardens. Any paving surfaces, early footings, drains, cisterns or other water storage features and cesspits identified must be retained *in situ*. Any significant surviving features, including early paving or surfaces, are to be retained and incorporated into the landscaping.

Policy 47. Any landscaping work that disturbs or removes soil and that may result in the disturbance of archaeology, such as excavation to lay paving or plant trees, may require an archaeological assessment prior to the works being undertaken.

Policy 48. Significant views to and from the site identified in Section 3.2.2 must be conserved. Change to items must not impede or obstruct a significant view and must not negatively impact upon a contributing element to a view. This policy does not apply to works subject of the Project's State Significant Development application number 14_6367.

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Policy 49. Significant views must be taken into account during the design phase and reviewed within the Statement of Heritage Impact for the proposed works. The Statement of Heritage Impact should outline what measures have been implemented to limit the impacts to the views. This policy does not apply to works approved within the State Significant Development Consent for the Bylong Coal Project. Refer to Policy 55 for the requirements of a Statement of Heritage Impact.

Policy 50. KEPCO are required to maintain or enhance the soil hydrology farming techniques (NSF) on Tarwyn Park under Draft Condition of Consent 68. This will support the identified heritage significance associated with the NSF method. Maintenance of structures and noxious weeds associated with NSF will be subject discussions with Department of Primary Industries.

Policy 51. Condition reports on the land should be undertaken at intervals recommended by an agri-scientist to record the long-term effects of Natural Sequence Farming on the landscape.

Policy 52. Should conventional farming methods be implemented, the condition reports should continue until the results plateau so as to allow a comparison of the two methods.

8.2.12 Alterations, Additions and New Structures

Alterations and additions, beyond those approved within the State Significant Development Consent for the Bylong Coal Project, need to be considered in terms of location, form, height and materials and the effect they have on the existing fabric in terms of significance, fabric changes and use changes. A formal mechanism for assessing the impact a proposal may have on the heritage significance of an item is a Statement of Heritage Impact (SoHI). The form of a SoHI is given in guidelines issued by the Heritage Division: *Statements of Heritage Impact* (NSW Heritage Office, 2002).

Policy 53. When undertaking works, ensure a Statement of Heritage Impact is prepared in line with the guide *Statements of Heritage Impacts* (NSW Heritage Office, 2002). The purpose of the document is to ensure that the proposed impacts are fully assessed and have sought to limit impacts to heritage significance and heritage fabric.

Policy 54. The Statement of Heritage Impact must be prepared with input from a relevant heritage specialist and using the relevant heritage guidelines. As there is no formal heritage listing, the Statement Heritage Impact may be approved internally by KEPCO, if there is no trigger for a Development Application to the Mid-Western Regional Council.

Policy 55. Any proposed permanent alterations and additions or new detached structures must be designed and constructed in a way that conserves, maintains and interprets the overall significance of the property during the life of the Project. This will require detailed consideration of the location, form, height and scale, as well as the colours and materials proposed and the impact they will have on the existing place, its context and building fabric in terms of its significance, fabric changes and use. See the Heritage Council of NSW's publication *Design in Context* for more information.

<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/DesignInContext.pdf>

Policy 56. Alterations or additions are not suitable to areas identified as of exceptional or high significance. These structures must retain their current form, unless additional research uncovers further information regarding an earlier configuration and reverting to said configuration will enhance an understanding of the significance of the structures.

Policy 57. Activities at the site should seek to use or adapt the existing structures on site. However, if the activities cannot be incorporated into the existing structures without significant impacts to heritage significance and fabric, new structures on the site may be suitable if:

- Changes do not impact areas and fabric of exceptional/high/moderate significance; and
- Changes do not impact significant views to and from the property;
- Changes do not obscure significant public views;
- Changes do not obscure significant elements of Tarwyn Park Homestead and Tarwyn Park Stables;

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- They are designed in a compatible manner and subordinate scale to the nearest adjacent structure;
- The design of new structures must complement, not compete with the architectural qualities of the nearest adjacent structure; and
- New structures must not replicate period detailing or architectural styles; this distorts the understanding of the historic evolution of the place.

Policy 58. Existing building envelopes of the exceptional, high and moderate significant components of Tarwyn Park Homestead, Tarwyn Park Stables are not to be increased upwards or outwards.

Policy 59. It may be appropriate to alter Tarwyn Park Stables for office or other purposes.

8.2.13 Ancillary Services

It is important that the original external appearance and form of the structures be retained. Ancillary structures for communication, energy efficiency, car parking etc. can be installed so long as their installation is planned to minimise damage to fabric, impact to archaeology and they are concealed from view within areas of lesser significance or located in inconspicuous positions and designed to be self-effacing (refer to Section 8.2.11).

Policy 60. Installation of external aerials and satellite dishes in areas of lesser significance and are not visually intrusive, may be acceptable, depending on the proposal.

Policy 61. Installation of solar panels at the rear of the property (in addition to those presently on the eastern roof plane of the south-western portion of Tarwyn Park Homestead), where there is no impact to significant fabric and are not visually intrusive, may be acceptable. Solar panels are not acceptable on the front facades of buildings, that is, on the northern and eastern elevations of Tarwyn Park, on the southern elevation of Farm House 2 and the southern elevation of Iron Tank House.

Policy 62. Installation of skylights that are discreetly proportioned and aligned with the plane of the roof, where there is no impact to significant fabric and are not visually intrusive, may be acceptable, depending on the proposal.

Policy 63. Miscellaneous additions, such as meter boxes, hot water systems, including those required by regulatory authorities, must be unobtrusively located. Where possible, these items should be located so as to minimise impacts to significant fabric and views.

- Note: it would be considered appropriate to maintain the hot water system on the eastern elevation as relocating it elsewhere is likely to involve impacting significant fabric to an unacceptable degree. The location of the air conditioning condenser on the northern verandah is considered inappropriate and if it requires replacing, options to relocate it to a more sensitive location should be considered.

8.2.14 Accessibility

The DDA makes it unlawful to discriminate against people on the grounds of their disability. Section 23 of the DDA requires non-discriminatory access to premises which the public or a section of the public is entitled or allowed to use. Where the DDA does apply, heritage places are not exempt from it, although the Australian Human Rights Commission has advised that heritage significance may be taken into account when considering whether providing equitable access would result in unjustifiable hardship.

Policy 64. Changes to facilitate equitable access may only be acceptable if they can be designed and implemented to affected areas of lesser significance rather than those of higher significance, and where all the options to create reasonable access have been conscientiously investigated (and this investigation is demonstrated). Advice from accessibility consultant's familiar with heritage issues must be used to assist in works of this nature.

8.2.15 Code Compliance

Compliance with building regulations should be achieved using their objectives and performance requirements rather than deemed-to-satisfy provisions of BCA. The structures on site may not comply with the deemed-to-satisfy requirements because of the original construction methods and materials

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used. The BCA permits alternatives to its deemed-to-satisfy requirements provided that these can be demonstrated to achieve at least the same level of compliance with its performance requirements. Relevant and experienced advice and practitioners must be used to assist in works of this nature.

Policy 65. Buildings must not be used for any purpose for which compliance with building regulations would adversely affect their significance. This policy is not intended to rule out, for example, the sympathetic installation of fire safety equipment to enable a building to continue to be used for housing.

Policy 66. Changes to achieve fire safety may be acceptable provided they are planned to occur in areas of lesser significance in preference to higher significance and that all alternatives are conscientiously investigated and demonstrated to have been investigated.

8.2.16 Adaptation for Structural, Service and Hazardous Materials Reasons

Adaptions for the following practical reasons must be done in accordance with the relevant policies in this policy framework, that address: intervention in the physical fabric and spatial qualities that are of exceptional, high and moderate significance; planning and oversight by a suitably qualified heritage architect; and installation by suitably experienced tradespersons.

- For structural reasons;
- For replacement of existing services;
- For installation of new services and equipment;
- To meet fire safety and other statutory requirements; or
- To deal with asbestos and other hazardous materials.

Policy 67. The insertion of new services (for instance for electricity, gas, drainage and communication, security) is acceptable, so long as their installation minimises damage to fabric and they are concealed from view within areas of lesser significance or located in inconspicuous positions or cavities and designed to be self-effacing. The shortest distance between two points should not be considered necessarily the best solution for the chasing of conduits.

Policy 68. The use of wireless technology for the introduction of new electronic services must be considered.

Policy 69. Ensure that evidence of historic services and fixtures is retained and actively conserved.

Policy 70. The replacement of existing services (for instance for electricity, gas, drainage, heating, cooling, communication and internal access) is acceptable, so long as removal and installation of replacement services minimises damage to fabric and they are concealed from view within areas of lesser significance or located in inconspicuous positions and designed to be self-effacing.

Policy 71. The chasing-in of new services to internal and external plastered walls or masonry in Tarwyn Park Homestead and Stables is not acceptable. Specialist heritage advice must be sought for the reticulation of new services and alternatives to chasing in must be explored with materials to match existing.

Policy 72. Stacks and drainage pipes as well as larger service pipes should be boxed in, if internal. Every alternative to chasing in should be explored e.g. the use of building cavities, in areas of lesser rather than higher significance. No UPVC is to be used in external areas of any of the structures as the material is not sympathetic to the heritage fabric of the buildings.

Policy 73. Stabilisation of fabric to prevent structural failure of existing fabric is acceptable, provided that alteration of significant fabric is minimised. Relevant and experienced advice from a heritage engineer will be required.

Policy 74. Adaptation of fabric identified as being of heritage significance, where shown to contain asbestos or other hazardous materials, is acceptable. Removal of fabric, where it cannot practically be sealed from future disturbance, is acceptable. In such cases, and where exposed to view in its normal configuration, fabric must be replaced with fabric of matching appearance. This is of particular relevance to the ceilings in Tarwyn Park Homestead. While

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the ceilings remain stable, they should be retained. Should they require replacement in the future, the panelled effect currently visible should be re-created.

8.2.17 Conservation, Maintenance and Repair of Fabric - ongoing

The maintenance, repair and conservation of fabric must be systematically managed into the future.

Policy 75. Any works identified in a Priority Conservation Works should be implemented as a matter of urgency to prevent further deterioration or damage to significant fabric and finishes. Works must be monitored by a suitably qualified heritage architect.

Policy 76. Regular Cyclical Maintenance Schedules should be implemented for each property to assist owners to plan ahead for the ongoing upkeep and conservation of their property. A copy of a general Cyclical Maintenance Plan is found in Appendix D.

8.2.18 Interpretation

Interpretation is an essential part of the conservation process. Opportunities to interpret the heritage values of the property through conservation works and new development must be incorporated in development proposals. Interpretation should be based on significant phases and themes:

- Aboriginal history;
- Early land grants;
- Herbert Thompson era and horse breeding; and
- Andrews' era and NSF.

Policy 77. Measures to appropriately interpret the major aspects of the significance of the place should be implemented. Interpretation must include all aspects of the place included in the Statement of Significance (refer to Section 5.5).

Policy 78. An interpretation plan should be prepared in accordance with Heritage Council of NSW Policy and Guidelines for such documents. The interpretation plan should be prepared by an appropriately experienced heritage consultant and set out the following information:

- Identify the potential audience for interpretive material;
- Require that the interpretive design and text be prepared by suitably skilled and experienced persons;
- Identify appropriate venues, which should be in more publicly accessible locations where people can appreciate the information presented;
- Establish the thematic structure to serve the “educational” purpose of heritage interpretation;
- Discuss options for interpretive media and methodology;
- Explore the potential for public open days;
- Identify items that are suitable for incorporation in the interpretive facilities: moveable heritage; discovered archaeological resources; building fabric of particular interest; images and documentary sources; and
- Provide guidelines for the format, content and design quality of the interpretive media.

Policy 79. Particular combinations of conservation, preservation, restoration and reconstruction of key significant elements, areas and fabric are the preferred method of meaningfully interpreting important attributes and associations of the property. Where adaptation is part of the conservation work, measures must be incorporated to show the location, character and/or role of removed or altered elements, including movable heritage.

Policy 80. Revealing previously hidden elements and fabric and defining new fabric and elements used as part of reconstruction and adaptation (as recommended in the Burra Charter and the general policies section of this report) are among the other methods of interpretation which may prove acceptable.

Policy 81. On closure of the mine, consideration should be given to interpreting the historical line of the driveway via plantings of peppercorn trees (*Schinus molle* or *S. areira*), as the

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original species to have demarcated the driveway. Poplars could be an acceptable alternative.

8.2.19 Archival Recording

Acceptable recording prior to significant works allows a proper record of the place to be made to record changes over time.

Policy 82. Any significant elements proposed for demolition or affectation by new works will be subject to archival photographic recording, this must include photography and measured drawings if required. Archival recording must be undertaken in accordance with the Heritage Council of NSW 2006 *Guidelines for Photographic Recording of Heritage Items*.
<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/info/photographicrecording2006.pdf>

Policy 83. Should work be proposed to Farm House 2, an archival recording should be undertaken. The archival record will be progressive as the false ceiling and timber wall panelling are removed to ensure any extant earlier surfaces are included in the archival recording.

Policy 84. Progressive archival recording may also apply to the Farm House 1, following inspection.

Policy 85. Copies of the Conservation Management Plan, Archival Recordings and Interpretation Plans must be lodged with The Mid-Western Regional Council, Mudgee, the Rylstone District Historical Society and the Heritage Council of NSW and made publicly accessible. A copy of any CMP must also be retained on site at all times for use by those responsible for the management and conservation of the place.

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Appendix A

Tarwyn Park and Iron
Tank History. Prepared
by Terry Kass

Tarwyn Park, Bylong, in Context – Historical, Local, Familial

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Abbreviations

<i>ADB</i>	<i>Australian Dictionary of Biography</i>
Bk	Book
CT	Certificate of Title
LPI	Land and Property Information, NSW
ML	Mitchell Library
NAA	National Archives of Australia
NLA	National Library of Australia
<i>NSWGG</i>	<i>New South Wales Government Gazette</i>
No	Number
OSD	Old System Deed
SANSW	State Archives, New South Wales
<i>SMH</i>	<i>Sydney Morning Herald</i>

Introduction

The property Tarwyn Park needs to be placed within various contexts. These contexts include its chronological setting placing it within the wider historical development of its locality. It also needs to be placed in the context of the property holdings of the different families or owners who held the property. Tarwyn Park will also be situated within the pattern of local landholdings in order to demonstrate its particular characteristics as a working rural property.

Contextual History of Bylong Valley

The parish of Bylong is part of County Philip. This county was one of the original Nineteen Counties, within which it was possible for landholders to acquire freehold title. The Nineteen Counties or Limits of Location beyond which no land would be alienated were established on 5 September 1826. Stockholders often ignored the boundaries of the Nineteen Counties taking their stock to land beyond the limits that was not occupied by any other stockholders, becoming 'squatters'. Within the Nineteen Counties, they had the option of purchasing freehold land as well as the possibility of leasing Crown Land legally. Only the original Aboriginal inhabitants stood in their way to be brushed aside, sometimes by mere pressure overwhelming them with livestock and white Europeans, or if they were recalcitrant, by force.

Though freehold settlement within the Nineteen Counties was possible, many stockholders could occupy land in the more remote parts of these counties on the basis of licences from the Crown. In addition, stockholders purchased key parts of their leased lands, in order to control access and significant water sources.

William Lee, who is believed to have been born at Norfolk Island, received one of the earliest grants near Bathurst. From his base at Kelso, he found good land, and accompanied William Lawson on his journey to Mudgee. Over the years, Lee acquired numerous runs in the Bathurst and Wellington districts.¹ Settlers sought to occupy land along the Goulburn River and its tributaries often by lease. Many also purchased land along those tributaries.² William Lee had occupied land in the Capertee Valley but was ousted by Sir John Jamison so he took his stock north to Bylong Valley and occupied the whole valley floor from Growee Gulph 15 miles north to Bylong Creek.³ John Tindale also took up land nearby.

William Lee selected strategic parcels of land so that he controlled access to good grazing and sources of water. On 6 May 1829, he was granted 2,000 acres at 'Bilong' on the basis of a warrant issued on 17 May 1822 allowing him to

¹ V Parsons, 'W Lee (1794? – 1870)', *ADB*, volume 2, pp 101-1-2

² 1-G665B, Crown Plan

³ D M Barrie, *Valley of Champions: The Story of the Widden Stud*, F W Cheshire, Melbourne, 1967, p 4

purchase land for £500. This became the original holding in Parish Bylong, now Portion 2.¹ On 10 December 1836, he was granted 840 acres, in 'County Hunter' for £210. This became Portion 80, in the Parish of Lee.² Then on 16 July 1841, he was granted 640 acres for £384. This became Portion 1, Parish Bylong, the core of Tarwyn Park.³ The strategic positioning of these grants controlled access into the valley, which became the Parish of Bylong. For many years, these strategic purchases enabled him to control much of the prime grazing land.

About 1840, his son John Lee assumed control of the Bylong property from his father. He changed the stock mix from sheep to cattle and horses.⁴ On 2 June 1867, by a deed of Partition, John Lee, of the District of Mudjee, esquire and his brother Thomas Lee, of Woodlands, of the District of Bathurst, esquire divided the lands that their father had placed in their control.⁵ John Lee's share included the Bylong holdings.



Figure 1 An overview of the topography of the area, as interpreted by the initial settlers and surveyors, is provided by this map of 1853. Source: George Philip & Son, *New South Wales*, Liverpool, Great Britain, 1853, NLA Map RM 847

¹ Grants, Vol 27 pp 95-97, LPI

² Grants, Vol 64 No 164

³ Grants, Vol 73 No 200

⁴ D M Barrie, *Valley of Champions*, p 4

⁵ OSD, No 444 Bk 78



Figure 2 This NSW map of squatters' holdings in 1860 showed no runs at Bylong since it was within the official Nineteen Counties. Source: *Reuss and Browne's map of New South Wales and part of Queensland showing the relative positions of pastoral runs, squattages, districts, counties, towns, reserves, etc, 1860, NLA Map NK 5928*

The Bylong Valley, particularly the Parish of Bylong had been protected from rapid settlement by its relative isolation. Bailliere's directory of 1866 and 1870 only mentioned the creek.¹ By the 1860s, John Lee as well as many other large scale pastoralists or squatters were threatened with losing control of their grazing land held on lease by the free selection legislation introduced from 1862 onwards. In order to protect his holdings, like many other squatters, he defended his runs by taking up Conditional Purchases or using Volunteer Land Orders to forestall the loss of grazing land.

John Lee took up numerous parcels of land in Parish Bylong and Parish Lee as Conditional Purchases. He also used Volunteer Land Orders to expand his property holdings. Volunteers in the colonial volunteer military forces who had served for five years under the *Volunteer Force Regulation Act* of 1867 (31 Vic No 5) were entitled to a free grant of 50 acres of land. Volunteers often sold these Orders to squatters avoiding existing controls on land selection. John Lee used Volunteer Land Orders to consolidate his holdings in the Parishes of Coggan and Lee, but most commonly in Parish Bylong.² In order to finance the acquisition of so many parcels of land, he mortgaged it, often to the Bank of New South Wales.

¹ *Bailliere's New South Wales Gazetteer and Road Guide*, Sydney, 1866 p 109; 1870, p 109

² L Burge, *The New South Wales military volunteer land grants*, Council of the New South Wales Military Historical Society, Kensington, 1976, pp 11, 34 50, 55, 57, 58, 59, 60, 61, 66, 72

Other settlers were also taking up land. John Tindale had acquired Portion 1 in the Parish of Budden in 1829, plus land in the Parish of Lee. Along with his son John Richard Tindale, he commenced taking up other land to protect his grazing interests. Similarly, the Gettens family, including John Thomas Gettens, James Gettens and Ernest Gettens also selected in the Parish of Lee. David Leighton selected land in 1875. John Davis selected land in the Parish of Bylong north of Dry Creek in 1889. It is unclear whether Leighton or Davis were bona fide selectors or dummies acting for John Lee. All their holdings were later transferred to John Lee.

Historic land-use during Bylong's early settlement was dominated by pastoral activities. Initially, the Lee family farmed sheep in Bylong. However, by the 1840s they had recognised the Valley's potential for horse and cattle-breeding and began to replace the sheep with shorthorn cattle (previously called Durham) and thoroughbred horses.¹ Very quickly the Bylong Valley became well-known in the colony for both cattle and horses. The Lee family, in particular, became famous for their Bylong shorthorn cattle with one newspaper article in 1875 asking "Who has not heard of the far-famed 'Lee cattle'? is a question simply and easily answered by the word 'nobody'".²

Responding to a need for horses in Australia in the nineteenth century, thoroughbred stallions and mares were imported to the colony from England, South Africa, America, and the Arabian Peninsula in increasing numbers. Throughout the nineteenth century, the Lee and Tindale families in Bylong were heavily involved in horse breeding for the burgeoning racing industry in Sydney and were responsible for four Australian taproots³. John Lee is considered one of Australia's greatest early stud masters and produced the first ever winner of the Great Metropolitan Handicap at Randwick in 1866 with a horse named *Bylong*.⁴ According to Barrie, John Lee was the originator of the yearling sales in Sydney, with his name frequently listed in early editions of the *Australian Stud Book* as the owner of numerous grand mares and stallions, including good importations.⁵ Three of the most well-known stallions owned by John Lee included *Kingston*, a pedigree horse, *Sir Hercules*, sire of *Bylong* and 1866 Melbourne Cup winner *The Barb*. Today, the skeleton of *Sir Hercules* is curated at the Australian Museum.

By mid 1875, a stone Church of England (St Stephens) was under construction at Bylong.⁶ The land for the church had been donated by John and Anthony Tindale.⁷ Some local stores were operating out of homesteads by the 1880s. A

¹ D M Barrie, *Valley of Champions*, p 4

² *Australian Town and Country Journal*, 1875

³ In the Australian context the taproot mare is the oldest female in the female line that was imported into the country.

⁴ *Illustrated Sydney News*, 1866

⁵ D M Barrie, *Valley of Champions*, p 6

⁶ *Maitland Mercury*, 15 May 1875, p 5

⁷ *Bylong Valley Centenary of Education 1884–1984*, Centenary Booklet Committee, c. 1984, p 13

post office operated by the Tindale family was in operation from 1880 onwards.¹ From October 1884, a provisional school operated at Bylong, with an average daily attendance of 11.6 pupils. In 1889 it became a halftime school with Coggan (8km north west of Bylong), meaning the two schools shared a teacher, but eventually closed after a number of families left the district.²

After John Lee's properties, including those in Parish Bylong, were sold, they were purchased by John Morrissey. Morrissey and his associate John Gerald Burke subdivided the land for sale. Victorians bought almost all of the lots.³ Alfred McIllree who was 'occupying' the property conducted the sale. Plans drawn at this time listed the 'Bylong Syndicate' as the owners and occupiers of this land. John Lee died at his home at Kelso in November 1909.⁴

On 27 September 1911, Alfred McIllree & Co, 56 Hunter Street, offered eight farms, part of the paddocks known as 'Scotchman's' and 'Heifer' measuring from 100 to 470 acres at Bylong for sale. The cheese factory was described as being 2 miles from the property.⁵ The sale plan showed that most of the lots were north of the current Tarwyn Park holding. Portions 43 and 44, which became part of Tarwyn Park were the only part of that estate included.⁶

¹ *Bylong Valley Centenary of Education 1884–1984*, Centenary Booklet Committee, c. 1984, p 13

² *Bylong Valley Centenary of Education*, pp 21-2

³ *Mudgee Guardian*, 11 July 1910, p 3

⁴ *Bathurst Times*, 27 Nov 1909, p 5

⁵ *Sydney Stock and Station Journal*, 8 Aug 1911, p 6; *Farmer & Settler*, 11 Aug 1911 p 2

⁶ *Bylong Valley Centenary of Education*, p 33; A copy of this plan is held at the Mitchell Library at County Phillip Subdivision Plans, ZCP/P2/5. However, staff could not locate this plan.



¹ Register of Firms, SANSW 2/8528, No 2806

Street, Sydney, with Alfred McIlree and Randal John Adams as principals.¹ The firm of A McIlree & Co handled the sale of the Bylong Dairy Farm lots. Though the sale plan alleged that the cheese factory had been operating for 10 years, this was false as revealed in a later press article.² It may have been referring to the butter factory at Rylstone that opened in January 1906.³

On 14 July 1910, it was reported that W H McIlree [sic] was establishing a cheese factory at Bylong to be managed by Allan Saxelby.⁴ W H McIlree was the brother of Alfred McIlree and was also shown as occupying some of Lee's former Bylong property.⁵ The cheese factory was operating shortly afterwards and a butter factory followed. In August 1912, Allan Saxelby registered his Bylong Bacon Factory.⁶ On 16 March 1914, Allan Saxelby and Henry Walker Mitchell registered 'The Bylong Cheese Factory' and 'The Bylong Estate'.⁷ The Bylong Butter factory was offered for sale on 24 February 1914, but no buyer was interested.⁸ The cheese factory closed in 1926 and the assets were sold on 18 and 19 December 1929.⁹

The Bylong area became known as a dairying district, in contrast to the earlier renown of the area for its shorthorn cattle and thoroughbred horses. Most of the dairy farms were in the Parishes of Lee and Coggan. During the 1910s, when Crown land was offered in the Parishes of Lee and Bylong, some the holders such as John Gerald Burke and Hugh Francis Cobrey conducted dairy farms on their properties.

This subdivision of the Lee holdings coupled with the provision of Crown Land attracted a significant influx of settlers. The sizable increase in the number of individual landholders was shown in the Stock Returns during the 1910s.¹⁰

Community facilities grew. Community facilities grew. In 1915, an official post office was set up at a property known as Almerta, owned by the Chapman John Burke called tenders for the erection of the Roman Catholic Church in December 1914.¹¹ It was constructed in the Parish of Bylong in 1915. A denominational cemetery serving that congregation was also established. In 1916, Percy William Tindale and Cecil Henry Tindale subdivided Portion 16, Parish Lee to create what became Bylong Village.¹² Bylong Hall opened in 1921.

Dairying continued in the area, whilst the purchase of a large estate by the Thompson brothers to create the Tarwyn Park property continued the tradition

¹ Register of Firms, SANSW 2/8541, No 18986

² *Mudgee Guardian*, 4 Jan 1906, p 22

³ *Mudgee Guardian*, 20 May 1912, p 2

⁴ *SMH*, 14 July 1910, p 6

⁵ DP 68996

⁶ *Mudgee Guardian*, 15 Aug 1912, p 8

⁷ Register of Firms, SANSW 2/8544, No 24214

⁸ *Mudgee Guardian*, 19 Feb 1914, p 17

⁹ *Mudgee Guardian*, 11 Dec 1929, p 24

¹⁰ Sands, John, *Directory*, 1910-20

¹¹ *Mudgee Guardian*, 10 Dec 1914, p 17

¹² CT 338 f 127; DP 8117

of horse studs in the district (see below for a detailed summary). Tarwyn Park became a significant stud, rearing many prize winning racecourses. Along with the Kia Ora stud at Scone, Tarwyn Park was recognised as one of the foremost breeders of champion racehorses.¹ James Thompson had been operating horse studs at Oakleigh and Woodlawn. His stud at Widden was a breeder of racehorses of great renown. His sons Herbert, Harold and Cyril had been breeding horses at Oakleigh.²

Much of the remaining Crown Land in the Parish of Bylong was taken up from the 1910s into the 1960s. Less attractive land was occupied under various lease arrangements such as Conditional Leases, Annual Leases and Crown Leases, all for pastoral settlement. The 1930 pastoral listing for those with addresses in Bylong showed James Gettens as holding 2,250 acres, much of which would have been in that parish. Others who were significant included Herbert Thompson with 1,517 acres, much of which would have been in the parish at Tarwyn Park. More recent settlers such as H F Cobrey and Paul Ribaux also held substantial acreages. The 1954 pastoral directory did not provide areas held, but showed that Mrs Burke, widow of John Burke, G H Gettens, V Glew and A Woolley probably all held land in the parish. Thomas Langhorne Fleming had become the holder of Tarwyn Park, altering its purpose from breeding racehorses to breeding cattle.

After years of politicking, the NSW Parliament passed an act in 1927 to construct the Sandy Hollow to Maryvale railway. Though the route had been surveyed in the late 1920s, construction work did not commence until 1936. Various impediments such as the war slowed construction. Work was so slow that it became a popular metaphor referring to anything that would never come to fruition.

The work was eventually abandoned due to the competition from road based transport. Nevertheless, in 1976, the Ulan coalmine found workable coal nearby. The New South Wales government approved construction of the line as the Ulan to Muswellbrook railway in 1980. It opened in 1982 costing \$105,000,000 to complete.³

The district continued as a pastoral area focussing on horse and cattle breeding into the 21st century.

Tarwyn Park – Land Ownership

The original land taken up by William Lee in what became the Parish of Bylong was 2,000 acres at 'Bilong' granted to him on 6 May 1829 on the basis of a warrant of 17 May 1822 allowing him to purchase this area of land for £500. This became the original holding in Parish Bylong, now Portion 2.⁴ A grant of 840

¹ T Kass, A History of Kia Ora Stud Scone, Final Report, Summit Projects Australia, 16 O'Connell Street, Sydney, June 2000

² D M Barrie, *Valley of Champions*, p 26

³ *Bylong Valley Centenary of Education*, p 51

⁴ Grants, Vol 27 pp 95-97, LPI

acres, in 'County Hunter' to William Lee, Bathurst, on 10 December 1836 for £210 became Portion 80 Parish Lee.¹ A grant of 640 acres to William Lee, of Clarendon, on 16 July 1841 for £384 became Portion 1, which was eventually the core holding of Tarwyn Park.²



Figure 4 The survey plan of William Lee's 640 acre grant that became the core of Tarwyn Park. Note that the north point is at the right hand side of the plan. Source: P.158.671, Crown Plan

On 27 October 1843, a Conveyance was signed with the following parties, 1st William Lee, 2nd Mary Lee 3rd John Dargin and Thomas Kite 4th Charles William Bligh.³ This allowed for the later distribution of land to his sons Thomas and John Lee. On 2 June 1867 by a deed of Partition, Thomas Lee, of Woodlands, of the District of Bathurst, esquire and John Lee, of the District of Mudgee, esquire divided the lands vested by their father.⁴ John Lee received the Bylong lands, which he used as a thoroughbred horse stud gaining a reputation for breeding fine horses.⁵

John Lee took up numerous parcels of land in Parish Bylong and Parish Lee as Conditional Purchases. He also used Volunteer Land Orders to expand his property holdings. Lee was able to protect his grazing by using his right to pre-emptive leases that attached to his freehold land under the terms of the *Crown*

¹ Grants, Vol 64 No 164

² Grants, Vol 73 No 200

³ RPA 18996

⁴ OSD, No 444 Bk 78

⁵ SMH, 24 Dec 1873, p 7

Land Occupation Act, 1861 (25 Vic No 2).¹ On 26 March 1867, Lee was allowed pre-emptive leases of 800 acres, 900 acres and 640 acres 'On Bylong Creek, Bylong'.² This permitted him to exclude settlers from some of his grazing land. On 11 August 1874, he was given pre-emptive leases over 5 parcels of 640 acres each in Parish Bylong.³

In addition, by judicious use of his right to Conditional Purchase and the application of Volunteer Land Orders, he acquired freehold over parcels in key locations. In 1865, he applied for six portions running along the creek and incorporating low-lying swampy land in order to control access to water. Portions 15, 16 and 17 were included.⁴ They were finally granted to him in 1877. In 1878, using some of the Volunteer Land Orders he had purchased, he cemented his control of further swampy land between Portions 1 and 2, which became portions 43 and 44.

¹ Sec 12 (5)

² *NSWGG*, 26 March 1867, p 788

³ *NSWGG*, 11 Aug 1874, p 2461

⁴ P.301.1524, Crown Plan

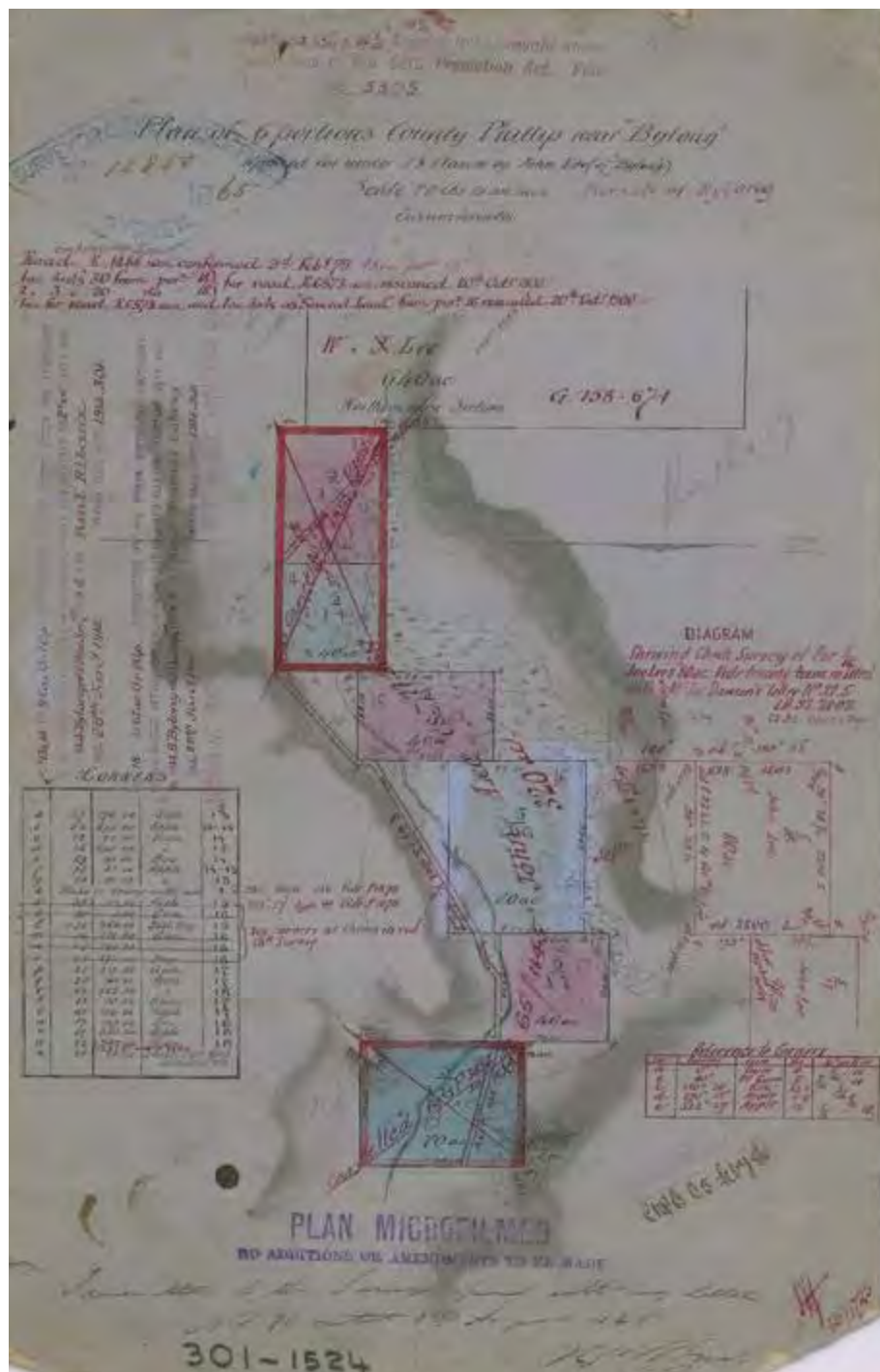


Figure 5 Crown survey of 6 Portions applied for by John Lee. It included Portions 11, 16 and 17.
 Source: P.301.1524, Crown Plan

In 1891, John Lee took a Conditional Purchase on 125 acres along Bylong Creek, immediately east of Portion 1, mostly of rough 'Barren Ridges' that became Portion 9.¹ A Conditional Lease for 375 acres north of that portion was also taken the same time becoming Portion 10. Though approximately half consisted of

¹ P.1877.2125, Crown Plan

'Barren Ridges', the rest included 'Rich open alluvial flat'.¹ In 1900, the 375 acres became an Additional Conditional Purchase.



Figure 6 The Portion survey of Portion 9. Source: P.1877.2125, Crown Plan

¹ P.1878.2125, Crown Plan



Figure 7 The Portion survey of Portion 10. Source: P.1878.2125, Crown Plan

In 1898 and 1899 John Lee's daughter, Ethel Constance Lee, took up Non-Residential Conditional Purchases on 244 acres 1 rood and 75 acres 3 roods north-east of Portions 43 and 44. These became Portions 48 and 51 respectively. About half of Portion 48 was ringbarked and grassy with some access to water

but the rest was 'Stony ridges' and a 'High rocky range'. Portion 51 included some of the rocky range but also extensive areas of 'Well grassed slopes'.¹ The rationale for selecting these parcels of land is less certain. They were not transferred to John Lee but were transferred to Hugh Cameron in 1908 when he purchased John Lee's Bylong estate. Cameron did not retain these Portions for long transferring both to James Mansfield Niall of Melbourne in 1908.



Figure 8 The Portion survey of Portion 48. Source: P.2360.2125, Crown Plan

¹ P.2360.2125; P.2439.2125, Crown Plans



Figure 9 The Portion survey for Portion 51. Source: P.2439.2125, Crown Plan

On 28 November 1906, the Bylong estate measuring 18,689 acres, owned by John Lee, was offered for sale by Pitt, Son and Badgery. The section in the Parish of Bylong was described as 11,400 acres 2 roods 31 perches, which was 8,949 acres 31 perches freehold, and 2,415 acres 2 roods Conditional Purchase land. The Bylong section was described as being the best most fertile land with 'mountains' as natural boundaries. It was proposed to sell the whole in one lot. Additionally, it was noted that its natural fertility ensured that even a small part

would 'support a family by dairying or intense forms of cultivation'. The improvements in 'Bylong proper' were described as a good stone cottage, ample out buildings, and yards, and it was divided into ten paddocks.¹

The estate did not sell immediately but a year later it was included in a conveyance of 6 September 1907. The parties were John Lee, of Bathurst, grazier as vendor and the Bank of NSW as mortgagee. The purchaser was Hugh Cameron, of Orbost, Victoria, grazier. It included numerous land parcels, both Old System and Torrens Title and some held as Conditional Purchases plus Annual Leases for £32,523/18/6.² The land in the Parish of Bylong was included.

Cameron only held it briefly, selling a large part on 30 June 1910. The sale included land held under both Old System and Torrens title. The Old System Conveyance was by Hugh Cameron, of Orbost, Victoria grazier, as vendor and the Australian Mutual Provident Society as mortgagee. The purchaser was John Morrissey, of Sackville Street, Hawthorn, Victoria, gentleman. The 'Bylong Estate' measured 13,437 acres 2 roods 31 perches freehold plus 320 acres Conditionally Purchased land as well as 421 acres held under Annual Lease. The sale price was £18,998/8/11.³

John Morrissey had previously been a Member of Parliament in Victoria. As well as being a significant investor in cattle and station properties, he purchased large estates, subdivided and sold them to small farmers.⁴ This was his plan for the Bylong estate. Previously, on 30 March 1910, he had signed an agreement that apparently related to the sale of Portion 1 to Alfred McIlree.⁵ John Morrissey then sold off various parts of that land. Alfred McIlree handled the sale of the Bylong Estate.⁶

Morrissey had purchased Bylong in association with John Gerald Burke.⁷ Burke, a Roman Catholic, acquired part of the Bylong land for himself to settle. On 15 January 1914, Burke took up a Settlement Purchase on Portion 75 of the Parish of Lee.⁸ He later purchased freehold land in the Parish of Lee from Morrissey, financed by a mortgage to Morrissey.⁹ John Gerald Burke became a stalwart of the Bylong Roman Catholic community playing a key role in the financing and construction of the Roman Catholic Church, which opened in August 1915. He was later buried in its cemetery.

A Real Property Application plan for Portion 80, Parish Lee dated 12 December 1912 showed the 'Bylong Syndicate' as the owner of Portion 1 Parish Bylong, with the occupier named as J Williams.¹⁰ John Morrissey signed the Real

¹ *ATCJ*, 26 Sept 1906, p 5

² OSD, No 547 Bk 840

³ OSD, No 298 Bk 916

⁴ *Scone Advocate*, 9 July 1926 p 7; *SMH*, 1 Dec 1926 p 19

⁵ Recited in RPA 18996; Contract not registered

⁶ *Sydney Stock and Station Journal*, 8 Aug 1911, p 6; *Farmer & Settler*, 11 Aug 1911 p 2

⁷ *Mudgee Guardian*, 11 July 1910 p 3

⁸ NRS 18096, Tenure Card, Sett Purch 14/3 Rylstone, SANSW

⁹ OSD, No 406 Bk 1300; No 407 Bk 1300

¹⁰ Ms.1462,3090, Crown Plan

When Hon John Morrissey, Sackville Street, Kew, Victoria, gentleman, signed his Real Property Application for Portion 1, Parish Bylong and the southern part of Portion 80, Parish Lee on 10 September 1913, it was 'occupied' by Alfred McIlree, Norwich Chambers, Hunter Street, Sydney.¹ Alfred McIlree, Hunter Street, Sydney, stock and station agent, was still the occupier of Portion 1 and part of Portion 80 on 24 November 1914 when he signed a declaration regarding improvements. Improvements on the land totalled £2,767/8/11 consisting of Fencing, Windmills, Wells, Clearing, Lucerne, Cultivation, etc at £2,013/2/1; Dwelling £472/5/8; Cow shed £127/7/10; and Dairy and sheds £154/13/4.²

A Certificate of Title for that land was issued to Hon John Morrissey, Kew, Victoria, gentleman on 3 July 1915. Alfred McIlree registered a caveat on 30 June 1915, referencing his earlier contract for the sale of that land. It was withdrawn on 31 May 1916.³ A backdated transfer of 19 May 1915 was registered from Morrissey to Frances Blake McIlree, St Kilda, Victoria, spinster; Margaret Elizabeth Anthoness, Mosman, wife of George Trimble Anthoness; Ella Isabella Ivens, wife of Percy Charles Martin Ivens, St Kilda, Victoria, indent agent; and Ida Ethel Evans, wife of Brindley Evans, Seddon, Victoria, bank clerk for £5,760 as tenants in common.⁴

That group of owners transferred the 1,001 acres 15¼ perches to Herbert Stanley Thompson and James Cyril Thompson, graziers of Rylstone as tenants in common for £12,013/2/11 on 26 September 1919.⁵ James Cyril Thompson transferred his half share to his brother on 11 September 1923.⁶

By mid 1920, Thompson Bros were building a large stone homestead at Bylong, with 22 rooms to the design of architect Harold Hardwick, of Mudgee.⁷ Herbert Stanley Thompson made the property known since at least 1918 as Tarwyn Park, his home and his principal thoroughbred horse breeding establishment. The first detailed listing of 'Commercial' entries for Bylong in Sands Directory was for 1919, when it listed James C Thompson at Bylong. He continued to be listed at Bylong until 1923.⁸ This listing may have related to his Wingarra stud. Herbert Thompson was not listed at Bylong until 1924 but James Thompson was no longer listed there.⁹ From 1925 to 1929, both Herbert and James Cyril Thompson were both listed at Bylong.¹⁰ Wise's 1936 Directory listed both Herbert and 'Cyril Thompson' at Bylong. Herbert's address was 'Bylong Stn'.¹¹

¹ RPA 18996

² Statutory Declaration, 24 Nov 1914, Alfred McIlree, Hunter Street, Sydney, stock and station agent, in NRS 17513, Land and Property Information, Primary Application Packet, RPA 18996

³ Dealing A184958, LPI, NSW

⁴ CT 2586 f 99; Dealing A196725

⁵ CT 2666 f 52-55; Dealing A488290

⁶ CT 2974 f 120

⁷ *Mudgee Guardian*, 10 June 1920, p 8

⁸ Sands, *Directory*, 1919, p 65A; 1920, p 65A; 1921, p 70A; 1922, p 68A; 1923, p 67A

⁹ Sands, *Directory*, 1924, p 52A

¹⁰ Sands, *Directory*, 1925, p 57A; 1926, p 61A; 1927, p 66A; 1928, p 71A; 1929, p 73A

¹¹ *Wise's New South Wales Post Office Commercial Directory*, 1936, Sydney p 441

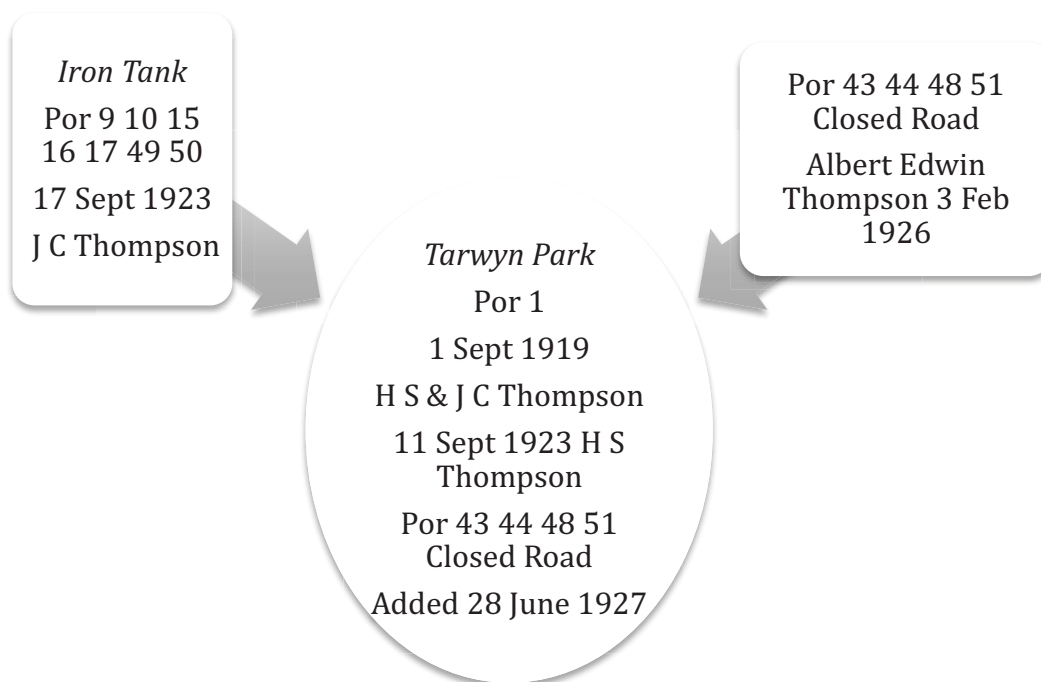
The pastoral listing in Sands Directories provides some concept of the scale of Herbert Thompson's activities at Tarwyn Park, but they are difficult to disentangle from possible crossover of data relating to his brother James Cyril Thompson.

Thompson Brothers Pastoral Holdings in Sands Directories

Year	Owner	Station	Post town	Horses	Cattle	Sheep	Acreage
1920	Thompson Bros		Rylstone	260	689 [?]	200	5800
1921	Thompson Bros		Rylstone	217	320	150	7800
1922	Thompson Bros		Rylstone	4	60		714
1923	Thompson H S		Rylstone	266	483	3829	7200
1924	Thompson Brothers	Tarinya Park [sic]	Rylstone	260	363	949	7000
1925	Thompson H S		Rylstone	211	180	-	3000
1926	Thompson H S	Oakley	Rylstone	312	62	102	3200
1927	Thompson H S		Rylstone	247	256		3006
1928	Thompson H S		Rylstone	301	75		3100
1929	Thompson H S		Rylstone	250	832	102	3200
1930	Thompson H S		Rylstone	120	37	140	1517
1930	Thompson J C		Rylstone	15	167	9926	6301
1931	Thompson H S		Rylstone	165	54	150	1570
1931	Thompson J C		Rylstone	22	366	5034	6400
1932/3	Thompson H S		Rylstone	165	54	150	1570
1932/3	Thompson J C		Rylstone	22	366	5034	6460

Source: Sands, *Directories*, 1920-1932/33

The following diagram shows in simplified form the process of amalgamation of Portions into Tarwyn Park and Iron Tank.



On 8 February 1926, the Mudgee press announced that Albert Thompson of Carema had sold his share in Widden stud and bought a property adjoining Tarwyn Park owned by his cousin H S Thompson.¹ This property extended across the Parishes of Coggan, Lee and Bylong but was mostly in the latter parish with a total area of 5,365 acres 1 rood 20¾ perches. It included Portions 43, 44, 48 and 51 held earlier by Henry Wallace McIlree who transferred these portions to Otway Rothwell Falkiner, of Boonoke, North Widgiewa, pastoralist on 21 September 1923. Falkiner transferred the whole to Albert Edwin Thompson, of Kerrabee, grazier on 3 February 1926.² On 28 June 1927, Albert Edwin Thompson transferred part of Portion 43, Portion 44, part of Portion 48 plus all of Portion 51 and 9 acres 2 roods being a Closed Road with a total area of 236 acre 2 roods to Herbert Stanley Thompson, Tarwin Park, Bylong, grazier, so that it became part of his holding.³ The combined area of Herbert Stanley Thompson's holdings was 1,236 acres 2 roods 15¼ perches so other holdings were taken into account when recording the acres he held in the Sands Directory.

Meanwhile, John Morrissey had transferred Portions 9, 10, 15, 16, 17, 49 and 50 to Francis Edward Ingram, Rylstone, grazier, on 24 May 1922 (see below). These Portions were transferred to James Cyril Thompson, Rylstone, grazier, on 17

¹ *Mudgee Guardian*, 8 Feb 1926 p 9

² CT 3505 f 215

³ CT 3505 f 215; CT 1353 f 144; CT 4074 f 211

September 1923.¹ The listing of James Cyril Thompson in the Sands Directory pastoral sections would relate to his Widden stud, but probably also included the acres he held in Parish Bylong near his brother Herbert.

After Herbert Thompson purchased part of John Lee's former Bylong estate, which he called 'Tarwyn Park', he continued to operate his stud at Oakleigh at Widden.² In 1930 Herbert Thompson still owned Oakleigh horse stud at Widden established by his father, plus Tarwyn Park over the hills from Oakleigh. He also owned Sunnyside, which he conducted with P C Basche, as a shorthorn cattle and sheep property.³

On 20 April 1939, the advantages of Tarwyn Park were highlighted since 'A fine chain of wells provides a good water supply and the standard of the lucerne in its paddocks is exceptionally high. Every conceivable modern improvement has been installed and the accommodation for the stock is the most up-to-date lines.'⁴ The attraction of the district to thoroughbred horse breeders was demonstrated in June 1939 when Reginald Charles Allen purchased a 700 acre property in the Bylong Valley with good lucerne next to Tarwyn Park where he would conduct a horse stud.⁵ He was already known as a notable breeder.⁶

Late in 1943, Herbert Thompson fell seriously ill and became an invalid afterwards.⁷ The expense of maintaining Tarwyn Park as well as the drain on his finances caused by prolonged medical attention depleted his income. The overdraft from his bank increased. On 24 December 1952, it was reported that Thomas Langhorne Fleming had purchased Tarwyn Park of 1840 acres with possession on 28 February 1952.⁸ On 23 December 1951, a press report stated that Tarwyn Park included 'a 14-room stone homestead surrounded by a well-kept garden and 1840 acres of rich grazing land'.⁹ The formal transfer when Thompson transferred Tarwyn Park to Thomas Langhorne Fleming, Bylong, grazier was dated as 13 August 1951 but was not presented to the Land Titles Office until 19 August 1952 and was not entered until 3 June 1953.¹⁰ Herbert Thompson purchased a property on the Nepean River at Castlereagh on 29 February 1952.¹¹ That property was managed for him whilst he remained in care in Sydney.

¹ CT 1390 f 30; CT 1945 f 7; CT 1945 f 8; CT 3364 f 53; CT 4638 f 178

² D M Barrie, *Valley of Champions*, p 28

³ *Mudgee Guardian*, 4 April 1930, p 17

⁴ *Mudgee Guardian*, 20 April 1939, p 15

⁵ *SMH*, 27 June 1939 p 6

⁶ CT 5095 f 240; See also CT 6861 f 92; The property was Portions 19 and 38 Parish Lee with an area of 476 acres 2 roods 32 perches. Allen was a Sydney solicitor. In 1941, he transferred it to Willowglen Pty Ltd, which may have been his own company. In 1954, Willowglen transferred the Bylong properties to Brian Reginald Pluck, grazier of Bylong.

⁷ *Mudgee Guardian*, 18 Nov 1943, p 2

⁸ *Daily Examiner*, (Grafton), 24 Dec 1951 p 3

⁹ *Truth*, 23 Dec 1951, p 3

¹⁰ CT 3535 f 152; CT 4074 f 211

¹¹ C T 5539 f 199-200

Thomas Langhorne Fleming had already achieved considerable notoriety. On 28 June 1951, his wife Betty died from cyanide poisoning in a car being driven by Thomas Langhorne Fleming between Willow Tree and his property at Mount Parry. After a sensational trial at Tamworth involving another woman, he was acquitted of his wife's murder in September 1951. He vowed not to return to his property, which was handed to his brothers.¹ With a new wife, he moved to Tarwyn Park, which he was converting into a cattle stud.² Despite that, champion racehorses, such as *Monte Carlo*, were still on the property in June 1957.³

According to oral information collected from Stuart and Anne Andrews, Fleming was later forced to sell Tarwyn Park after being sued by a neighbour for diverting the creek. Confirmation of this has not been located, but as long time local residents, their information is likely to be true. Tarwyn Park was originally offered for private sale by Dalgety and Co Ltd but this does not appear to have been successful.⁴ So, on 30 October 1959, Dalgety and Co Ltd offered it at auction in three separate parcels. The second and third parcels were not part of the core property. The second parcel, the 'Church' block measured 365 acres along Lee Creek. The third, the 'Cousins Gully' block was 280 acres situated 2 miles from the homestead. The 'Homestead' block measured 844 acres (almost exactly the same as in the valuation by the Valuer-General – see below). It was described as:

COUNTRY. 250 acres of RICH LUCERNE COUNTRY, which will grow lucerne without irrigation in any season, remainder is flat to low slopes. 400 acres under cultivation, including 50 acres established lucerne, 25 acres grazing lucerne, 74 acres oats, 250 acres wheat (28 acres with lucerne), and most of the balance of the area is rich cultivable land.

WATERED by double frontage Bylong Creek, 6 wells, 1 bore, a water hole on a Spring and 1 dam.

FENCING: Netted boundary: subdivided 18 paddocks (plain wire or pig mesh)

BUILDINGS: Spacious Sandstone Homestead with all modern conveniences and comprising 4 bedrooms, etc, lounge, dining, office, foyer and large hall, bathroom, toilet, kitchen (Aga 4 oven stove). Wall to wall carpets, 32v Electric light plant, Agamatic hot water system; septic sewerage. Servants' dining room and 2 bedrooms, bathroom, etc. Three workmen's cottages. Large stone stables of 14 horse boxes, feed, harness rooms, etc, covered round yard. Shearing shed for 2 stand plant, large hay shed and other sheds, etc.⁵

The following owner was Harold John Arthur Howes, Bylong, company director and grazier, to whom Tarwyn Park was formally transferred on 14 March 1961.⁶

¹ *Daily Advertiser*, (Wagga Wagga), 28 Jan 1952, p 1; *Northern Star*, 7 Sept 1951, p 1; *Truth*, 9 Sept 1951, pp 1, 8-10

² *Daily Advertiser*, (Wagga Wagga), 28 Jan 1952, p 1; *Armidale Express*, 28 Jan 1952, p 8

³ *SMH*, 12 June 1957, p 12

⁴ *SMH*, 28 Aug 1959, p 27

⁵ *SMH*, 9 Oct 1959, p 21

⁶ CT 6681 f 202

When the Valuer-General assessed the property on 16 January 1962, the improvements were recorded as a stone homestead, cottages, farm buildings, and a water supply.¹ Howes died at Woollahra on 31 March 1989.²

Howes transferred the property to Imijt Pty Ltd, whose address was c/- Peat Marwick Mitchell & Co, Australia Square, Sydney for \$96,000 on 29 November 1974.³ Imijt Pty Ltd had previously been registered in NSW on 24 May 1974 and was deregistered in February 2002.⁴ This was apparently the company established by Peter Andrews to acquire Tarwyn Park. By June 1975, Peter Andrews and his wife Ann were busy reviving the 'tired veins' of the property, 'clearing away the rubble of stagnancy', installing his Melbourne Cup winner *Rain Lover* on the property after shifting from his Glen Acres stud, at One Tree Hill, South Australia.⁵

Peter Andrews used Tarwyn Park to apply the principles of 'Natural Sequence Farming' to rehabilitate the degraded pastures of the property to revive the natural fertility of the land. It became a showpiece of the success of such innovative environment techniques.⁶ On 26 May 1999, Peter Andrews' son, Stuart Peter Andrews and Megan Leisha Andrews became the new owners.⁷

Appendix 1 shows the changes in ownership of the Portions that make up Tarwyn Park.

Iron Tank Property

John Morrissey transferred Portions 9, 10, 15, 16, 17, 49 and 50 to Francis Edward Ingram, Rylstone, grazier, on 24 May 1922.⁸ Ingram appears to have had little interest in the Bylong property. He died on 1 July 1952 at Coonamble aged 87. His rural property at Coonamble was then in a rundown condition.⁹

Ingram had held these portions briefly before transferring them to Herbert's brother, James Cyril Thompson, Rylstone, grazier on 17 September 1923. Those Portions remained in his hands until they were transferred to Andrew Woolley, Bylong, farmer and grazier on 2 December 1949.¹⁰ When assessed by the Valuer-General on 21 January 1957, the property, owned by Andrew Woolley, 'Helvetia' Bylong, which also encompassed Portions 11, 52, 67, 70 and 71 included the following improvements - 2 galvanised iron cottages, with galvanised iron roofs, a fibro cottage with a galvanised iron roof, farm buildings, fencing, clearing, a

¹ Valuer-General, Valuation List, SANSW 3/11585, ph Bylong, No fol 69

² NSWGG, 18 Aug 1989, p 5815

³ CT 8299 f 14; Dealing P125788

⁴ ASIC company register search, 23 Oct 2017

⁵ SMH, 11 June 1975, p 15

⁶ <http://www.naturalsequencefarming.com/phpBB3/viewtopic.php?t=265>. Accessed 23 Oct 2017; <http://tarwynpark.com/page/2/>. Accessed 23 Oct 2017

⁷ CT 8299 f 14

⁸ CT 4638 f 178; CT 4638 f 185; CT 6216 f 136; CT 8331 f 213

⁹ NRS 13660, Supreme Court, Probate Packet, SANSW Series 4 No 399394

¹⁰ CT 1390 f 30; CT 3364 f 53; CT 4638 f 178; CT 4638 f 185; CT 4867 f 114; CT 6216 f 136;

water supply, and lucerne. He also held Portions 12 and 72 on Conditional Lease, with clearing, fencing and ringbarking.¹

On 11 September 1970, this property later known as Iron Tank, was transferred by Andrew Woolley, Bylong, grazier to Zivorad Jack Yagodich, Bylong Valley, farmer and grazier and his wife Alison Ann Yagodich, including Portions 9, 10, 15, 16, 17, 49 and 50.² Woolley died at Evans Head on 20 September 1979.³ On 23 January 1978, Zivorad (Jack) Yagodich murdered his wife Alison at their property 'Zora' at Bylong.⁴ She was cremated at Northern Suburbs Crematorium on 31 January 1978.⁵ The inquest was held in Mudgee on 24 March 1978. The inquest papers are not available. Zivorad (Jack) Yagodich committed suicide by hanging at Long Bay Gaol on 19 June 1978.⁶

The property was transferred to Peter John Andrews, Bylong, grazier on 30 November 1988. It was later transferred on 26 May 1999 to Stuart Peter Andrews and Megan Leisha Andrews.⁷

See Appendix 2 for a Tabulation of ownership of the Portions included in Iron Tank

Property Owners and Their Families

William Lee

William Lee is believed to have been born at Norfolk Island about 1794 to a convict woman named Sarah Smith. William was known for many years as William Pantoney junior. In 1818, magistrate William Cox recommended that he receive a grant near Bathurst under his new name William Lee. From Lee's base at Kelso, he found good land, and accompanied William Lawson on his journey to Mudgee. Over the years, Lee acquired numerous runs in the Bathurst and Wellington districts. He was a member of the first Legislative Assembly, from 1856 to 1858 as Member for Roxburgh. He died at Kelso on 18 November 1870. He had previously married Mary Dargin, the daughter of prominent Windsor settlers in 1821. His sons were John (see below), Thomas, William and George, all of whom occupied pastoral runs across New South Wales.⁸

John Lee

John Lee was the son of William Lee and Mary Lee (nee Dargin), and was born in 1825. About 1843, when aged 18, his father gave him control of the Bylong estate, which was then in 'a very isolated position, without many improvements'.

¹ Valuer-General, Valuation List, SANSW 3/11585, ph Bylong, No 73, 74

² CT 4638 f 178; CT 4638 f 185; CT 6216 f 136; CT 8331 f 213

³ Australian Cemeteries Index, Accessed 20 Oct 2017; *Northern Star*, 31 Oct 1979

⁴ Alison Ann Yagodich, Death Certificate, 1978

⁵ *SMH*, 28 Jan 1978, p 34

⁶ Zivorad (Jack) Yagodich, Death Certificate, 13878/1978

⁷ CT 6216 f 136; CT 8331 f 213

⁸ V Parsons, 'W Lee (1794? – 1870)', *ADB*, volume 2, pp 101-1-2

John Lee became a noted horse breeder whilst his shorthorn cattle were also renowned. During his lifetime, he owned the Bylong, Coggan and Murrumbo stations. He also married a member of the Dargin family. The couple had two sons and seven daughters. He died at his home 'Karalee', near Kelso on 27 November 1909 aged 84 a few days after falling off his horse.¹

Hugh Cameron

Hugh Cameron held Portions 1, 9, 10, 15, 16, 17, 43, 44, 48, and 51 for a short period from 1907 to 1910. This does not appear to have been an important part of his pastoral activity. He was a prominent member of the Victorian Farmers Union and had been a farmer and grazier in South Gippsland.²

He appears to have been born about 1858. Hugh Cameron, grazier, married, died on 7 February 1923 aged 65 at Rosebud, Victoria. He was originally from Terang, Victoria. He then owned property at Mornington. At his death, he also held a pastoral property in Victoria plus one holding measuring 1,854 acres in Parish Brassi, County Townsend, NSW.³

John Morrissey

John Morrissey was born about 1861. He married on 1 August 1881.⁴ He was a Member of Parliament in Victoria serving as minister from 1900 to 1902. He was a significant investor in cattle and station properties. He gained an excellent reputation by purchasing large estates, subdividing them and selling them to small farmers. John Morrissey died aged 65 on 6 July 1926. He had lived at Minimbah, near Singleton from 1910 until 1925. He left a widow Elizabeth and four sons, John, Patrick, Francis and Charles, plus five daughters, Mrs Katherine Susan Moore, Mrs Elizabeth Grace Fogarty and Molly, Loretto Frances ('Reta' ?) and Frances Genevieve. He was buried in Melbourne.⁵

Alfred McIlree

Alfred and Henry McIlree (see below) were brothers born to Henry and Isabella McIlree in Victoria. Alfred McIlree was a commission agent at Albury in 1900.⁶ On 25 June 1903, the firm of W S Norman and Co, auctioneers, wool and produce merchants, Townsend Street, Albury, was registered with W S Norman and Alfred McIlree as principals.⁷ On 24 January 1910 the firm of A McIlree & Co, stock and station agents and fat stock salesmen, 56 Hunter Street, Sydney, with Alfred McIlree and Randal John Adams as principals was registered.⁸

¹ *Bathurst Times*, 27 Nov 1909 p 5

² *Age*, 12 Feb 1923 p 10; *Jerilderie Herald & Urana Advertiser*, 22 Feb 1923 p 2

³ NRS 13340, Deceased Estate File, pre A 2607, SANSW 20/927

⁴ NRS 13012, Real Property Application 18996, SANSW 6/10224

⁵ *Scone Advocate*, 9 July 1926 p 7; *SMH*, 1 Dec 1926 p 19

⁶ NRS 13660, Supreme Court, Probate Packet, SANSW, Series 4 No 222219

⁷ Register of Firms, SANSW 2/8528, No 2806

⁸ Register of Firms, SANSW 2/8541, No 18986

Alfred McIlree briefly held Portion 1 from 1910 to 1913. He seems to have been part of the 'Bylong Syndicate', which acquired a large estate at Bylong either from John Morrissey or in association with him. Although he was the holder and was even shown as 'occupier' in some documentation, he appears to have been based in Sydney. When Portion 1 was transferred on 19 May 1915, his association appears to have ended.¹ The new holders were Frances Blake McIlree, St Kilda, Victoria, spinster; Margaret Elizabeth Anthoness, Mosman, wife of George Trimble Anthoness; Ella Isabella Ivens, wife of Percy Charles Martin Ivens, St Kilda, Victoria, indent agent; and Ida Ethel Evans, wife of Brindley Evans, Seddon, Victoria, bank clerk, all of them sisters of Alfred and Henry McIlree.

When Alfred McIlree died aged 66 on 29 May 1937, he was a stock and station agent of Wyong Road, Mosman. His business had not been doing much in the past few years. At that time, he had no financial interest in Bylong property.²

Henry Wallace McIlree

Alfred McIlree's brother, Henry Wallace McIlree, also had interests in the Bylong area. From 1914 to 1923, he held Portions 43 and 44. In August 1905, as a grazier at Goombargona, he had acquired a large holding measuring 4,054 acres in County Hume from John Morrissey, which he sold within a year.³ Henry Wallace McIlree, farmer of Bylong acquired Portion 2 Parish Bylong and Portions 15 and 16 Parish Coggan with a combined area of 2,304 acres by purchase from John Morrissey on 27 May 1914 for £20,590/10/0 covered by a mortgage to Morrissey.⁴ He transferred that land as two parcels in 1917 and 1918.⁵ On 10 November 1921, he mortgaged both Portions 43 and 44 to John Robert Falkiner Carse, of Boonoke, North Widgiewa, grazier and George O'Dell Crowther, of Melbourne, solicitor. He appears to have been unable to repay the loan, so the mortgagees transferred it to Otway Rothwell Falkiner, of North Widgiewa, pastoralist, who appears to have been a relative.⁶

Henry Wallace McIlree of Albury, gentleman, died aged 82, on 21 August 1941. At his death, he held no real estate. His main asset was money in the bank.⁷

Francis Edward Ingram

Francis Edward Ingram of Rylstone, grazier briefly held Portions 9, 10, 15, 16, 17 in 1922 and 1923. He was born about 1864, possibly at Hay.⁸ On 17 September 1923, he transferred those portions to James Cyril Thompson, Rylstone, grazier.⁹

¹ CT 2586 f 99

² NRS 13340, Deceased Estate File, pre A 113002, SANSW 20/2240

³ CT 1626 f 20; CT 1765 f 47

⁴ OSD, No 769 Bk 1029; No 770 Bk 1029;

⁵ CT 2807 f 173

⁶ CT 2938 f 118; CT 3365 f 120

⁷ NRS 13340, Deceased Estate File, A 32199, SANSW 20/2855

⁸ BDM Index 4950/1864 possible birth – same father as on death certificate and approximate age agreement

⁹ CT 1390 f 30; CT 1945 f 7; CT 1945 f 8; CT 3364 f 53; CT 4638 f 178

Francis Edward Ingram, grazier of Ventura, Coonamble and a widower, died at Coonamble on 1 July 1952 aged 87. His property at Coonamble was then in a rundown condition.¹

Herbert Stanley Thompson

James Thompson married 'Kesia' [Kesia] Readford and their union was registered at Rylstone in 1878.² The birth of their first child, Herbert Stanley Thompson was registered at Mudgee in 1879.³ James Thompson was operating horse studs at Oakleigh and Woodlawn. His sons Herbert, Harold and Cyril bred horses at Oakleigh.⁴

Herbert Stanley Thompson, oldest son of James Thompson, of Olinda, Rylstone married Edythe Jessie Macpherson, daughter of the late Dr James M Macpherson, Aberdeenshire, Scotland and Mrs Macpherson, Woodlands, Scone at St James Church of England, Sydney, on 25 June 1902.⁵

In 1910, James Thompson gave the running of his stud to his sons. On 3 October 1911, James Thompson died at Homebush.⁶ He left a legacy to his sons Herbert and James and his daughter Clare of one-third of his estate.,⁷ Their brother, Harold Thompson had been killed in World War One.⁸

When James Thompson died in 1911, he was described as a sturdy man of great strength.⁹ These characteristics appear to have been inherited by his son Herbert Thompson. A press report of 30 March 1930 provided a detailed description of him. Herbert S Thompson was described as bearing little resemblance to his cousin A W Thompson. It went on to say,

Herbert, bright complexioned, spruce, and wearing a perpetual smile, might easily be taken for a prosperous city merchant, in the prime of life. Broad-shouldered, and well set up, his is a striking figure in any group of sportsmen in the official stand at a race meeting. His bespectacled face, animated by twinkling eyes, he holds his own in an argument, and you will win more often than not if you wager that he is wielding the cudgels on behalf of a horse bred at one of the Thompson studs.¹⁰

¹ NRS 13660, Supreme Court, Probate Packet, SANSW, Series 4 No 399394

² BDM Index, 4708/1878

³ BDM Index, 18036/1879

⁴ D M Barrie, *Valley of Champions*, p 26

⁵ *Sydney Stock & Station Journal*, 9 Sept 1902, p 3

⁶ *SMH*, 4 Oct 1911, p 8; *Sydney Mail*, 11 Oct 1911, p 50

⁷ NRS 13340, Deceased Estate, B 127148, SANSW 20/6163

⁸ D M Barrie, *Valley of Champions*, p 26

⁹ *SMH*, 4 Oct 1911, p 8; *Sydney Mail*, 4 Oct 1911, p 52

¹⁰ *Sun*, 30 March 1930, p 11



Figure 11 A bright spruce Herbert Thompson in March 1930. Source: *Sun*, 30 March 1930, p 11

Herbert Thompson increased his holdings at Bylong by purchasing Sunnyside along with Sydney importer P C Basche.¹ Stanley N Readford was manager at Tarwyn Park, and was reported to have driven the first horse float to carry the horse *Heroic* across the Blue Mountains to the stud. He had previously been with his father James Readford at Woodlawn Stud, Rylstone.² Stanley Readford was related to Herbert Stanley and James Cyril Thompson,. Their mother was Kezia Readford before her marriage to James Thompson. On 4 March 1914, Stanley N Readford married Ethel Kate Gorrick (nee Carr) who had divorced her first husband Albert Gorrick in 1913.

As a breeder, H S Thompson rivalled Percy Miller of Scone as a top breeder.³ Herbert Thompson's horse *Heroic* became a renowned sire standing over a number of seasons, with many of his progeny becoming winning thoroughbreds. In 1933, one of his offspring *Hall Mark* won the Melbourne Cup. For a time, *Heroic* was competing with *Windbag*, bred by Percy Miller at Kia Ora stud, Scone to produce the largest number of winners.⁴ Apart from *Heroic*, other noted sires who stood at Tarwyn Park included *Chrysolaus*, *Moabite* and *Marconigrain*.⁵

¹ D M Barrie, *Valley of Champions*, p 28

² *Newcastle Morning Herald*, 18 May 1951, p 10; *Scone Advocate*, 6 June 1951, p 3

³ D M Barrie, *Valley of Champions*, p 29; See also T Kass, A History of Kia Ora Stud Scone, Final Report, Summit Projects Australia, 16 O'Connell Street, Sydney, June 2000, pp 10-17

⁴ *Referee*, 7 Dec 1933, p 8; For *Windbag*, see T Kass, A History of Kia Ora Stud Scone, Final Report, Summit Projects Australia, 16 O'Connell Street, Sydney, June 2000, pp 14-15

⁵ *Sunday Sun*, 23 Dec 1951, p 1

Melbourne Cup winners bred at Tarwyn Park included *Marabou* (1935). Peter Andrews shifted his Melbourne Cup winner *Rain Lover* (1968 and 1969) to Tarwyn Park in 1976 for breeding purposes.

In 1932, a visitor described Tarwyn Park lying in a 'wonderfully fertile belt of country'. He went on to observe that 'The wealth lies in the valley, as the hills, which carry light timber, are so rocky up that there is little feed for anything but rabbits..'. At that stage, the original Bylong homestead, presumably the earlier cottage on the property was still standing, though the writer may have been referring to the original Lee homestead on Portion 2.¹

Despite his apparent robust health, Herbert Thompson began to suffer ill health. In March 1934, he was reported to have been seriously ill for some weeks.² In November 1943, he was reported to have become seriously ill and was confined to St Luke's Private Hospital (Mudgee?) for some weeks.³ He became an invalid afterwards. In June 1945, Thompson was still 'seriously ill'.⁴ His wife Edith died at 9 Waratah Street, Rushcutters Bay on 8 April 1948.⁵ When H S Thompson's horse *Golden Chariot* won the Two-Year-Old Stake at Canterbury on 3 March 1951, it was reported he had not watched a race for seven years due to being an invalid, hearing the race in bed at his flat at Rushcutters Bay.⁶



Figure 12 A frail Herbert Thompson in December 1951. Source: *Truth*, 23 Dec 1951, p 3

¹ *Australasian*, 26 Nov 1932, p 22

² *Muswellbrook Chronicle*, 29 March 1934, p 2

³ *Mudgee Guardian*, 18 Nov 1943, p 2

⁴ *Mudgee Guardian*, 21 June 1945, p 15

⁵ *SMH*, 10 April 1948, p 28

⁶ *Sun*, 4 March 1951, p 19

His health problems made it increasingly difficult to continue running Tarwyn Park at Bylong. He sold the property on 13 August 1951 and moved the Tarwyn Park stud to Castlereagh.¹ Title to Portion 50 Parish Castlereagh was transferred to Herbert Stanley Thompson, of Penrith, grazier on 29 February 1952.² Frank Wentworth Duesbury, chartered accountant, managed Tarwyn Park during Herbert Stanley Thompson's illness.³ Herbert Stanley Thompson held that property until his death.⁴

Herbert Stanley Thompson, of Tarwyn Park, grazier signed his will on 31 January 1951 appointing Frank Wentworth Duesbury and Leslie Sydney Duesbury, chartered accountants, of Sydney as trustees and executors. Over the next few years, he altered the will a number of times signing codicils to document the changes. In his original will, he made the following bequests:

To Zelma Mary Readford £8,000 plus 'the canteen of cutlery which is at present at Tarwyn Park';
£500 to Frank Wentworth Duesbury even if he did not act as executor;
£500 to his brother James Cyril Thompson;
£2,000 to Marie Readford;
£1,000 to Richard R Turner, Tarwyn Park, head groom;
£1,000 to Edward Mitchell, Tarwyn Park, farmer;
£250 to Lawrence Turner, Tarwyn Park, stable hand;
£250 to Leslie Mitchell, Tarwyn Park, stable hand;
£100 to Gertrude V Wilson, Bylong Cash Store;
Five year old imported stallion *Transatlantic* by Colombo – Water Rose to Zelma Mary Readford and Frank Wentworth Duesbury as tenants in common;
Real estate to his trustees for the benefit of his brother and sister in equal shares as tenants in common or to their children if they predecease Herbert Thompson.⁵

By a codicil to his will dated 8 December 1952, Herbert Stanley Thompson, originally of Tarwyn Park, but now of Penrith, grazier revoked a codicil of June 1951. By the new codicil, he:

Revoked the £2,000 to Marie Readford;
Revoked the £1,000 to Edward Mitchell, Tarwyn Park, farmer;
Revoked the £250 to Leslie Mitchell, Tarwyn Park, stable hand;
Altered the bequest to Zelma Mary Readford of £8,000 by adding £2,000 making the bequest a total of £10,000.⁶

By a further codicil of 27 August 1954 Herbert Stanley Thompson:

¹ *SMH*, 24 June 1952, p 8

² C T 5539 f 199-200

³ NRS 13340, Deceased Estate, B 127148, SANSW 20/6163

⁴ C T 6539 f 108

⁵ NRS 13660, Supreme Court, Probate Packet, Series 4 No 442934

⁶ NRS 13660, Supreme Court, Probate Packet, Series 4 No 442934

Revoked the £1,000 to Richard R Turner;
 Revoked the £100 to Gertrude V Wilson;
 Revoked the gift of the stallion *Transatlantic* to Thelma Mary
 Readford and Frank Wentworth Duesbury since it had been sold.¹

Herbert Stanley Thompson, a widower, died aged 75 at Sydney on 20 June 1955. He was privately cremated the following day.² The final net worth of his estate was £38,836/2/3 including real estate worth £34,700; Livestock £9,020; Farm implements, etc £790; Plant & tools £2,494; Life insurance £10,000 plus bonuses £11,556; Debts due to him £1,867; Interest from his father's estate £77. He had made gifts the past 3 years totalling £5,500. Debts to be deducted from the gross value of the estate were £37,522, mostly a significant bank overdraft. An overdraft of £8,115/19/7 arose from expenses for care during his long illness. An overdraft of £25,394/9/1 was for the expenses of running Tarwyn Park stud.

A list of what the beneficiaries would finally receive compiled on 17 April 1956 showed these sums:

Zelma Mary Readford (not relative) Legacy £10,000; cutlery £8; Gift £500
 F W Duesbury (not relative) Legacy £500; Gift £1,000
 Lawrence Turner (not relative) Legacy £250
 James Cyril Thompson (brother) £500; 1/5 residue £4415/12/5
 Claire Elaine Oxenham (sister) £1,000; 1/5 residue £4415/12/5
 Elsie May Gibb (sister) £1,000; 1/5 residue £4415/12/5
 Stella Mildred Thompson (sister) £1,000; 1/5 residue £4415/12/5
 Muriel Alice Sykes (sister) £1,000; 1/5 residue £4415/12/5.³

James Cyril Thompson

James Thompson had married 'Kesia' [Kezia] Readford in 1878.⁴ The birth of their son James Cyril Thompson was registered at Rylstone in 1888.⁵ James Cyril Thompson married Myrtle Maria Gibb, named on the certificate as Maria Myrtle Gibb (born Wallendbeen near Cootamundra c 1887) at St Stephen's Sydney on 28 April 1911.⁶

Their first child was Beatrice Marie Thompson (later Jeffrey) born at Berthonga, Billyard Ave, Elizabeth Bay on 7 June 1912. Patty Laura Thompson (later Grieve) was also born at Berthonga, Billyard Ave, Elizabeth Bay on 18 November 1917. Their son, Harold James Thompson, was born at St Kilda, Elizabeth Bay on 6 June 1921.⁷

¹ NRS 13660, Supreme Court, Probate Packet, Series 4 No 442934

² *SMH*, 23 June 1955, p 12

³ NRS 13340, Deceased Estate, B 127148, SANSW 20/6163

⁴ BDM Index, 4708/1878

⁵ BDM Index, 28771/1888

⁶ NRS 13660, Supreme Court, Probate Packet, SANSW Series 4 No 483947

⁷ NRS 13660, Supreme Court, Probate Packet, SANSW Series 4 No 483947

James Cyril Thompson's horse breeding activity was largely focused on his Widden stud. However, he purchased land adjoining Herbert Thompson's Tarwyn Park, on 17 September 1923, which later became part of the property now known as Iron Tank. He transferred it to Andrew Woolley, Bylong, farmer & grazier on 2 December 1949.

Although James Cyril Thompson had originally prepared a will on 11 April 1956 he renounced all previous wills electing to die intestate. His reason is unclear. James Cyril Thompson, of Wingarra, Rylstone, grazier died at Mudgee District Hospital of a heart attack aged 69 on 10 February 1958. He was married.¹

His property, Wingarra, was described as measuring 2,743 acres 2 roods, in the Parishes of Burrumbelong and Budden. . Attempts were quickly in train to sell Wingarra in order to pay death duties and also because of a large overdraft to the bank and wool firms. His estate was left as one third to his wife and 2/9 of the estate to each of the children.²

Thomas Langhorne Fleming

Thomas Langhorne Fleming purchased Tarwyn Park from Herbert Thompson when Thompson shifted his thoroughbred horse breeding operations to Castlereagh near Penrith. Fleming was originally from Mount Parry near Quirindi. When he purchased Tarwyn Park, he was already well known to the Australian public after a sensational murder trial.

Thomas Langhorne Fleming's wife Betty had died on 28 June 1951 from cyanide poisoning in a car being driven by Thomas Langhorne Fleming between Willow Tree and his property at Mount Parry. They had four children.³ He was tried for her murder. Sensational details that emerged at the trial included the fact that Fleming promised Norma Lokkerbol (nee Rose), an employee on his property that he would leave his wife to marry her. He had sent her a total of 99 letters. The trial was so popular that spectators waited outside for seats before the trial the doors opened on Tamworth Courthouse. Many did not secure entry due to the huge demand for seats.

Betty Fleming had drunk a beer at the Willow Tree Hotel that had been laced with cyanide. The defence claimed that she was ill and wished to commit suicide. A doctor for the defence stated that it would be difficult to drink anything laced with cyanide without realising.⁴ When Fleming was acquitted, it was a notable success for his barrister John Shand, who also won a number of other controversial legal trials.⁵

¹ NRS 13660, Supreme Court, Probate Packet, SANSW Series 4 No 483947

² NRS 13340, Deceased Estate File, B 185950, SANSW 20/6937

³ *Daily Advertiser*, (Wagga Wagga), 28 Jan 1952, p 1

⁴ *Daily Advertiser*, (Wagga Wagga), 28 Jan 1952, p 1; *Northern Star*, 7 Sept 1951, p 1; *Truth*, 9 Sept 1951, pp 1, 8-10

⁵ J Slee, 'John Wentworth Shand (1897-1959)', *ADB*, volume 16, p 216

Thomas Langhorne Fleming vowed not to return to his property, which he handed to his brothers. He promised to devote his life to his four children.¹ Thomas Langhorne Fleming was reported in December 1951 to have purchased Tarwyn Park of 1,840 acres with possession on 28 February 1952.² Tarwyn Park included 'a 14-room stone homestead surrounded by a well-kept garden and 1840 acres of rich grazing land'.³

On 9 January 1952, Thomas Langhorne Fleming married Mrs Norma Lokkerbol also known as Norma Rose who had worked on his property until 1949. They planned to live at Tarwyn Park, which he was converting into a cattle stud. He was reported to have paid £100,000 for the property.⁴ According to one report, she had been employed at the GPO until shortly before the marriage. The suburban clergyman who conducted the ceremony had been reluctant to perform the ceremony counselling them to wait for a later date.⁵

Mrs Norma Lokkerbol had reverted to her maiden name after her husband committed suicide.⁶ In 1943, as Norma Catherine Rose, she married Cornelis Marinus Lokkerbol, a Dutch maritime engineer.⁷ He returned to Brisbane on 16 May 1948 on the ship *El Liberator*.⁸ On 23 July 1948, the Dutch engineer, Cornelius Marinnas [sic] Lokkerbol, 29, married, who had been in Australia for two months was found in Livingstone Park, Marrickville lying next to a pistol with a bullet in his head.⁹ He later died.¹⁰ Though no evidence has been found to link his suicide to his wife's relationship to Fleming, this appears to overlap with the period she was working at Mount Parry.

Fleming transferred the Tarwyn Park property to Harold John Arthur Howes, Bylong, company director & grazier, on 14 March 1961. Both Thomas Langhorne Fleming and his wife, Norma were still listed at Tarwyn Park in the 1965 Electoral Roll.¹¹ In 1969, they were listed at Homeleigh, Bylong.¹² When Fleming died in February 1993, he was reported to be of Muswellbrook, late of 'Homeleigh', Bylong.¹³

¹ *Daily Advertiser*, (Wagga Wagga), 28 Jan 1952, p 1

² *Daily Examiner*, (Grafton), 24 Dec 1951 p 3

³ *Truth*, 23 Dec 1951, p 3

⁴ *Daily Advertiser*, (Wagga Wagga), 28 Jan 1952, p 1; *Armidale Express*, 28 Jan 1952, p 8

⁵ *Sun*, 27 Jan 1952, p 1

⁶ *SMH*, 4 Aug 1951, p 1

⁷ BDM Index, 23471/1943

⁸ CRS BP210/2. Item C Lokkerbol, NAA

⁹ *Newcastle Morning Herald*, 24 July 1948, p 3

¹⁰ BDM 20512/1948

¹¹ Commonwealth, Electoral Rolls, Lawson Electorate, Kandos subdivision, 1965, Nos 580-581

¹² Commonwealth, Electoral Rolls, Robertson Electorate, Kandos subdivision, 1965, Nos 671, 673

¹³ *Scone Advocate*, 4 March 1993; The *Mudgee Guardian* was searched for any material about him after his death with no success.



Figure 13 T L Fleming at the time of his marriage to Norma Lokkerbol. Source: *Truth*, 27 Jan 1952, p 1



Figure 14 Mrs Lokkerbol at the trial. Source: *Truth*, 9 Sept 1951, p 9

Andrew Woolley

Andrew Woolley was born on 1 December 1915 at Broombee to Arthur Holmes Woolley and his wife Mildred.¹ Broombee was south-west of Bylong along the Cudgegong River. On 21 June 1941, Andrew Woolley married Violet Florence Skinner at the Church of England, Cudgegong. Andrew appears to have been working nearby at Burrundulla when he enlisted in the RAAF in 1942.² He served as an aircraftsman at 5 Operational Training Unit.³

James Cyril Thompson transferred the portions later known as Iron Tank to Andrew Woolley, Bylong, farmer and grazier on 2 December 1949.⁴ When assessed by the Valuer-General on 21 January 1957, the property, owned by Andrew Woolley, 'Helvetia' Bylong, which also included Portions 11, 52, 67, 70 and 71 included the following improvements - 2 galvanised iron cottages, with galvanised iron roofs, a fibro cottage with a galvanised iron roof, farm buildings, fencing, clearing, a water supply, and lucerne. Woolley also held Portions 12 and 72 on Conditional Lease, with clearing, fencing and ringbarking.⁵

On 11 September 1970, he transferred the Iron Tank property to Zivorad Jack Yagodich, of Bylong Valley, farmer and grazier and his wife Alison Ann Yagodich, including Portions 9, 10, 15, 16, 17, 49 and 50.⁶ Woolley died at Evans Head on 20 September 1979 and is buried at Lismore Memorial Gardens.⁷

Zivorad (Jack) and Alison Ann Yagodich

According to his death certificate, Zivorad (Jack) Yagodich was born in Yugoslavia about 1924. He arrived in Australia about 1958.⁸ This appears to be the man who arrived on the *Fairsky* in 1958 as 'Zivorad Jagodic'.⁹ Zivorad (Jack) Yagodich married Alison Ann Dent at Rose Bay about 1968. They had two children.¹⁰ She had been born about 1941 to Digby and Barbara Dent. On 23 January 1978, Zivorad (Jack) murdered his wife Alison at their property 'Zora' at Bylong.¹¹ She was cremated at Northern Suburbs Crematorium on 31 January 1978.¹² The inquest papers relating to her death held in Mudgee on 24 March 1978 are not available. Zivorad (Jack) Yagodich committed suicide by hanging himself at Long Bay Gaol on 19 June 1978.¹³

¹ BDM Death Certificate Index, 106587/1979; NAA index, Andrew Woolley, CRS A9301, Item 432613

² *Mudgee Guardian*, 30 June 1941, p 2; 6 Aug 1942, p 2

³ <http://nominal-rolls.dva.gov.au/veteran?id=1025075&c=WW2#R>, accessed 23 Oct 2017

⁴ CT 1390 f 30; CT 3364 f 53; CT 4638 f 178; CT 4638 f 185; CT 4867 f 114; CT 6216 f 136;

⁵ Valuer-General, Valuation List, SANSW 3/11585, ph Bylong, No 73, 74

⁶ CT 4638 f 178; CT 4638 f 185; CT 6216 f 136; CT 8331 f 213

⁷ Australian Cemeteries Index, Accessed 20 Oct 2017; *Northern Star*, 31 Oct 1979; The *Mudgee Guardian* was searched for any material about him after his death with no success.

⁸ Zivorad (Jack) Yagodich, Death Certificate, 13878/1978

⁹ CRS A1877, Item 08/06/1959, NAA Record Search

¹⁰ Zivorad (Jack) Yagodich, Death Certificate, 13878/1978. The *Mudgee Guardian* was searched for any material about the death or the inquest, with no success.

¹¹ Alison Ann Yagodich, Death Certificate, 1978

¹² *SMH*, 28 Jan 1978, p 34

¹³ Zivorad (Jack) Yagodich, Death Certificate, 13878/1978

Peter Andrews

According to his own recollections, Peter Andrews acquired Tarwyn Park in the 1970s.¹ He appears to have done this through the company Imijt Pty Ltd that acquired the property in 1974. According to his own recollections, he was born near Broken Hill where he acquired an environmental understanding from Aboriginal stockmen. On a small degraded farm near Gawler, South Australia, affected by a rising salt table, he tested some theories about ways to rehabilitate ruined land. From this process emerged Natural Sequence Farming. When he purchased Tarwyn Park, which had become an arid, eroded and salt affected property, he was able to apply his theories on a much larger scale. Under his care, Tarwyn Park became a rejuvenated fertile showpiece.²

His theories were promoted to the wider public in a press article in July 1989. Dr Baden Williams, head of the CSIRO Division of Water and Land Resources was impressed by the revolutionary nature of the process. Instead of relying on surface dams, Peter Andrews promoted subsurface water storage, which would reduce loss through evaporation, be more cost effective than expensive irrigation schemes, ensure better survival of crops in dry conditions and provide scope for a wider range of cropping options, whilst increasing natural nutrients and reducing erosion. Salination of soils would also be reduced. An attached graphic explained the process.³

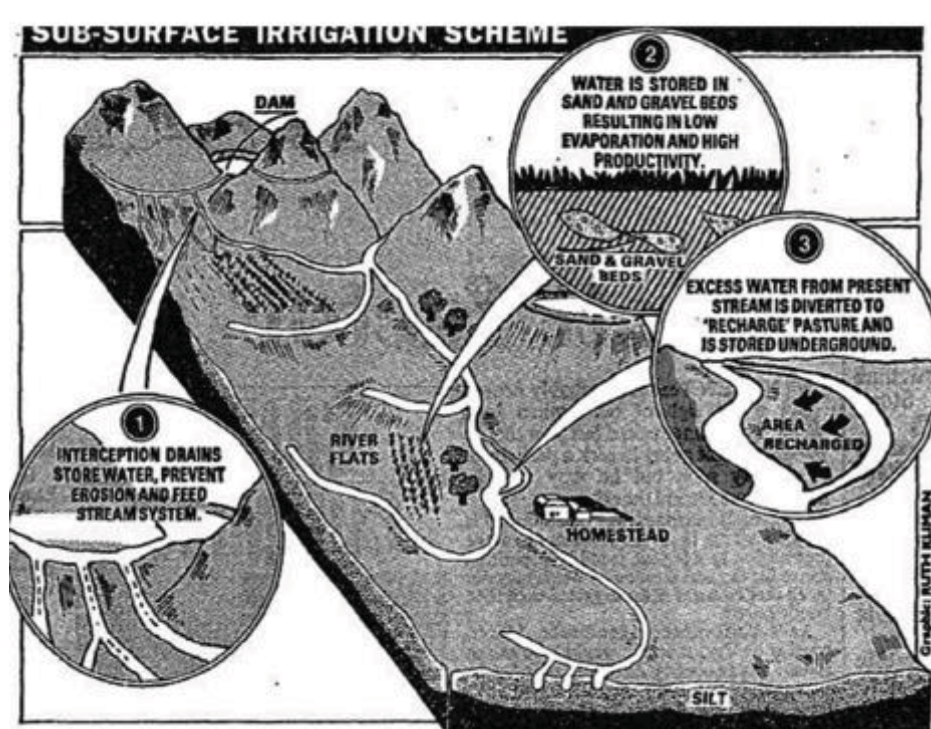


Figure 15 Peter Andrew's sub-surface irrigation explained. Source: *SMH*, 30 July 1989, p 29

¹ <http://www.naturalsequencefarming.com/phpBB3/viewtopic.php?t=265>, Accessed 23 Oct 2017; <http://tarwynpark.com/page/2/>. Accessed 23 Oct 2017

² <http://www.naturalsequencefarming.com/phpBB3/viewtopic.php?t=265>. Accessed 23 Oct 2017; <http://tarwynpark.com/page/2/>. Accessed 23 Oct 2017; <http://www.abc.net.au/austory/content/2005/s1383562.htm>

³ *SMH*, 30 July 1989, p 29

Though this outline of what he claims to be a revolutionary technique for restoring natural systems and natural fertility has been based upon information that he made available in the public sphere, his claims have been backed up by expert scientific opinion. In 2002, an Expert Panel headed by Dr John Williams from the CSIRO Land and Water Division supported his claims.¹ The iconic ABC series 'Australian Story' featured him in a double episode on 6 and 13 June 2005, entitled 'Of Drought and Flooding Rains', which demonstrated his techniques to wider audience. An obsessive visionary who pursued his theories at great personal cost and an ensuing bankruptcy, Peter Andrews became a catalyst for change in environmental management of farms.² His efforts have also been recognised by the award of an Order of Australia Medal on 26 January 2011 'For service to conservation and the environment through the development of sustainable farming practises [sic]'.³ After losing the property to his bank mortgagee, his son Stuart took over the property and the debt turning it into a cattle property whilst retaining many of the land management principles devised by his father.⁴ Stuart eventually sold the property for coal mining when the largest landholder in the mine area sold his property to the mining company.⁵

Tarwyn Park – Construction and Fabric

The property was known as 'Tarwin Park' as early as November 1918.⁶



Figure 16 The earliest use of the name 'Tarwin Park'. Source: *Mudgee Guardian*, 21 Nov 1918 p 20

¹ The 'Natural Farming Sequence', Tarwyn Park, Upper Bylong Valley, New South Wales, Expert panel Report, July 2002, Canberra, CSIRO Land and Water

² <http://www.abc.net.au/austory/content/2005/s1383562.htm> &

<http://www.abc.net.au/austory/content/2005/s1388590.htm>

³ <http://www.naturalsequencefarming.com/phpBB3/viewtopic.php?t=265>, Accessed 23 Oct 2017; <http://tarwynpark.com/page/2/>. Accessed 23 Oct 2017;

<https://honours.pmc.gov.au/honours/awards/1143543>, Accessed 23 Oct 2017

⁴ <http://www.abc.net.au/austory/content/2005/s1388590.htm>

⁵ <http://tarwynpark.com/page/2/>. Accessed 23 Oct 2017

⁶ *Mudgee Guardian*, 21 Nov 1918 p 20

In January 1920, the press reported that H Thompson who had recently purchased 'Tarwin Park' at Bylong was having a large stone homestead erected.¹ This was followed by article on 10 June 1920 that Thompson Bros were building a large stone homestead at Bylong, with 22 rooms. The contractors for the stonemasonry were Bush E Traynor of Sydney. Other contractors involved were C Babidge, F Babidge, J Gordon and T Pratt. By June 1920, the stonework was reported to be nearing completion. The architect was Harold Hardwick, of Mudgee.² J F Knight, painter, of Lewis Street, Mudgee was reported to be engaged 'to do a big job for Mr Thompson, of Bylong' in August 1920.³

A number of the internal features such as fireplaces and fireplace tiles show Dutch settings or images of tulips. The possibility that the Thompson family had Dutch connections has been raised. There has been no evidence found of such a connection.

In addition, examination of the images showing these features strongly suggests that the original design for the house used design features that were commonly available in its construction period. Majolica tiles with Dutch inspired images were part of a suite of design elements available to home builders. For example, a standard small stained glass window available during the 1920s featured a Dutch windmill in a landscape. These small windows often at the side of Californian bungalows erected during the 1920s can still be seen on number of surviving examples.



Figure 17 The Dutch windmill stained glass window seen in many houses built in the 1920s. Source: Author photo

¹ *Mudgee Guardian*, 22 Jan 1920 p 14

² *Mudgee Guardian*, 10 June 1920, p 8

³ *Mudgee Guardian*, 26 Aug 1920 p 10

The majolica tile with what appears to be an interpretation of a tulip has striking similarities to majolica tiles, which I hold. These tiles were rescued from a house I owned in the 1970s. They had been ripped from the fireplace by a previous owner and left under the house from where I rescued them. The manufacturers name on the back is given as 'G & T Ltd, England' around a number 9. That number possibly refers to the stock number. The house was built in 1926 by a speculative building company. These features were probably stock materials available from any building materials supplier. An image of these tiles is below.



Figure 18 Daffodil pattern majolica tiles from a 1920s house similar to the Dutch and tulip tiles in Tarwyn Park. Source: Author photo

Land Ownership Patterns at Bylong

The following tables showing landholdings at Bylong have been based on various sources of differing reliability. They provide an overview of the acreages held by various landowners as well as details of their livestock.

Stockholders at 'Bylong' in 1884

Occupier	Acreage	Horses	Cattle	Sheep	Pigs
Brennan James	280	4	8		
Spradbrow James	50	5			

Occupier	Acreage	Horses	Cattle	Sheep	Pigs
Gettons [sic] Thomas	100	3			
Hoare Patrick	40	1			
Tindle [sic] W H	1612	20	400	41	
Tindle [sic] Anthony	2387	10	280		
Tindle [sic] E & A	6000	20	200	6600	
Lee John	12000	25	1250		
Chitty Caroline	40	7	17		
Elliott W R	1000	15	20		2

Source: 'Dept of Mines (Stock and Brands Branch), Report 31 Dec 1884', *V & P L A N S W*, 1885 (2), volume III, p 279

Landholders Listed under Bylong Post Office, 1900

Landholder	Property	Agriculturalist	Dairy farmer	Grazier
Bird George	Rosside	*		
Chitty Caroline	Bylong Creek	*		
Davis John, jun	Bylong Creek	*		
Doyle Andrew C	Drummond	*		*
Doyle Colin C	Murrumbo	*		
Gettens Ernest				*
Gettens James		*		
Gettens John Thomas	Glenadah	*		
Gettens William		*		
Lee Alfred S	The Willows			*
Lee John				*
Marsh Jacob	Coggan	*		
Mead Catherine	Coggan	*		
Mead Elijah D	Coggan	*		
Mead Samuel H	Coggan	*		
Mead William	Coggan	*		

Landholder	Property	Agriculturalist	Dairy farmer	Grazier
Morrison George W	Tallwood	*		
Parkinson John	Binjang			*
Robbins Charles	Drummond	*		
Smith James B	Coggan	*		
Spradbrow James	Bylong Creek	*		
Spradbrow James jun	Springfield			*
Stevens Thomas H	Springside	*		*
Tindale Catherine	Torrie Lodge	*		*
Tindale Cecil H	Sunnyside			*
Tindale Lillian	Torrie Lodge	*		
Tindale Morson	Torrie Lodge	*		
Tindale William Henry	Sunnyside	*		*

Source: *Yewen's Directory of the Landholders of New South Wales, 1900*, Farm & Dairy Publishing Co, Sydney, 1900, p 461

The 1884 stock return highlights how John Lee held a significant acreage stretching across the Parish of Bylong and adjoining parishes. The 1900 listing of landholders only provides a general view without information about acres held. It demonstrates the number of landholders within the vicinity of the Parish of Bylong. Most of these holders would have been located in the Parishes of Lee and Coggan.

Holdings Listed in Sands Directories

1903

Owner	Station	Post town	Horses	Cattle	Sheep	Acreage
Doyle A C	Drummond	Bylong	38	100		
Lee John	Bylong	Bylong	25	777		

1910

Owner	Station	Post town	Horses	Cattle	Sheep	Acreage
Gettens James & Ernest	Harley Hall	Bylong	15	65		
Spradbrow John		Bylong			188	
Spradbrow Thomas		Bylong	6	50		
Tindale W H	Sunnyside	Bylong	15	250		

1915

Owner	Station	Post town	Horses	Cattle	Sheep	Acreage
Fountain E		Bylong	8	95		604
McIlree A		Bylong	17	143		1000
McIlree H W		Bylong	80	14	2930	5148

1920

Owner	Station	Post town	Horses	Cattle	Sheep	Acreage
Burke John		Bylong	9	142		300
Chapman John		Bylong	6	84		334
Gettens James		Bylong	14	95	514	1932
Ingram F E	Overone	Bylong	35	235	552	2446
James George		Bylong	9	275	403	900
McIlree Alfred		Bylong	22	421	927	1001
McIlree H W	Bylong	Rylstone	50	61	2605	5728
Spradbrow John		Bylong	9	4	132	320
Tindale G W	Wymore	Bylong	9	24	1293	980
Tindale P W	Sunnyside	Bylong	5	70	1612	2300

1925

Owner	Station	Post town	Horses	Cattle	Sheep	Acreage
Cobrey H	Innisfail	Bylong	8	25		422
Collins Russell E		Bylong	19	4	513	1002
Dix A T	Sylvania	Bylong	8	87		650
Farrar Ernest		Bylong	3	10	596	1150
Gettens James		Bylong	5	74	524	1400
Morrison G W		Bylong	5	67		849
McManus James		Bylong	4	110	147	1000
Ribaux Paul		Bylong	9	162		439
Saxelby A		Bylong	32	398		1840
Tulloch R		Bylong	7	432	1275	5800
Walker John		Bylong	3	28	135	782

1930

Owner	Station	Post town	Horses	Cattle	Sheep	Acreage
Cobrey H F	Bylong	Rylstone	12	73		425
Dix A J	Bylong	Rylstone	6	122	54	700
Gettens James		Bylong	12	55	1620	2250
Morrison G W		Bylong	7	70		628
Ribaux Paul		Upper Bylong	7	140	200	420
Russell F H		Bylong	1	30		520
Spradbrow Thomas		Bylong	4	20		60
Thompson & Basche		Bylong	30 [?]	5	200	320
Thompson H S		Rylstone	120	37	140	1517
Thompson J C		Rylstone	15	167	9926	6301
Walker John		Bylong	5	21	529	762

The next significant return is that of 1915. It identifies Alfred McIlree and Henry McIlree as significant landholders. According to research on the core area of Tarwyn Park, Alfred McIlree was probably the holder of property that later became Tarwyn Park. In 1920, both Alfred McIlree and Henry McIlree were shown as still holding significant large areas at 'Bylong', possibly due to a lag in updating the information. Francis Ingram also held a large area some of which was later incorporated into Tarwyn Park. The 1920 listing clearly demonstrates the entry of a number of smaller settlers into the district attracted by production for the cheese factory. The take up of a number of Settlement Purchases under the relevant Crown Lands legislation during the 1910s is clear. The landholders who took up Crown Land included John Burke, Hugh Cobrey, and Paul Ribaux.

The 1930 list shows James Cyril Thompson as a significant landholder at 'Rylstone', presumably on his Widden property. Though Herbert Thompson is given the post town of Rylstone, at least some of the acreage given relates to Tarwyn Park. It is also significant that whilst Herbert Thompson held 120 horses, largely related to his horse stud, his brother James only had 15 horses but a total of nearly 1,000 sheep.

Bylong Stockowners in 1954

Owner	Station	Post town	Horses	Cattle	Sheep	Acreage
Burke Mrs M	View Point	Bylong		75	1100	
Davis W C	Ringwood	Bylong		27	1059	
Delaney K P	Sunnyside	Bylong		77	1285	
Fleming T L	Tarwyn Park	Bylong		150	850	
Gettens G H	Harley Hill	Bylong		30	1700	
Glew V & Son	Sylvania	Bylong		100	753	
Macfarlane D D	Budden	Bylong		80	2684	
Thompson A E & Son	Bylong	Rylstone		535	300	
Woolley A	Helvetia	Bylong		151	1015	

Source: *The Australian Pastoral Directory*, The Pastoral Review, Sydney, 1954

The 1954 listing did not provide information about acres held. It only provides an approximate measure of landholdings through the numbers of livestock.

The compilation of data about total holding size from the Valuer-General's valuation rolls from 1957 to 1965 provides a total area for Tarwyn Park of 850 acres. With that area, it sits in the approximate median for landholdings within the parish of Bylong. See Appendix 3 for a transcription of the data in the Valuation Rolls.

Tabulation of Holdings in Parish Bylong 1957-65

Name of Holder	Total Acreage (rounded)
Thompson, John Albert, Bylong Station, Rylstone	3225
Woolley, Andrew, 'Helvetia' Bylong	2411
Pluck, Reginald Charles, 14 Spring St, Sydney (trustee)	2527
Kerney, Albert Edward, Jacques St, Kandos	1324
** Howes, Harold John, Tarwyn Park	850
Roberts, Cyril Thomas James, Cox's Gap, Rylstone	715
Stanmore, Allan Frederick, Bylong Road, Bylong	539
Cosgrove, Leonard Thomas, 'Innisfail', Bylong	466
Maskell, Mrs Alice, Bylong Rd, Rylstone	387
Glew, Wilfred Clive, 'Sylvania' Bylong	185
Harrison, William Vincent, Bylong	154
Schneider, Francis, Bylong Rd, Rylstone	140
Woolley, Arthur Holmes, 'Helvetia' Bylong	133
Thompson, Geoffrey Ernest, Bylong Station, Rylstone	102

Source: SANSW 3/11585

NB: The totals were based on the Valuation Rolls, from 1957 to 1965. Most of the entries date from 1957 but the volume includes entries updated up to 1965. There was no data earlier than 1957. The total acreages include freehold and Crown leasehold land. A few of the holdings incorporate land in the adjoining Parishes of Lee and Coggan.

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McIllree, Alfred, died 29/5/1937, pre A 113002 20/2240

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Appendix 1 – Summary of Ownership of the Portions Included in Tarwyn Park

Portion 1

Date	Activity	Identity	Details	Reference
18 February 1841	Survey	F T Rusden, Assistant Surveyor	Boundaries & some topography shown	P.158.671
16 July 1841	Grant	William Lee	640 acres for £384	Grant Vol 73 No 200
6 September 1907	Conveyance	John Lee to Hugh Cameron, Orbost, Vic, grazier		OSD No 547 Bk 840
2 October 1907	Mortgage	Goldsborough Mort & Co Ltd		OSD No 548 Bk 840
31 December 1908	Discharge			OSD No 758 Bk 872
31 December 1908	Mortgage	Australian Mutual Provident Society		OSD No 760 Bk 872
31 December 1908	Mortgage	Goldsborough Mort & Co Ltd		OSD No 761 Bk 872
20 February 1909	Lease	Hugh Cameron to John Morrissey		OSD No 394 Bk 877
30 June 1910	Discharge	Goldsborough Mort & Co Ltd to Hugh Cameron		OSD No 296 Bk 872
30 March 1910	Contract for Sale	John Morrissey to Alfred McIlree		RPA 18996 [Not registered]
30 June 1910	Conveyance	1 st Hugh Cameron, Orbost, Vic, grazier, 2 nd AMP Society (mortgagee) 3 rd John Morrissey, Sackville Street, Hawthorn, Vic, gentleman		OSD No 298 Bk 916

Date	Activity	Identity	Details	Reference
10 September 1913	Real Property Application	Hon John Morrissey, Sackville St, Kew, Vic, gentleman	Occupied by Alfred McIlree, Norwich Chambers, Hunter St, Sydney	RPA 18996
3 July 1915	Issue CT	Hon John Morrissey, Kew, Vic, gentleman	Por 1 & part Por 80 ph Lee	CT 2586 f 99
19 May 1915	Transfer	Frances Blake McIlree, St Kilda, Vic, spinster; Margaret Elizabeth Anthoness, Mosman, wife of George Trimble Anthoness; Ella Isabella Ivens, wife of Percy Charles Martin Ivens, St Kilda, Vic, indent agent; Ida Ethel Evans, wife of Brindley Evans, Seddon, Vic, bank clerk	Por 1 & part Por 80 ph Lee	CT 2586 f 99
19 May 1915	Mortgage	AMP Soc	Por 1 & part Por 80 ph Lee	CT 2666 f 52-55
1 September 1919	Transfer	Herbert Stanley Thompson and James Cyril Thompson, both Rylstone, graziers	Por 1 & part Por 80 ph Lee	CT 2666 f 52-55
26 September 1919	Issue CT	Herbert Stanley Thompson and James Cyril Thompson, both Rylstone, graziers	Por 1 & part Por 80 ph Lee	CT 2974 f 119-120

Date	Activity	Identity	Details	Reference
11 September 1923	Transfer of half share to Herbert Stanley Thompson	James Cyril Thompson, Rylstone, grazier	Por 1 & part Por 80 ph Lee	CT 2974 f 120
3 December 1923	Issue CT	Herbert Stanley Thompson, Rylstone, grazier	Por 1 & part Por 80 ph Lee	CT 3535 f 152
11 September 1923	Mortgage	Bank of NSW	Por 1 & part Por 80 ph Lee	CT 3535 f 152
17 December 1940	Resumption Part	Commissioner for Railways	Por 1 & part Por 80 ph Lee	CT 3535 f 152
13 August 1951	Transfer (apart from Railway resumption)	Thomas Langhorne Fleming, Bylong, grazier	Por 1 & part Por 80 ph Lee	CT 3535 f 152
10 November 1952	Issue CT	Commissioner for Railways	Parts Por 1, 43, 44, 48, 51 (railway line) 21.3.3¾	CT 6585 f 92
24 June 1953	Issue CT	Thomas Langhorne Fleming, Bylong, grazier	Por 1 & part Por 80 ph Lee PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 6681 f 202
16 April 1953	Mortgage	Bank of NSW	Por 1 & part Por 80 ph Lee PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 6681 f 202
6 February 1956	Fi.Fa		Por 1 & part Por 80 ph Lee PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 6681 f 202

Date	Activity	Identity	Details	Reference
14 March 1961	Transfer part (all except portion 80 ph Lee)	Harold John Arthur Howes, Bylong, company director & grazier	Por 1 & part Por 80 ph Lee PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 6681 f 202
7 September 1961	Issue CT	Harold John Arthur Howes, Bylong, company director & grazier	Por 1 PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 8299 f 14
14 March 1961	Mortgage	Bank of NSW	Por 1 PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 8299 f 14
29 November 1974	Transfer	Imijt Pty Ltd	Por 1 PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 8299 f 14
29 November 1974	Mortgage	Harold John Arthur Howes, Sydney, company director & grazier	Por 1 PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 8299 f 14
19 July 1979	Mortgage	Bank of NSW	Por 1 PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 8299 f 14
20 October 1994	Mortgage	Commonwealth Development Bank of Australia	Por 1 PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 8299 f 14

Date	Activity	Identity	Details	Reference
26 May 1999	Transfer	Stuart Peter Andrews & Megan Leisha Andrews	Por 1 PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 8299 f 14
26 May 1999	Mortgage	R M Cullen Holdings etc	Por 1 PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 8299 f 14
30 July 2002	Mortgage	Elders Rural Bank Ltd	Por 1 PLUS Part Por 43; 44; Pt 9.2.0; Part Por 48; 51	CT 8299 f 14
	Computer folio			

Portion 43

Date	Activity	Identity	Details	Reference
1 November 1878	VLO Grant	John Lee, Bathurst	Por 43	CT 414 f 191
3 January 1902	Mortgage	Bank of NSW	Por 43	CT 414 f 191
6 September 1907	Transfer	Hugh Cameron, Orbost, Vic, grazier	Por 43	CT 414 f 191
2 October 1907	Mortgage	Goldsborough Mort & Co Ltd	Por 43	CT 414 f 191
SAME AS POR 9 & 10				
31 December 1908	Mortgage	AMP Soc	Por 43	CT 414 f 191
31 December 1908	Mortgage	Goldsborough Mort & Co Ltd	Por 43	CT 414 f 191
20 February 1909	Lease	John Morrissey, St Kilda, Vic, grazier	Por 43	CT 414 f 191
30 June 1910	Transfer	John Morrissey, St Kilda, Vic, grazier	Por 43	CT 414 f 191

Date	Activity	Identity	Details	Reference
DIFFERENT TO POR 9 & 10				
			Por 43 & 44 part of land offered by A McIlree as 'Bylong Dairy Farms'	
27 May 1914	Transfer	Henry Wallace McIlree, Bylong, farmer	Por 43	CT 414 f 191
27 May 1914	Mortgage	Trustees Executors & Agency Co Ltd	Por 43	CT 414 f 191
4 August 1914	Mortgage	Bank of NSW	Por 43	CT 414 f 191
26 May 1919	Issue CT	Henry Wallace McIlree, Bylong, farmer	Por 43 & 9.2.0 Closed Road (CT 1353 f 144)	CT 2938 f 118
10 November 1921	Mortgage	John Robert Falkiner Carse, Boonoke North Widgiewa, grazier & George O'Dell Crowther, Melbourne, solicitor	Por 43 & 9.2.0 Closed Road (CT 1353 f 144)	CT 2938 f 118
19 December 1921	Mortgage	Bank of NSW	Por 43 & 9.2.0 Closed Road (CT 1353 f 144)	CT 2938 f 118
30 May 1923	Transfer by Mortgagees John Robert Falkiner Carse, Boonoke North Widgiewa, grazier & George O'Dell Crowther, Melbourne, solicitor	Otway Rothwell Falkiner, North Widgiewa, pastoralist	Por 43 & 9.2.0 Closed Road (CT 1353 f 144)	CT 2938 f 118

Date	Activity	Identity	Details	Reference
21 September 1923	Issue CT	Otway Rothwell Falkiner, Boonoke, North Widgiewa, pastoralist	Various including Por 43, 44, 48, 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 3505 f 215
3 February 1926	Transfer	Albert Edwin Thompson, Kerrabee, grazier	Various including Por 43, 44, 48, 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 3505 f 215
3 February 1926	Mortgage	Commercial Banking Co of Sydney Ltd	Various including Por 43, 44, 48, 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 3505 f 215
28 June 1927	Transfer	Herbert Stanley Thompson, Tarwin Park, Bylong, grazier	Part Por 43 & Por 44 & Part Por 48 & 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 3505 f 215
8 November 1927	Issue CT	Herbert Stanley Thompson, Tarwin Park, Bylong, grazier	Part Por 43 & Por 44 & Part Por 48 & 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 4074 f 211
9 January 1929	Mortgage	Bank of NSW	Part Por 43 & Por 44 & Part Por 48 & 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 4074 f 211
17 December 1940	Resumption railway	Commissioner for Railways	Part Por 43 & Por 44 & Part Por 48 & 51 & 9.2.0 Closed Road (CT	CT 4074 f 211

Date	Activity	Identity	Details	Reference
			1353 f 144)	
13 August 1951	Transfer	Thomas Langhorne Fleming, Bylong, grazier	Part Por 43 & Por 44 & Part Por 48 & 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 4074 f 211
JOINS WITH POR 1 TITLE – WHICH SEE				CT 6681 f 202

Portion 44

Date	Activity	Identity	Details	Reference
1 November 1878	VLO Grant	John Lee, Bathurst	Por 44	CT 414 f 192
3 January 1902	Mortgage	Bank of NSW	Por 44	CT 414 f 192
6 September 1907	Transfer	Hugh Cameron, Orbest, Vic, grazier	Por 44	CT 414 f 192
2 October 1907	Mortgage	Goldsborough Mort & Co Ltd	Por 44	CT 414 f 192
SAME AS POR 9 & 10				
			Por 43 & 44 part of land offered by A McIlree as 'Bylong Dairy Farms'	
31 December 1908	Mortgage	AMP Soc	Por 44	CT 414 f 192
31 December 1908	Mortgage	Goldsborough Mort & Co Ltd	Por 44	CT 414 f 192
20 February 1909	Lease	John Morrissey, St Kilda, Vic, grazier	Por 44	CT 414 f 192
30 June 1910	Transfer	John Morrissey, St Kilda, Vic, grazier	Por 44	CT 414 f 192

Date	Activity	Identity	Details	Reference
12 December 1912	Survey Por 1 & pt 80	William Newton Scott, LS	H W McIlree as owner-occupier	RPA 18996 plan
DIFFERENT TO POR 9 & 10				
27 May 1914	Transfer	Henry Wallace McIlree, Bylong, farmer	Por 44	CT 414 f 192
27 May 1914	Mortgage	Trustees Executors & Agency Co Ltd	Por 44	CT 414 f 192
4 August 1914	Mortgage	Bank of NSW	Por 44	CT 414 f 192
20 September 1922	Issue CT	Henry Wallace McIlree, Bylong, farmer	Por 44 & various	CT 3365 f 120
10 November 1921	Mortgage	John Robert Falkiner Carse, Boonoke North Widgiewa, grazier & George O'Dell Crowther, Melbourne, solicitor	Por 44 & various	CT 3365 f 120
19 December 1921	Mortgage	Bank of NSW	Por 44 & various	CT 3365 f 120
30 May 1923	Transfer by Mortgagees John Robert Falkiner Carse, Boonoke North Widgiewa, grazier & George O'Dell Crowther, Melbourne, solicitor	Otway Rothwell Falkiner, North Widgiewa, pastoralist	Por 44 & various	CT 3365 f 120

Date	Activity	Identity	Details	Reference
21 September 1923	Issue CT	Otway Rothwell Falkiner, Boonoke, North Widgiewa, pastoralist	Various including Por 43, 44, 48, 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 3505 f 215
3 February 1926	Transfer	Albert Edwin Thompson, Kerrabee, grazier	Various including Por 43, 44, 48, 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 3505 f 215
3 February 1926	Mortgage	Commercial Banking Co of Sydney Ltd	Various including Por 43, 44, 48, 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 3505 f 215
28 June 1927	Transfer	Herbert Stanley Thompson, Tarwin Park, Bylong, grazier	Part Por 43 & Por 44 & Part Por 48 & 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 3505 f 215
8 November 1927	Issue CT	Herbert Stanley Thompson, Tarwin Park, Bylong, grazier	Part Por 43 & Por 44 & Part Por 48 & 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 4074 f 211
9 January 1929	Mortgage	Bank of NSW	Part Por 43 & Por 44 & Part Por 48 & 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 4074 f 211
17 December 1940	Resumption railway	Commissioner for Railways	Part Por 43 & Por 44 & Part Por 48 & 51 & 9.2.0 Closed Road (CT	CT 4074 f 211

Date	Activity	Identity	Details	Reference
			1353 f 144)	
13 August 1951	Transfer	Thomas Langhorne Fleming, Bylong, grazier	Part Por 43 & Por 44 & Part Por 48 & 51 & 9.2.0 Closed Road (CT 1353 f 144)	CT 4074 f 211
JOINS WITH POR 1 TITLE – WHICH SEE				CT 6681 f 202

Portion 48

Date	Activity	Identity	Details	Reference
10 February 1898	NRCP 98/5 Rylstone	Ethel Constance Lee (later Ethel Constance Lydiard)	Por 48	Ph Bylong 1896
5 November 1898	Portion Survey	James Dawson, LS	Ringbarking £5	P.2360.2125
23 October 1908	Transfer CP	Hugh Cameron, Bathurst		CP Register SANSW 7/4752
29 June 1909	Transfer CP	James Mansfield Niall, Melbourne		CP Register SANSW 7/4752
20 December 1910	Grant for £488/10/0	James Mansfield Niall, Melbourne, Vic	Por 48	CT 2110 f 247
30 June 1910	Transfer	Hugh Cameron, Orbost, Vic, grazier	Por 48	CT 2110 f 247
30 June 1910	Transfer	John Morrissey, Hawthorn, Vic, gent	Por 48	CT 2110 f 247
12 December 1912	Survey Por 1 & pt 80	William Newton Scott, LS	H W McIlree as owner-occupier	RPA 18996 plan
SAME AS POR 43				

Portion 51

Date	Activity	Identity	Details	Reference
29 June 1899	NRCP 99/37 Rylstone	Ethel Constance Lee (later Ethel Constance Lydiard)	Por 51	Ph Bylong 1896
30 November 1899	Portion Survey	James Dawson, LS	Ringbarking £0/8/6	P.2439.2125
23 October 1908	Transfer CP	Hugh Cameron, Bathurst		CP Register SANSW 7/4752
29 June 1909	Transfer CP	James Mansfield Niall, Melbourne		CP Register SANSW 7/4752
20 December 1910	Grant for £151/10/0	James Mansfield Niall, Melbourne, Vic	Por 51	CT 2110 f 248
30 June 1910	Transfer	Hugh Cameron, Orbost, Vic, grazier	Por 51	CT 2110 f 248
30 June 1910	Transfer	John Morrissey, Hawthorn, Vic, gent	Por 51	CT 2110 f 248
12 December 1912	Survey Por 1 & pt 80	William Newton Scott, LS	H W McIllree as owner- occupier	RPA 18996 plan
SAME AS POR 43				

Appendix 2 – Summary of Ownership of the Portions Included in Iron Tank

Portion 9

Date	Activity	Identity	Details	Reference
23 April 1891	ACP	John Lee, Kelso		CP91/13 Rylstone; CP Register SANSW 7/4752
12 September 1891	Portion Survey	James Dawson, LS	Well £15; Bark hut £1 [extending from Portion 14 to the south]	P.1877.2125
3 January 1902	Mortgage	Bank of NSW		CP Register SANSW 7/4752
6 September 1907	Transfer CP	Hugh Cameron, Orbost, Vic, grazier		OSD No 547 Bk 840; CP Register SANSW 7/4752
2 October 1907	Mortgage	Goldsborough Mort & Co Ltd		CP Register SANSW 7/4752
14 January 1909	Grant for £125	Goldsborough Mort & Co Ltd	Por 9	CT 1945 f 7
31 December 1908	Transfer	Hugh Cameron, Fassifern, Orbost, Vic, grazier	Por 9	CT 1945 f 7
31 December 1908	Mortgage	AMP Soc	Por 9	CT 1945 f 7
31 December 1908	Mortgage	Goldsborough Mort & Co Ltd	Por 9	CT 1945 f 7
20 February 1909	Lease	John Morrissey, St Kilda, Vic, grazier	Por 9	CT 1945 f 7
30 June 1910	Transfer	John Morrissey, St Kilda, Vic, grazier	Por 9	CT 1945 f 7
8 February 1912	Mortgage	AMP Soc	Por 9	CT 1945 f 7

Date	Activity	Identity	Details	Reference
24 May 1922	Transfer	Francis Edward Ingram, Rylstone, grazier	Por 9	CT 1945 f 7
17 May 1922	Mortgage	Perpetual Trustee Co Ltd	Por 9	CT 1945 f 7
17 September 1923	Transfer	James Cyril Thompson, Rylstone, grazier	Por 9	CT 1945 f 7
19 September 1923	Mortgage	Bank of NSW	Por 9	CT 1945 f 7
31 March 1931	Mortgage	Bank of NSW	Por 9	CT 1945 f 7
14 April 1934	Mortgage	Bank of NSW	Por 9	CT 1945 f 7
2 September 1937	Issue CT	James Cyril Thompson, Rylstone, grazier	Por 9 & Por 10	CT 4867 f 114
2 December 1949	Transfer (part)	Andrew Woolley, Bylong, farmer & grazier	Por 9 & Por 10 (excluding railway)	CT 4867 f 114; CT 6216 f 136
13 November 1950	Issue	Andrew Woolley, Bylong, farmer & grazier	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
26 October 1955	Transfer	Hilton James Spencer, Bylong, grazier	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
26 October 1955	Mortgage	Andrew Woolley, Bylong, grazier	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
17 July 1956	Transfer	Andrew Woolley, Bylong, grazier	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
11 September 1961	Mortgage	E S & A Bank	Por 9 & Por 10 (excluding	CT 6216 f 136

Date	Activity	Identity	Details	Reference
			railway) 482.0.25	
11 September 1970	Transfer	Zivorad Jack Yagodich, Bylong Valley, farmer & grazier & wife Alison Ann Yagodich	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
11 September 1970	Mortgage	John Sherard Widdows, East Pallant, Chichester, England, solicitor & Marian Lisbeth Chase, Barnfield, Mark Way, Godalming, Surrey, England, married woman	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
30 November 1988	Transfer	Peter John Andrews, Bylong, grazier	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
25 February 1988	Mortgage	Westpac Banking Corp	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
	Auto Consol 6216-136			

Portion 10

Date	Activity	Identity	Details	Reference
23 April 1891	CL	John Lee		CL91/10 & 19332; P.1878.2125
12 September 1891	Portion Survey	James Dawson, LS	Ringbarking £3	P.1878.2125
19 February 1898	Forfeit			P.1878.2125

Date	Activity	Identity	Details	Reference
2 April 1898	Reversal of Forfeit			P.1878.2125
29 March 1900	ACP1900/22 Rylstone	John Lee, Kelso		CP Register SANSW 7/4752
3 January 1902	Mortgage	Bank of NSW		CP Register SANSW 7/4752
6 September 1907	Transfer CP	Hugh Cameron, Orbost, Vic, grazier		OSD No 547 Bk 840; CP Register SANSW 7/4752
2 October 1907	Mortgage	Goldsborough Mort & Co Ltd		CP Register SANSW 7/4752
14 January 1909	Grant for £375	Goldsborough Mort & Co Ltd	Por 10	CT 1945 f 8
31 December 1908	Transfer	Hugh Cameron, Fassifern, Orbost, Vic, grazier	Por 10	CT 1945 f 8
31 December 1908	Mortgage	AMP Soc	Por 10	CT 1945 f 8
31 December 1908	Mortgage	Goldsborough Mort & Co Ltd	Por 10	CT 1945 f 8
20 February 1909	Lease	John Morrissey, St Kilda, Vic, grazier	Por 10	CT 1945 f 8
30 June 1910	Transfer	John Morrissey, St Kilda, Vic, grazier	Por 10	CT 1945 f 8
8 February 1912	Mortgage	AMP Soc	Por 10	CT 1945 f 8
24 May 1922	Transfer	Francis Edward Ingram, Rylstone, grazier	Por 10	CT 1945 f 8
17 May 1922	Mortgage	Perpetual Trustee Co Ltd	Por 10	CT 1945 f 8
17 September 1923	Transfer	James Cyril Thompson, Rylstone, grazier	Por 10	CT 1945 f 8
19 September 1923	Mortgage	Bank of NSW	Por 10	CT 1945 f 8

Date	Activity	Identity	Details	Reference
31 March 1931	Mortgage	Bank of NSW	Por 10	CT 1945 f 8
14 April 1934	Mortgage	Bank of NSW	Por 10	CT 1945 f 8
2 September 1937	Issue CT	James Cyril Thompson, Rylstone, grazier	Por 9 & Por 10	CT 4867 f 114
2 December 1949	Transfer (part)	Andrew Woolley, Bylong, farmer & grazier	Por 9 & Por 10 (excluding railway)	CT 4867 f 114; CT 6216 f 136
13 November 1950	Issue	Andrew Woolley, Bylong, farmer & grazier	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
26 October 1955	Transfer	Hilton James Spencer, Bylong, grazier	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
26 October 1955	Mortgage	Andrew Woolley, Bylong, grazier	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
17 July 1956	Transfer	Andrew Woolley, Bylong, grazier	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
11 September 1961	Mortgage	E S & A Bank	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
11 September 1970	Transfer	Zivorad Jack Yagodich, Bylong Valley, farmer & grazier & wife Alison Ann Yagodich	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136

Date	Activity	Identity	Details	Reference
11 September 1970	Mortgage	John Sherard Widdows, East Pallant, Chichester, England, solicitor & Marian Lisbeth Chase, Barnfield, Mark Way, Godalming, Surrey, England, married woman	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
30 November 1988	Transfer	Peter John Andrews, Bylong, grazier	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
25 February 1988	Mortgage	Westpac Banking Corp	Por 9 & Por 10 (excluding railway) 482.0.25	CT 6216 f 136
	Auto Consol 6216-136			

Portions 15, 16, 17

Date	Activity	Identity	Details	Reference
	CP65/1145	John Lee		P.301.1524
5 August 1865	Survey	LS Robert Birch	Some topography and swamps shown	P.301.1524
13 July 1865	CP			
10 December 1877	Grant	John Lee, Bylong	Por 13, 14, 15, 16, 17, 18	CT 352 f 160
3 January 1902	Mortgage	Bank of NSW	Por 13, 14, 15, 16, 17, 18	CT 352 f 160
SAME AS Por 9 & 10				

Date	Activity	Identity	Details	Reference
6 September 1907	Transfer	Hugh Cameron, Orbest, Vic, grazier	Por 13, 14, 15, 16, 17, 18	CT 352 f 160
31 December 1908	Mortgage	AMP Soc	Por 13, 14, 15, 16, 17, 18	CT 352 f 160
31 December 1908	Mortgage	Goldsborough Mort & Co Ltd	Por 13, 14, 15, 16, 17, 18	CT 352 f 160
20 February 1909	Lease	John Morrissey, St Kilda, Vic, grazier	Por 13, 14, 15, 16, 17, 18	CT 352 f 160
30 June 1910	Transfer	John Morrissey, St Kilda, Vic, grazier	Por 13, 14, 15, 16, 17, 18	CT 352 f 160
8 February 1912	Mortgage	AMP Soc	Por 13, 14, 15, 16, 17, 18	CT 352 f 160
4 March 1914	Parish Road		Por 13, 14, 15, 16, 17, 18	CT 352 f 160: NSWGG 21 Feb 1879
28 January 1914	Surrender of part for Clo Sett Pro Act 1910	King George V	Por 13, 14, 15, 16, 17, 18	CT 352 f 160
15 September 1922	Issue CT	John Morrissey, Minimbah, Whittingham, grazier	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
SAME AS PORTIONS 9 & 10				
24 May 1922	Transfer	Francis Edward Ingram, Rylstone, grazier	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
17 May 1922	Mortgage	Perpetual Trustee Co Ltd	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
17 September 1923	Transfer	James Cyril Thompson, Rylstone, grazier	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
19 September 1923	Mortgage	Bank of NSW	Por 15, 16, 17 [157.1.0]	CT 3364 f 53

Date	Activity	Identity	Details	Reference
31 March 1931	Mortgage	Bank of NSW	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
14 April 1934	Mortgage	Bank of NSW	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
2 September 1937	Issue CT	James Cyril Thompson, Rylstone, grazier	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
2 December 1949	Transfer (part)	Andrew Woolley, Bylong, farmer & grazier	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
13 November 1950	Issue	Andrew Woolley, Bylong, farmer & grazier	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
26 October 1955	Transfer	Hilton James Spencer, Bylong, grazier	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
26 October 1955	Mortgage	Andrew Woolley, Bylong, grazier	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
17 July 1956	Transfer	Andrew Woolley, Bylong, grazier	Por 15, 16, 17 [157.1.0]	CT 3364 f 53
22 January 1962	Issue CT	Andrew Woolley, Bylong, grazier	Por 15, 16, 17 [157.1.0]	CT 8331 f 213
SAME AS POR 9 & 10				
11 September 1961	Mortgage	E S & A Bank	Por 15, 16, 17 [157.1.0]	CT 8331 f 213
11 September 1970	Transfer	Zivorad Jack Yagodich, Bylong Valley, farmer & grazier & wife Alison Ann Yagodich	Por 15, 16, 17 [157.1.0]	CT 8331 f 213

Date	Activity	Identity	Details	Reference
11 September 1970	Mortgage	John Sherard Widdows, East Pallant, Chichester, England, solicitor & Marian Lisbeth Chase, Barnfield, Mark Way, Godalming, Surrey, England, married woman	Por 15, 16, 17 [157.1.0]	CT 8331 f 213
30 November 1988	Transfer	Peter John Andrews, Bylong, grazier	Por 15, 16, 17 [157.1.0]	CT 8331 f 213
25 February 1988	Mortgage	Westpac Banking Corp	Por 15, 16, 17 [157.1.0]	CT 8331 f 213
19 October 1994	Mortgage	Commonwealth Development Bank of Australia	Por 15, 16, 17 [157.1.0]	CT 8331 f 213
SAME AS POR 1				
26 May 1999	Transfer	Stuart Peter Andrews & Megan Leisha Andrews	Por 15, 16, 17 [157.1.0]	CT 8331 f 213
26 May 1999	Mortgage	R M Cullen Holdings etc	Por 15, 16, 17 [157.1.0]	CT 8331 f 213
30 July 2002	Mortgage	Elders Rural Bank Ltd	Por 15, 16, 17 [157.1.0]	CT 8331 f 213
	Auto Consol 8331-213			

Appendix 3 – Valuations by Valuer-General, Parish Bylong 1957-65

Date	Assessment No	Portion or Cadastral Description	Area	Owner	Improvements	UCV	ICV	Remarks
16/1/1962	Fol 69	44, 51, pt 1 pt 48, Cl road	849.2.19 ³ / ₄	Howes, Harold John, Tarwyn Park	St Homestead, Cottages, Farm bldgs, Water	7020	38000	
6/2/1957	70	Pt 2 (lot 1)	1.0.0	Thompson, Geoffrey Ernest, Bylong	Fibro cottage, 3 R & K, Gl rf, Fibro Cottage, Gl rf	15	800	
24/1/1957	71	43, Pts 2, 8, 48: Rd Purch; Ph Lee Pt 80	698.3.35 ³ / ₄	Pluck Brian Reginald, Yarrowonga, Upper Bylong	Conc homestead, 7 rooms, K & O, Gl rf, Sk; Fibro cottage, sk, clearing, ringbarking, Farm bldgs, Lucerne, Water	4825	25750	

Date	Assessment No	Portion or Cadastral Description	Area	Owner	Improvements	UCV	ICV	Remarks
29/9/1965	74	3/7, 21, 23/5, 46/7 & Cl Rd, Pt 2 (lot 3 DP 222796), Pt 8, Pt 48, (lot 1 DP 512928) Ph Cogan 86/9, 201, Pt 304 (Lot 1 DP 204085)	3057.3.0 ³ / ₄	Thompson, John Albert, Bylong Station, Rylstone	Homestead, farm bldgs. & impts	7270	35200	
29/9/1965	75	Pt 2 Ph Lee 12, Pt 80 (lot 1 DP 222796)	100.2.6	Thompson, Geoffrey Ernest, Bylong Station, Rylstone	Farm Impts	1800	4650	

Date	Assessment No	Portion or Cadastral Description	Area	Owner	Improvements	UCV	ICV	Remarks
21/3/1962	Fol 71	160, 175, 302/3, 306 Ph Bylong & Coggan Pts 2,Pts 15/17, Pt 304 (lot 2) Ph Coggan (lot 2 DP 204084)	732.2. 39½	Pluck, Reginald Charles, 14 Spring St, Sydney	Pasture	4637	13200	Later impts by 1967
17/8/1967	Fol 76	Lot 2 DP 222796	1095.0.0	Pluck, Reginald Charles (trustee)	'Marapana' Cottage, Fram impts	21560	64700	
21/1/1957	73	9/11, 15/17, 49/50, 52, 67, 70/71	1958.0.20	Woolley, Andrew, 'Helvetia' Bylong	Gl cottage, Gl rf, Fibro Cott, Gt rf, Gl cott, Gl rf, farm bldgs., fencing, clearing, water supply, lucerne	6740	28250	

Date	Assessment No	Portion or Cadastral Description	Area	Owner	Improvements	UCV	ICV	Remarks
22/2/1966	Fol 73	11, 71	153.3.0	Harrison, William Vincent, Bylong	Farm impts	300	1000	
4/2/1957	74	12, 72	452.3.0	CROWN Woolley, Andrew, Bylong	Clearing, fencing, ringbarking	308	820	[Conditional lease]
4/2/1957	75	19.69	184.3.0	CROWN Glew, Wilfred Clive, 'Sylvania' Bylong		46	46	[Annual lease] - later cancelled
6/2/1957	76	20, 36 Ph Lee 82	143.0.0	CROWN Stanmore, Allan Frederick, Bylong Rd, Rylstone	GI cott, 2 R, K & O, GI rf, 2 GI sheds, fencing, clearing, ringbarking, water supply	165	1650	

Date	Assessment No	Portion or Cadastral Description	Area	Owner	Improvements	UCV	ICV	Remarks
21/1/1957	78	37/40	283.1.10	CROWN Cosgrove, Leonard Thomas, 'Innisfail', Bylong	GI cott, sheds, fencing, clearing, ringbarking, water supply, lucerne	1156	5500	Settlement Purchase Lease
4/2/1957	83	41	50.0.0	CROWN Cosgrove, Leonard Thomas, 'Innisfail', Bylong	Fencing, clearing, ringbarking, lucerne	220	850	Settlement Purchase Lease
4/2/1957	80	42, 61, 63, 80	220.0.0	Roberts, Cyril Thomas James, Cox's Gap, Rylstone	Ringbarking	220	300	[Conditional Purchase]
30/1/1957	81	53, 55, 66	166.2.0	Thompson, John Albert, Bylong Station, Bylong	Ringbarking, fencing	308	1300	[Conditional Purchase]

Date	Assessment No	Portion or Cadastral Description	Area	Owner	Improvements	UCV	ICV	Remarks
7/2/1957	82	54	60.0.0	Kerney, Albert Edward, Jacques St, Kandos		60	60	
30/1/1957	83	56/57	139.2.0	CROWN Schneider, Francis, Bylong Rd, Rylstone	Ringbarking	140	160	[Special Lease]
6/2/1957	84	58 Ph Lee 76, 83	396.0.0	CROWN Stanmore, Allan Frederick, Bylong Road, Bylong	Ringbarking, fencing	200	300	[Conditional Leases]
21/1/1957	85	59/60	153.2.4½	Maskell, Mrs Alice, Bylong Rd, Rylstone	Conc cott, Fibro Gl rf; 3 sheds, Ringbarking, fencing, clearing, water supply	266	1450	

Date	Assessment No	Portion or Cadastral Description	Area	Owner	Improvements	UCV	ICV	Remarks
5/2/1957	86	62	190.0.0	CROWN Roberts, Cyril Thomas James, Cox's Gap, Rylstone	Ringbarking,	142	230	[Special Lease]
5/2/1957	87	64	200.0.0	CROWN Roberts, Cyril Thomas James, Cox's Gap, Rylstone	Ringbarking	150	165	[Conditional Lease]
21/2/1957	88	65	92.2.0	Cosgrove, Leonard Thomas, 'Innisfail', Bylong	Ringbarking	92	180	[Conditional Purchase]

Date	Assessment No	Portion or Cadastral Description	Area	Owner	Improvements	UCV	ICV	Remarks
21/1/1957	89	73, 79	185.3.0	CROWN Maskell, Mrs Alice, Bylong Rd, Rylstone	Ringbarking	76	160	[Conditional Lease]
5/2/1957	90	74	46.3.0	CROWN Maskell, Mrs Alice, Bylong Rd, Rylstone	Fencing	46	85	[Conditional Lease]
5/2/1957	91	75	40.0.0	Cosgrove, Leonard Thomas, Bylong		40	40	[Special Lease]
5/2/1957	92	76, 86	132.2.0	Woolley, Arthur Holmes, 'Helvetia' Bylong		66	66	[Conditional Purchase]

Date	Assessment No	Portion or Cadastral Description	Area	Owner	Improvements	UCV	ICV	Remarks
7/2/1957	93	78, 88	1264.1.0	CROWN Kerney, Albert Edward, Jacques St, Kandos		316	316	[Crown Lease]
4/2/1957	94	81	61.3.0	CROWN Roberts, Cyril Thomas James, Cox's Gap, Rylstone		30	30	[Conditional Lease]
4/2/1957	95	82	91.1.0	CROWN		46	46	
4/2/1957	96	83	174.3.0	CROWN		82	82	
4/2/1957	97	84	74.2.0	CROWN		37	37	
4/2/1957	98	85	35.2.10	CROWN		17	17	

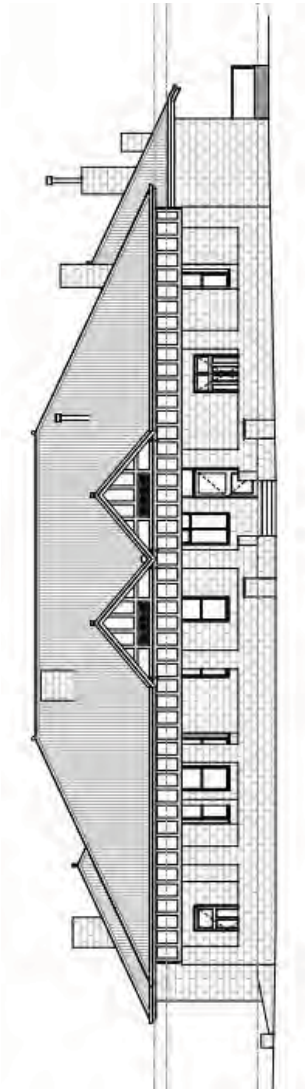

Date	Assessment No	Portion or Cadastral Description	Area	Owner	Improvements	UCV	ICV	Remarks
4/2/1957	99	87	41.2.0	CROWN Roberts, Cyril Thomas James, Cox's Gap, Rylstone	Ringbarking	20	40	[Crown Lease]



Source: NRS 14465, Valuation Rolls, Parish Bylong SANSW 3/11585



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Appendix B



Schedules of
Components
Significance and
Condition



Element	Component	Materials	Time Period	Grading	Condition	Image
<div> <div>  </div> <div> North (front) façade </div> </div>						
North (Front) façade	Walls	Sandstone	Original	E	F	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Roof	Corrugated Iron	Late 20 th C	E (form only. Fabric can be replaced)	F	
		Asbestos tiles (covered over by corrugated iron)	Original?	L	P	<p>Overview of corrugated iron roof, front elevation</p>  <p>Asbestos roof tiles, laid in a diamond pattern visible under eaves on eastern elevation</p>


Element	Component	Materials	Time Period	Grading	Condition	Image
	Gables	Timber half-framing Asbestos panelling	Original Original	E L	P V (to be replaced like-for-like with non-hazardous material)	
		Timber lined eaves Terracotta decorative panels Finial	Original Original Late 20 th C	E E L	P G F	
	Window 1	Opening Timber Frame casement window Leadlight glass	Original Original Original	E E E	G G F	
						



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 1	Opening	Original	E	G	 
		Timber frame	Original	E	G	
		Door				
		Lock	Modern	I	F	
		Leadlight	Original	E	F	
		Door bell	Original?	M	P	
		Transom				
		Frame	Original	E	F	
		Leadlight	Original	E	P	
		Door sill – white marble	Original	E	G	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Chimney	Sandstone Chimney Metal flue	Original Late 20 th C - Modern	E I	F F	 <p>Original sandstone chimney (left) and late 20th C to modern metal flue (right)</p>
	Verandah	Sandstone piers and half wall Concrete floor	Original Mid 20 th C	E M	V F	 <p>View east along northern elevation verandah</p>


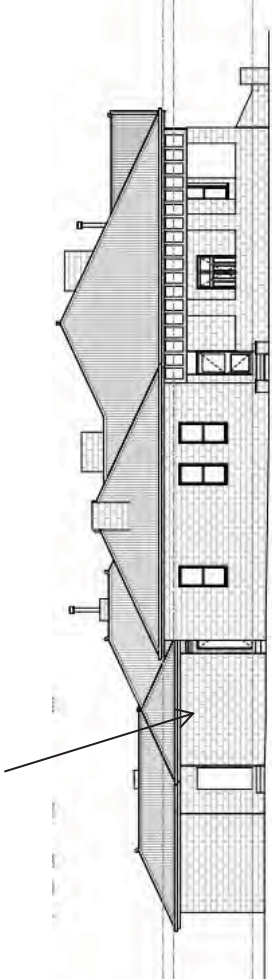

Element	Component	Materials	Time Period	Grading	Condition	Image
						 <p>Sandstone verandah pier showing weathering</p>
						 <p>Sandstone verandah half wall showing weathering</p>

Element	Component	Materials	Time Period	Grading	Condition	Image
		Asbestos (?) ceiling	Original	L	F	
		Verandah light	Original?	E	F	
		Stair treads – white marble	Original	E	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Downpipe/guttering	Zincalume guttering Zincalume square downpipe	Late 20 th C Late 20 th C	L L	F F	
	Window 2 and 3	Opening Window Timber frame Single hung sash, two pane Fly screen	Original Original Mid 20 th C Modern	E E L I	G F F F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 4	Opening Window	Original	E	G	
		Timber frame	Original	E	F	
		Single hung sash, two pane	Mid 20 th C	L	F	
		Fly screen	Modern	I	F	
	Air conditioning	Air conditioning unit and ducting	Modern	I	G	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 12	Opening	Original	E	G	
		Timber frame	Original	E	F	
		French doors (including leadlight panels)	Original	E	F	
		Door sill – white marble	Original	E	G	


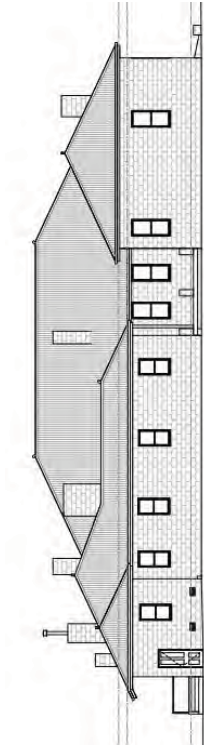

Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 4	Opening Timber frame Timber panel door Lock	Original Original Original Late 20 th C	E E M L	G F P F	
Eastern façade	Eastern façade	<p>Vernacular Concrete Structure</p>  <p>03 ELEVATION, LEFT FACADE SCALE 1:100 (A3) or 1:200 (A4)</p>				



Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Sandstone	Original	E	P	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Verandah	Timber half-framing	Original	E	P	 <p>Overview of verandah section to northern portion of elevation</p>  <p>Example of weathering to sandstone half wall</p>
		Asbestos panelling	Original	L	V (to be replaced like-for-like with non-hazardous material)	
		Sandstone piers	Original	E	V	
		Sandstone half wall	Original	E	V	
		Concrete stairs	Mid 20 th C	M	G	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 2	Opening Timber frame French doors (including leadlight) Sandstone sill	Original Original Original Original	E E E E	G F F G	
	Door 3 Note: identical to door 6	Opening Timber frame Timber panel and glass door Lock Transom (including glass) Flyscreen	Original Original Mid 20 th C Modern Original Modern	E M L I M L	G F F G G G	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 5 & 6	Opening Frame Single hung sash, two pane Flyscreen	Original	E	G	
			Mid 20 th C	M	F	
			Mid 20 th C	L	F	
			Mid 20 th C	L	F	
	Window 7	Opening Frame Single hung sash, two pane Flyscreen	Original	E	G	
			Mid 20 th C	M	F	
			Mid 20 th C	L	F	
			Modern	L	F	


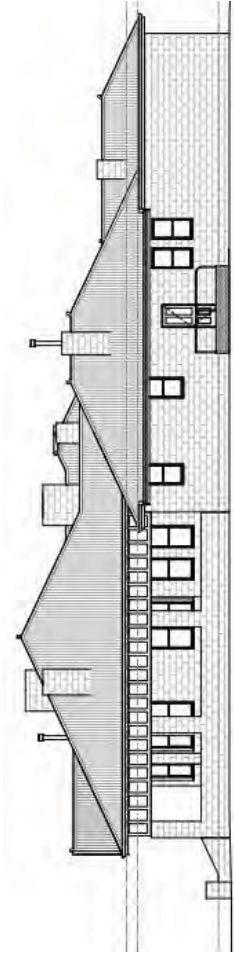

Element	Component	Materials	Time Period	Grading	Condition	Image
	Rainwater goods	Guttering Down pipe	Modern Modern	L L	G G	
Southern (rear) façade		 <p>04 ELEVATION - REAR FACADE SCALE 1 : 100 (A4) or 1 : 200 (A3)</p>				



Element	Component	Materials	Time Period	Grading	Condition	Image
	Rear Wall	Sandstone	Original	E	F to V	
	Window 8	Opening Frame Single hung sash, two pane Flyscreen	Original Mid 20 th C Mid 20 th C Modern	E M L L	G F F F	


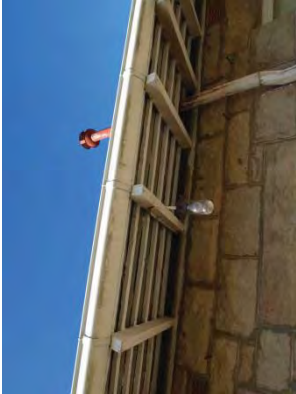

Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 9	Opening Frame Single hung sash, two pane Flyscreen	Original Mid 20 th C Mid 20 th C Modern	E M L L	G F F F	
	Window 16	Opening Frame Single hung sash, two pane Flyscreen	Original Mid 20 th C Mid 20 th C Modern	E M L L	G F F F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 18	Opening Frame Single hung sash, two pane Flyscreen	Original Mid 20 th C Mid 20 th C Modern	E M L L	G F F F	
	Window 19	Opening Frame Single hung sash, two pane Flyscreen	Original Mid 20 th C Mid 20 th C Modern	E M L L	G F F F	




Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 9	Opening	Original	E	G	
		Timber frame (no door)	Mid 20 th C	L	F	
		Concrete steps	Mid 20 th C	L	P	
		Boot scrap	Mid 20 th C - Modern	M	G	
	Window 20	Opening	Original	E	G	
		Frame	Mid 20 th C	M	F	
		Single hung sash, two pane	Mid 20 th C	L	F	
		Flyscreen	Modern	L	F	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 10	Opening Timber frame Timber panelled door Lock	Original Mid 20 th C Mid 20 th C Mid 20 th C	E M M M	G P P P	
Western (rear) façade						




Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Sandstone	Original	E	P-V	
	Window 21 & 22	Opening Frame Single hung sash, two pane Flyscreen	Original Mid 20 th C Mid 20 th C Modern	E M L L	G P F F	

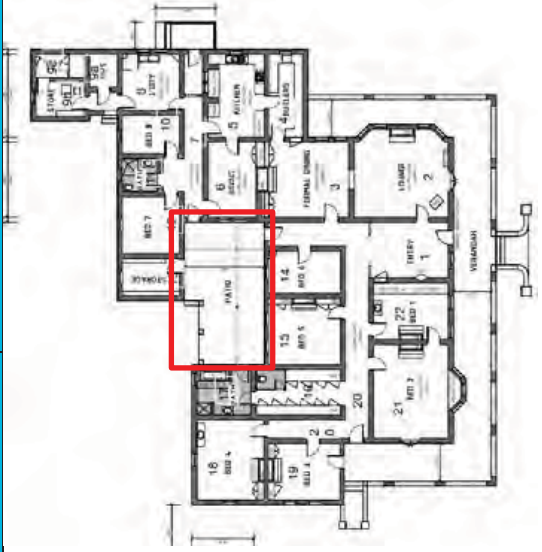


Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 11	Open	Original	E	G	 
	Note: identical to door 7	Timber frame	Mid 20 th C	L	P	
		Four panel timber frame door	Mid 20 th C	L	P	
		Lock	Mid 20 th C	L	P	
		Entrance light	Mid 20 th C	M	F	
	Drainpipe beneath Window 23	Concrete box drain	Modern	L	F	
		Metal grate	Modern	L	P	
		PVC pipe	Modern	L	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 23	Opening	Original	E	G	
		Frame	Mid 20 th C	M	P	
		Single hung sash, two pane	Mid 20 th C	L	F	
		Flyscreen	Modern	L	F	
	Hot water system	Oil tank system, for AGA (not inspected)	Modern	I	Not inspected	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 24	Opening Frame Single hung sash, two pane Flyscreen	Original Mid 20 th C Mid 20 th C Modern	E M L L	G P F F	
	Door 11 Landing	Brick and concrete Metal rail	Mid 20 th C Mid 20 th C	I I	F F	
	Window 25& 26	Opening Frame Single hung sash, two pane Flyscreen	Original Mid 20 th C Mid 20 th C Modern	E M L L	G P F F	




Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 27	Opening Frame Single hung sash, two pane Leadlight Flyscreen	Original Mid 20 th C Mid 20 th C Early 20 th C Modern	E M L E L	G P F F F	
	Window 28	Opening Frame Single hung sash, two pane Leadlight Flyscreen	Original Mid 20 th C Mid 20 th C Early 20 th C Modern	E M L E L	G P F F F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 29	Opening	Original	E	G	
		Frame	Mid 20 th C	M	P	
		Single hung sash, two pane	Mid 20 th C	L	F	
		Leadlight	Early 20 th C	E	F	
		Flyscreen	Modern	L	F	
	Verandah Wall	Timber half-framing	Original	E	P	
		Asbestos panelling	Original	L	V (to be replaced like-for-like with non-hazardous material)	
		Sandstone piers	Original	E	V	
		Sandstone half wall	Original	E	V	
		Concrete stairs	Mid 20 th C	M	G	
	Window30	Opening	Original	E	G	
		Frame	Mid 20 th C	M	P	
		Single hung sash, two pane	Mid 20 th C	L	F	
		Leadlight	Early 20 th C	E	F	
		Flyscreen	Modern	L	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
Patio (rear)						
	Walls	Sandstone	Original	E	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 5	Opening	Original	E	G	
		Timber frame	Mid 20 th C	L	P	
		Timber panel and glass door	Mid 20 th C	L	P	
		Knob	Mid 20 th C	L	P	
		Door sill - tile	Late 20 th C	L	F	
	Window 10	Opening	Original?	M	G	
		Frame	Mid 20 th C	M	P	
		Single hung sash, two pane	Mid 20 th C	L	F	
		Flyscreen	Modern	L	F	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 11	Opening Frame Single hung sash, two pane	Original Original? Original?	E M M	G P F	
	Window 12	Opening Frame Single hung sash, two pane	Original Original? Original?	E M M	G P F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 13	Opening Frame Single hung sash, two pane	Original Original? Original?	E M M	G P F	
	Door 6 Note: identical to Door 3	Opening Timber frame Timber panel and glass door Lock Transom (glass missing) Flyscreen	Original Original Mid 20 th C Modern Original Modern	E M L I M L	G F F G G G	
	Window 14 & 15 and air conditioner	Opening Frame Single hung sash, two pane Air conditioner	Original Original? Original? Modern	E M M I	G P F Not checked	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 7 Note: Identical to door 11	Open Timber frame Four panel timber frame door Lock	Original Mid 20 th C Mid 20 th C Mid 20 th C	E L L L	G P P P	
	Door 8	Opening Timber frame Three panel timber door Knob Lock	Original Original Original Original? Mid 20 th C	E M E E? L	G F F F F	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Rainwater goods	Guttering Downpipe	Modern Original – Mid 20 th C	L M	G P	 <p>View of guttering from patio, view north Refer to window 10 for view of downpipe</p>
	Sewer vent to bathroom	Metal	Mid 20 th C	L	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Chimney from patio	Sandstone	Original	E	F	
	South section of patio veranda	Timber frame Corrugated iron roof	Original – early 20 th C Late 20 th C - Modern	M L	F F	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Patio fence posts	Sandstone	Original	E	F	
	Patio flooring	Tiles	Late 20 th C	I	F	Refer above for picture.



Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	<p>Carpet</p> <p>Timber boards (timber boards not inspected)</p> <p>Skirting</p>	<p>Modern</p> <p>Original?</p> <p>Original?</p>	<p>L</p> <p>E?</p> <p>H?</p>	<p>F</p> <p>Unknown</p> <p>G</p>	
	Ceiling	<p>Asbestos sheeting?</p> <p>Brass and glass light fitting</p>	<p>Original</p> <p>Original</p>	<p>H</p> <p>E</p>	<p>G</p> <p>G</p>	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Coat Closet	Opening	Original	E	G	
		Four panel timber door	Original	E	G	
		Door knob	Original	E	G	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Entrance frame	Turned timber with tulip elements	Original	E	G	





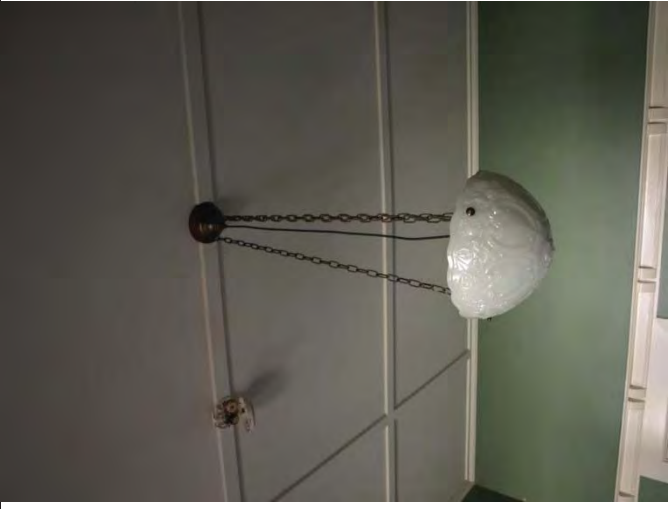
Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 13	Four panel timber door Door knob	Original Late 20 th C	E I	G G	
Room 2 Living Room						


Element	Component	Materials	Time Period	Grading	Condition	Image
	Walls	Rendered concrete	Original	E	G	
		Paint (colour)	Modern	H	G	
		Corbelled picture rail	Original	E	G	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	Ceiling — gyprock	Mid-Late 20 th C	L	G	
	Note: the ceiling is not panelled as seen in rooms 1 and 3 and the style of the cornice is not seen elsewhere in the Homestead	Light fittings	Modern	L	G	
		Cornice	Modern	L	G	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Wood burning fire	Wood burning fire and flue Tile surround	Late 20 th C	I	F	
			Late 20 th C	I	F	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Fireplace	Sandstone breast and marble mantle	Original	E	G	
		Metal grate	Original	H	P	
		Tiles	Mid 20 th C?	L	G	
		Marble surround	Original	E	F	
Room 3 Dining Room						



Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	<div> <div>Panelled asbestos (?) sheeting</div> <div>Light fitting</div> <div>Cornice</div> </div>	<div>Original</div> <div>Original</div> <div>Original</div>	<div>E</div> <div>E</div> <div>E</div>	<div>G</div> <div>G</div> <div>G</div>	   
	Skirting	Timber	Original	E	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Fireplace	Fireplace	Original	E	G	
		Marble mantle and surround	Original	E	G	
		Tiles	Original	E	G	
		Metal grate	Original	E	G	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 15	Four panel timber door Door knob	Original Late 20 th C	E I	G G	
	Servery door	Timber frame Timber door mirror	Original Original Original	E E E	G F G	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 16	Four panel timber door Door handle	Original	E	G	
			original	E	G	

Element	Component	Materials	Time Period	Grading	Condition	Image
						



Element	Component	Materials	Time Period	Grading	Condition	Image
	Built-in cabinets	Timber Lead light windows	Original Original	High High	F F	
Room 4 Butler's Pantry						

Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	<p>Panelled asbestos sheeting</p> <p>Cornice</p>	<p>Original</p> <p>Original</p>	<p>H</p> <p>H</p>	<p>F</p> <p>F</p>	
	Walls	<p>Rendered and painted</p> <p>Tiles (above sink)</p>	<p>Original</p> <p>Modern</p>	<p>E</p> <p>L</p>	<p>F</p> <p>F</p>	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Cupboards and draws	Painted timber	Original	E	F	 
		Laminate bench top	Early 20 th C	M	P	
		Composite stone bench top & sink	Original	E	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 17	Opening	Original	E	G	
		Timber frame	Original	E	G	
		Four panel door	Original	E	G	
		Door knob	Original	E	G	
		Height indicators (Andrews family)	Modern	H	F	

Element	Component	Materials	Time Period	Grading	Condition	Image
						
	Floor	Timber – polished pine	Original	E	G	



Element	Component	Materials	Time Period	Grading	Condition	Image
	AGA	AGA oven	Early 20 th C	H	G	
	Floor	Pine timber floor boards	Original	H	G	
	Ceiling	Panelled asbestos sheeting Cornice	Original Original	H H	F G	




Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 18	Four panel timber door Door knob	Original Original	E E	G G	
	Door 19	Four panel timber door Door knob	Original Original	E E	G G	
	Kitchen Cabinetry	Timber	Modern	L	G	
	Appliances	Stove/oven Dishwasher	Modern Modern	L L	Not checked Not checked	




Element	Component	Materials	Time Period	Grading	Condition	Image
Room 6 Lounge 2	Fireplace	Built in brick Mantel removed other than timber skirting	Original	H	F	
	Built in shelving	Timber and glass	Mid-Late 20 th C	I	F	
	Door 19	Four panel timber door Door knob	Original	E	G	




Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 20	Four panel timber door Door knob	Original	E	G	
Room 7 Side entrance						



Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	Asbestos	Mid 20 th C	M	F	
	Floor	Timber – polished	Original (polishing later modification)	H	G	
	Skirting	Timber	Original?	H	F	
	AGA Window 1	Timber Frame Casement window	Original Original	H H	G G	
	AGA Window 2	Timber Frame Casement window	Original Original	H H	G G	




Element	Component	Materials	Time Period	Grading	Condition	Image
	Entry tiling	Ceramic tiles	Mid-Late 20 th C	L	F	
Room 8 Laundry						

Element	Component	Materials	Time Period	Grading	Condition	Image
	Sink	Ceramic sink Tapware	Mid 20 th C Mid 20 th C	M L	F P	
	Walls	Rendered masonry Paint	Original Modern	E L	P (evidence of rising salt attack) F	
	Floor	Ceramic tiles	Modern	L	F	




Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	Fibre board	Modern	L	P	
Room 9 a, b & c Boiler Room						
	Door 26 (Room 9a)	Three panel door Door knob	Early-Mid 20 th C	H	F	




Element	Component	Materials	Time Period	Grading	Condition	Image
	Hot water system (Room 9a)	Hot water system	Modern	L	Not checked.	
	Door 28 (Room 9b)	Four panel timber door Door knob	Original	H	G	
	Floor (Room 9b)	Concrete	Late 20 th C	I	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 27 (room 9b)	Four panel door Door knob	Late 20 th C Late 20 th C	L L	F F	
	Door 10 (Room 9c)	Four panel door Door knob	Mid 20 th C Mid 20 th C	L L	F F	



Element	Component	Materials	Time Period	Grading	Condition	Image
Room 10 Storage 2						
	Door 23	Four panel door Door knob	Original Original	H L	F F	
	Ceiling	Asbestos sheeting?	Original?	L	P	



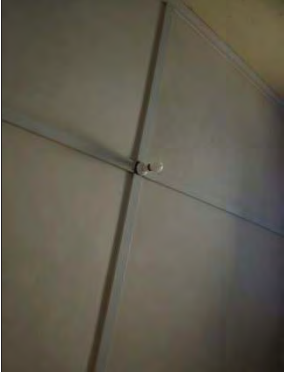
Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Carpet	Modern?	L	P	
Room 11 Bath						
	Shower	Glass partition tapware	Modern Modern	L L	P P	
	Floor	Ceramic tiles	Modern	L	P	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 22	Four panel door Door knob	Original Original	H H	F F	
	Ceiling	Asbestos sheeting Ceiling fan	Original Modern	L L	F Not checked	
	Wall tiling and basin	Ceramic tiles Vanity/basin	Modern Modern	L L	F G	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Masonry Paint	Original Modern	E L	F G	
						
Room 12 Office	Floor	Plywood covering unknown flooring	Modern	I	G	
	Skirting	Timber skirting	Late 20 th C?	L	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	Asbestos sheeting	Original	L	P	
	Door 21	Four panel door Door knob	Original Original	H H	F F	


Element	Component	Materials	Time Period	Grading	Condition	Image
Room 13 Storage 1						
	Shelving	Timber and metal frame shelving	Mid 20 th C to modern?	M	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 8	Three panel door Door knob	Mid 20 th C Mid 20 th C	L L	F F	
	Floor	Concrete	Original?	L	P	
	Ceiling	Asbestos sheeting	Original	L	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
Room 14 Bedroom						
	Door 28	Four panel door Door knob	Original Original	H H	F F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Sink	Sink Tiling vanity	Mid-Late 20 th C	M	P	
	Floor	Carpet over timber	Modern Original	L E	F Not inspected	
	Ceiling	Asbestos sheeting	Original	L	P	


Element	Component	Materials	Time Period	Grading	Condition	Image
Room 15						
	Ceiling	Asbestos panelling	Original	H	F	
		Light fitting	Original/mid 20 th century	H	G (appearance only)	
		Smoke alarm	Modern	L	Not tested	
		Cornice	Original	M	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Carpet Over timber boards – not inspected	Modern	L	G	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Skirting	Mid 20 th Century	L	G	 
		Picture Rail	Original	E	G	
		Fireplace	Original (all components)	E	G	
		<ul style="list-style-type: none"> • mantle – two tone granite • tiles – blue rectangular • grate – beaten metal with copper plate (largely worn away) 			G	
		Built-in cupboards	Original	H	G	
		<ul style="list-style-type: none"> • framing • doors • mirror • handles 	Original Original Modern Modern			


Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 29	Four panel door Door knob	Original Mid 20 th Century	E L	G G	
Room 16a						



Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Built-in Cupboards <ul style="list-style-type: none"> • frames • doors • door handles 	Original Original Late 20 th Century	E E L	G G G	
	Ceiling	Asbestos panelling Light fitting	Original Modern	H L	F F (appearance only)	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Timber boards Carpet	Original	H	P	
			Late 20 th Century	L	V	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 30	Three panel door	Late 20 th Century	M	F	
		Door knob	Late 20 th Century	L	F	
Room 16b – toilet	Walls	Tiles (matching room 17)	Mid 20 th Century	M	F	
		Air vent	Original	M	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	Asbestos sheeting?	Original	H	G	
		Cornice	Original	H	G	
		Light fitting	Modern	L	G	




Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Tiles	Mid 20 th Century	L	P	



Element	Component	Materials	Time Period	Grading	Condition	Image	
	Fixtures	Toilet bowl Plumbing	Modern Mid 20 th Century	L M	G F		
Room 17							




Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Tiles (matching room 16b)	Mid 20 th Century	M	F	
		Air vent	Original	M	F	
	Ceiling	Asbestos sheeting	Original	H	G	
		Cornice	Original	H	G	
		Light fitting	Mid 20 th Century	M	G (appearance only)	
	Floor	Tiles	Mid 20 th Century	L	P	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Fixtures	Bath	Late 20 th Century	L	F (not tested)	
		• taps	Mid 20 th Century	H	G (not tested)	
		• Spout	Mid 20 th Century	H	F	
		• Bath	Mid 20 th Century	H	G	
		• In-built soap dish				
		Shower	Mid 20 th Century	M	G	
		• Cubicle	Mid 20 th Century	M	F	
		• Shower head	Late 20 th Century	M	F (not tested)	
		• Taps	Mid 20 th Century	M	G	
		• In-built soap dish				
		Sink	Mid 20 th Century	H	F	
		• Sink	Late 20 th Century	L	F (not tested)	
		• Taps				
		Mirror	Late 20 th Century	L	G	
		Towel rail & toothbrush holder	Late 20 th Century	L	F	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 31	Three panel door with opaque, textured glass Door knob	Mid 20 th Century Mid 20 th Century	L L	F F	
Room 18						



Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Skirting	Mid 20 th Century	L	G	 
		Picture Rail	Original	E	G	
		Fireplace	Original (all components)	E	G	
		<ul style="list-style-type: none"> • mantle – two tone granite • tiles – teal rectangular • grate – beaten metal with copper plate (largely worn away) 			G	
		Built-in cupboards	Original	H	G	
		<ul style="list-style-type: none"> • framing • doors • mirror • handles 	Original Original Modern Modern			
	Ceiling	Sink	Modern Modern	H	G	
		Asbestos sheeting and panels	Original	H	G	
		Light fitting	Original	H	G (appearance only)	
	Floor	Carpet	Modern	L	F	
		Floor boards	Original?	H	Not inspected	

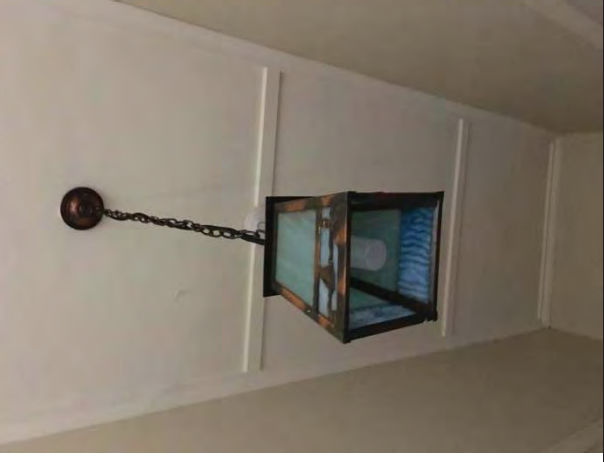

Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 32	Four panel door Door knob	Original Mid 20 th Century	H L	G G	
Room 19						



Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Skirting	Mid 20 th Century	L	G	 
		Picture Rail	Original	E	G	
		Fireplace	Original (all components)	E	G	
		<ul style="list-style-type: none"> • mantle – two tone granite • tiles – Dutch scene • grate – beaten metal with copper plate 			G	
		Built-in cupboards <ul style="list-style-type: none"> • framing • doors • mirror • handles 	Original Original Modern Modern	H	G	
	Ceiling	Asbestos sheeting and panels	Original	H	G	
		Light fitting	Modern	L	G (appearance only)	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Carpet Floor boards	Modern Original?	L E	F Not inspected	
	Door 33	Four panel door Door knob	Original Late 20 th Century	H L	P F	



Element	Component	Materials	Time Period	Grading	Condition	Image
Room 20						



Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Skirting	Original	H	F	
		Picture Rail	Original	H	G	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	Asbestos sheeting and panels	Original	H	G	
		Light fitting in east wing of hall <ul style="list-style-type: none"> Brass and glass lead light depicting a ship and lighthouse 	Original	H	G (appearance only)	
		Light fitting in north wing of hall	Modern	L	G (appearance only)	
		Smoke alarm	Modern	L	G (appearance only)	
	Floor		Modern?	L	P	
Room 21			Original	E	Not inspected	
						


Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Skirting	Original	M	P	
		Picture Rail	Original	E	G	
		Fireplace	Original (all components)	E	G	
		<ul style="list-style-type: none"> • mantle – two tone granite • tiles – pink rectangular with tulip feature tiles • grate – beaten metal with copper plate (largely worn away) 			G	
					F/P	
	Ceiling	Asbestos sheeting and panels	Original	H	P (paint peeling)	
		Light fitting <ul style="list-style-type: none"> • Brass and moulded milk glass 	Original	H	G (appearance only)	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Carpet Floor boards	Modern? Original	L E	P Not inspected	
	Door 34	Four panel door Door handle	Original Late 20 th Century	E L	P P	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 36	Four panel door Door knob	Original Late 20 th Century	E L	F F	
Room 22						





Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Skirting	Original	M	P	
		Picture Rail	Original	E	G	
		Fireplace <ul style="list-style-type: none"> • mantle – two tone granite • tiles – blue • grate – beaten metal with copper plate (largely worn away) and cast iron 	Original (all components)	E	G	
		Sink <ul style="list-style-type: none"> • vanity • sink • tapware • tiles 	Original Original Late 20 th C Modern	H H L L	P F P G	
		Built-in Robe	Modern	L	F	


Element	Component	Materials	Time Period	Grading	Condition	Image
						
	Ceiling	Asbestos sheeting and panels Light fitting <ul style="list-style-type: none"> • Metal and glass 	Original Modern	H I	P (paint peeling) G (appearance only)	
	Floor	Carpet Floor boards	Modern? Original	L E	P Not inspected	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 35	Four panel door	Original	E	F	
		Door knob	Late 20 th Century	L	F	

Vernacular Concrete Structure



Element	Component	Materials	Time Period	Grading	Condition	Image
Northern façade	Wall	Unreinforced concrete pise	Original	H	P	
		Render, including ashlar line markings	Original	H	P	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Roof	Corrugated iron Guttering Timber battens	Early-Mid 20 th C Late 20 th C Original?	H L H	P P P	
	Door	Three panel fly screen door	Late 20 th C	L	V	
	Wall					
Southern façade	Wall	Unreinforced concrete pise Render, including ashlar line markings	Original Original	H H	P P	




Element	Component	Materials	Time Period	Grading	Condition	Image
Western façade	Window					
	Wall	Unreinforced concrete pise Render, including ashlar line markings	Original Original	H H	P P	
Interior	Walls	Render Paint	Original Mid-Late 20 th C	L L	P P	
	Floor	Timber floor boards Exposed sub floor	Original Late 20 th C	H I	P G	




Tank Stand/Garage/Generator Shed



Note: the phasing of the garage indicates that it was constructed in four phases. The tank stand was the initial structure, followed by the weatherboard structure and then the concrete garage and corrugated iron generator shed. The fabric would suggest that the three infill construction phases occurred between the late 1940s and late 1960s. The time period given below has been augmented by the addition of an informational note indicating whether the fabric relates to Phase 1, Phase 2 or Phase 3. It is unclear from an initial inspection of the fabric as to whether the concrete garage or the generator shed came first and therefore the garage has arbitrarily been assigned Phase 2 and the generator shed Phase 3. There is an additional un-phased lean-to structure on the eastern side that may have been used as a chicken roost.



Element	Component	Materials	Time Period	Grading	Condition	Image
Northern façade	Wall	Tank stand unmilled timber uprights	Original	H	F	
		Timber weatherboard	Mid 20 th C (Phase 1)	L	P	
		Corrugated iron (generator shed)	Mid 20 th C (Phase 3)	L	P	
						



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door	Interior four panel door Door knob	Mid 20 th C (Phase 1)	L	P	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Window	Timber frame double hung sash window	Mid 20 th C (Phase 1)	L	VP	
	In-ground water tank	Concrete tank	Late 20 th C	L	Not inspected	
	Generator shed	Window – timber frame	Late 20 th C (Phase 3)	L	P	
Western façade						

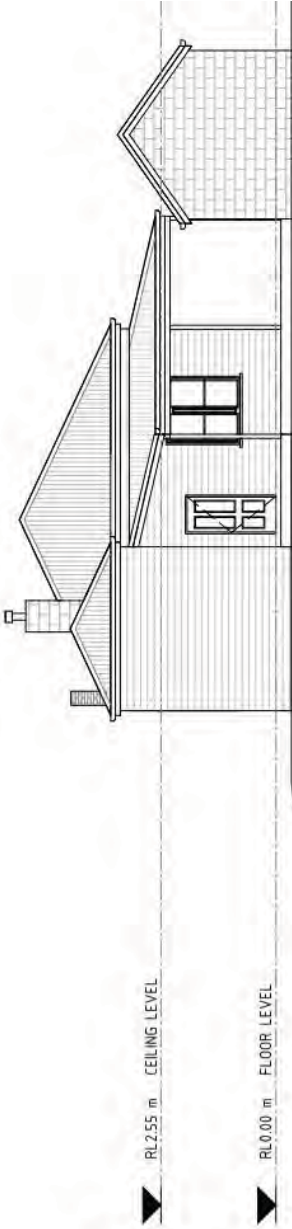

Element	Component	Materials	Time Period	Grading	Condition	Image
Southern façade	Concrete Garage	Concrete wall – formwork	Late 20 th C (Phase 2)	L	F	
	Beams	Timber supports – milled timber	Late 20 th C (Phase 2)	L	P	 

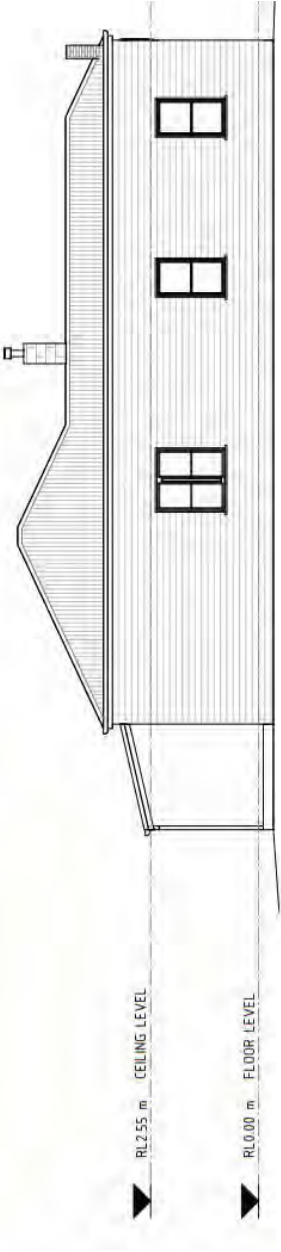


Element	Component	Materials	Time Period	Grading	Condition	Image
Eastern façade	Wall	Timber weatherboard	Mid 20 th C (Phase 1)	L	P	
		Concrete	Mid 20 th C (Phase 2)	L	F	
	Chicken roost	Timber weatherboard on timber frame with corrugated iron roof	Late 20 th C	L	P	


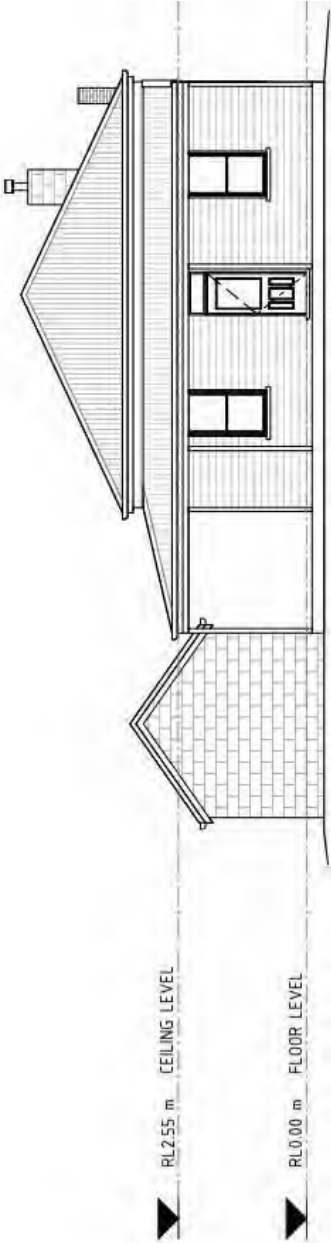

Element	Component	Materials	Time Period	Grading	Condition	Image
	Window	Single hung four pane sash window	Mid 20 th C (Phase 1)	L	VP	
Interior						
Interior	Interior beams	Unmilled uprights	Original (tank stand)	H	F	
		Metal support	Mid 20 th C (Phase 2)	L	P	
	Walls	Unlined weatherboard	Mid 20 th C (Phase 1)	L	P	
		Formwork concrete	Mid 20 th C (Phase 2)	L	F	
		Unlined corrugated iron	Mid 20 th C (Phase 3)	L	P	


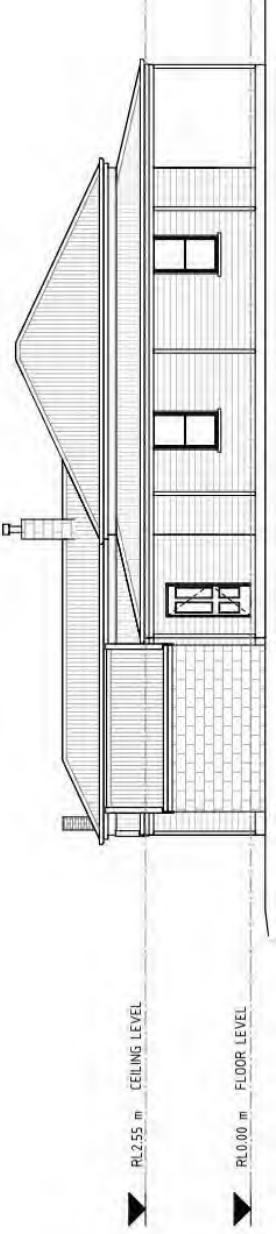
Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	Unlined corrugated iron on timber batons	Mid 20 th C (Phase 1, 2 & 3)	L	P	
	Interior fittings	Concrete generator bed (generator removed)	Mid 20 th C (Phase 3)	L	F	

Farm House 2




Element	Component	Materials	Time Period	Grading	Condition	Image
North-west façade						
	Wall	Weatherboard	Early 20 th C	H	P	
	Roof	Corrugated iron	Late 20 th /Modern	H (form)	F	
		Satellite Dish x2	Modern	L	L	
	Chimney	Red Brick	Early 20 th C	H	F	
	Door 8	Hollow core door	Modern	I	P	
	Window 8	Four pane, single hung sash windows	Original (Late 19 th C)	H	P	
	Window 9	Four pane, single hung sash windows	Original (Late 19 th C)	H	P	



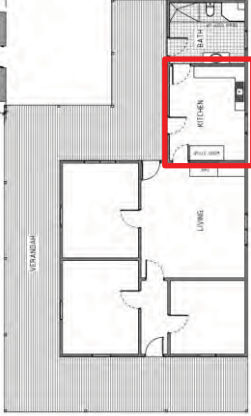

Element	Component	Materials	Time Period	Grading	Condition	Image
North-east façade						
	Window 1	Four pane, single hung sash windows	Original (Late 19 th C)	H	P	
	Window 2	Four pane, single hung sash windows	Original (Late 19 th C)	H	P	
	Window 3	One pane, single hung sash windows	Original (Late 19 th C)	H	P	
	Wall	Weatherboard	Original (Late 19 th C)	H	P	





Element	Component	Materials	Time Period	Grading	Condition	Image
	Tank	Corrugated iron tank	Modern	L	P	
		Concrete base	Modern	L	F	
South-east façade						
	Door 7	<ul style="list-style-type: none">• Complex seven panel door with decorative moulding and central glass panel• Door bell• Door knob• Fly screen	Original	H	F	
			Original	H	F	
			Modern	I	F	
			Modern	L	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 4	Four pane, single hung sash windows	Original (Late 19 th C)	H	P	
	Window 4	Four pane, single hung sash windows	Original (Late 19 th C)	H	P	
	Window 5	Four pane, single hung sash windows	Original (Late 19 th C)	H	P	
West Elevation						
	Wall	Weatherboard	Original & Early 20 th C	H	P	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Kitchen chimney	Sandstone	Original (Late 19 th C)	H	F	
		Metal Flue	Late 20 th C/Modern	L	F	
	Window 6	Four pane, single hung sash windows	Original (Late 19 th C)	H	P	
	Window 7	Four pane, single hung sash windows	Original (Late 19 th C)	H	P	
	Door 1	Hollow core door	Modern	L	P	
		Door knob	Modern	L	P	

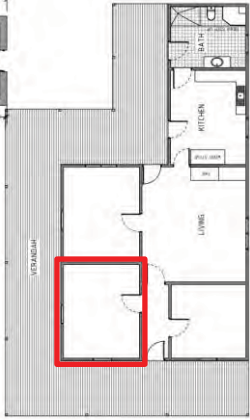


Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 2	Hollow core door Door knob Fly screen	Modern Modern Modern	L L L	P P P	
Interior						
Bathroom						
	Copper	Brickwork Tile top	Early 20 th C Modern	H I	F F	
	Floor	Tile	Modern	L	F	

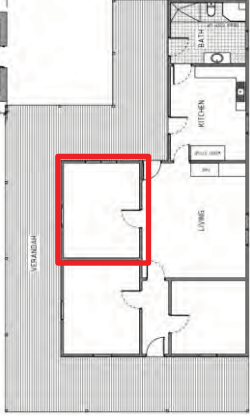


Element	Component	Materials	Time Period	Grading	Condition	Image
	Vanity	Vanity Tapware Sink	Modern Modern Modern	L L L	P P P	
	Shower	Shower head Tiles Shower screen (glass)	Modern Modern Modern	L L L	P P P	
	Toilet	Cistern Bowl	Modern Modern	L L	F F	
						
	Kitchen					
	Walls	Timber panelling over timber frame Note: Intrusive investigations were not undertaken. It is not known whether earlier/original wall coverings are preserved beneath the timber panelling.	Late 20 th C	I	F	
	Ceiling	Medium Density Fibreboard panelling Note: Intrusive investigations were not undertaken. It is not known whether earlier/original ceiling is preserved beneath the panelling.	Late 20 th C	I	F	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Fireplace	Fireplace/breast – brick with concrete render Metters Canberra Coke burning stove (released c. 1920 and available until mid 1950s)	Original Early/Mid 20 th C	H H	F H	
	Tiling beneath Stove	Tile	Late 20 th C	L	P	
	Floor	Vinyl Timber floor	Late 20 th C Original?	L H	P Not inspected	
	Kitchen cupboards	Timber and glass	Late 20 th C	L	P	
	Door 2	Three vertical panel door Door knob	Late 19 th C Early 20 th C	H H	F F	
	Door 3	Hollow core door Door knob	Modern Modern	L L	F F	
Living Room						




Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Timber panelling Note: Intrusive investigations were not undertaken. It is not known whether earlier/original wall coverings are preserved beneath the timber panelling.	Late 20 th C	I	F	
	Ceiling	Medium Density Fibreboard panelling Note: Intrusive investigations were not undertaken. It is not known whether earlier/original ceiling is preserved beneath the panelling.	Late 20 th C	I	F	
	Fireplace	Fireplace/breast – brick with concrete render Wood burning fire	Original Modern	H L	P F	
	Fireplace tiling	Tile	Late 20 th C	L	P	
	Built in shelving	Timber	Late 20 th C	L	F	
	Door 8	Four panel door Door knob	Original/Early	M	F	
	Floor	Carpet	Modern	I	VP	
		Timber boards	?	?	Not inspected	
Bedroom 1						




Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 6	Four panel door Door knob Transom	Original Early 20 th C Original	H M H	G G G	
	Wall	Timber panelling Note: Intrusive investigations were not undertaken. It is not known whether earlier/original wall coverings are preserved beneath the timber panelling.	Late 20 th C	I	F	
	Ceiling	Medium Density Fibreboard panelling Note: Intrusive investigations were not undertaken. It is not known whether earlier/original ceiling is preserved beneath the panelling.	Late 20 th C	I	F	
	Floor	Carpet Timber boards	Modern ?	I ?	VP Not inspected	


Element	Component	Materials	Time Period	Grading	Condition	Image
Bedroom 2						
	Wall	Timber panelling Note: Intrusive investigations were not undertaken. It is not known whether earlier/original wall coverings are preserved beneath the timber panelling.	Late 20 th C	I	F	
	Door 5	Four panel door Door knob Transom	Original Early 20 th C Original	H M H	G G G	
	Ceiling	Medium Density Fibreboard panelling Note: Intrusive investigations were not undertaken. It is not known whether earlier/original ceiling is preserved beneath the panelling.	Late 20 th C	I	F	
	Floor	Carpet Timber boards	Modern ?	I ?	VP Not inspected	

Element	Component	Materials	Time Period	Grading	Condition	Image
Bedroom 3						
	Walls	Timber panelling Note: Intrusive investigations were not undertaken. It is not known whether earlier/original wall coverings are preserved beneath the timber panelling.	Late 20 th C	I	F	
	Floor	Carpet Timber boards	Modern ?	I ?	VP Not inspected	
	Ceiling	Medium Density Fibreboard panelling Note: Intrusive investigations were not undertaken. It is not known whether earlier/original ceiling is preserved beneath the panelling.	Late 20 th C	I	F	
	Door 4	Four panel door Door knob Transom	Original Early 20 th C Original	H M H	G G G	

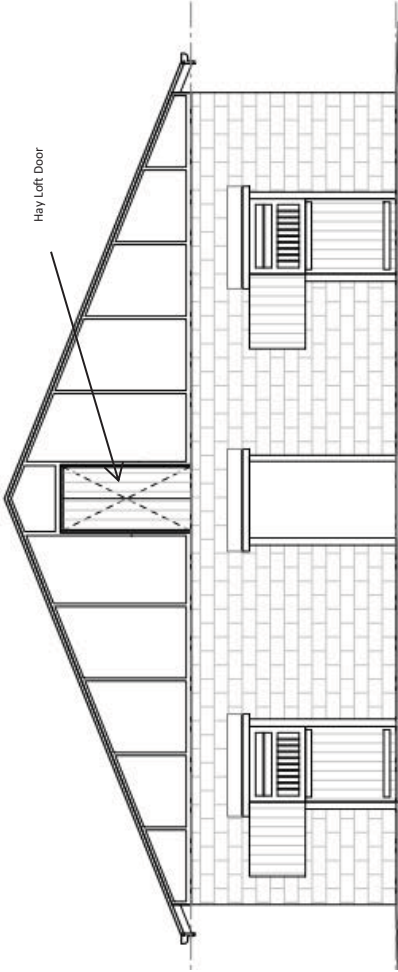

Sandstone Structure Associated with Farm House 2


Element	Component	Materials	Time Period	Grading	Condition	Image
North east façade	Walls	Sandstone – un-coursed squared rubble	Mid/Late 19 th C	E	P	
	Door opening	Frame – timber <small>Note: the door has been removed at some point</small>	Mid/Late 19 th C	H	F	
	Roof	Corrugated iron sheeting	Late 20 th C	E (form only. Material of little significance and may be replaced as required with like for like)	P	
South east façade	Guttering	Iron – squareline profile	Modern	I	VP	
	Walls	Sandstone – un-coursed squared rubble	Mid/Late 19 th C	E	P	
	Window	Facia board - timber Frame – timber Pane – fly mesh (no glass)	Late 20 th C Mid/Late 19 th C	L H	F F	
South west façade	Walls	Sandstone – un-coursed squared rubble	Mid/Late 19 th C	E	P	
	Roof	Corrugated iron sheeting	Late 20 th C	E (form only. Material of little significance and may be replaced as required with like for like)	P	
	Guttering	Iron – squareline profile	Modern	I	VP	


Element	Component	Materials	Time Period	Grading	Condition	Image
North west facade	Walls	Sandstone – un-coursed squared rubble	Mid/Late 19 th C	E	P	
		Facia board – timber	Late 20 th C	L	F	
		Concrete patching	Modern	I	VP	
Interior	Window	Frame – timber Pane – fly mesh (no glass)	Mid/Late 19 th C	H	F	
	Walls	Random Rubble	Mid/Late 19 th C	E	P	
		Plaster	Original?	H	VP	
	Fittings	Pipes	Late 20 th C/Modern	L	Not inspected	
		Tapware	Modern	L	P	
		Laundry Tub	Modern	L	F	
	Floor	Concrete	Late 20 th C/Modern	I	VP	
		Timber stump	Original?	L	F	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	Tray vaulted, timber panelled ceiling Florescent light, wiring and conduit	Early Addition	H	P	
			Modern	I	Not inspected	


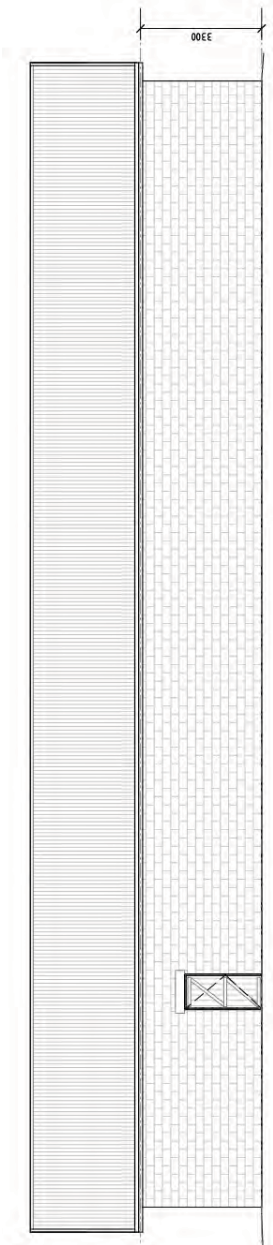

Tarwyn Park Stables Exterior



Element	Component	Materials	Time Period	Grading	Condition	Image
North Façade						
						
Northern façade	Walls	Sandstone— un-coursed squared rubble Fibrous sheeting (Gables)	Original ?	E L	P VP	
			Stable Door 1	Stable Door 2	Stable Door 3	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Stable 1 doors	Double hung timber doors with metal bars	Original?	H	VP	
		Hinges	Original?	H	P	
		Latches	Original?	H	P	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Stable 2 doors	Double hung timber doors with metal bars	Original?	H	Failed/Missing	
	Note: broken door piece is inside Stable 2. Material should be reinstated if possible	Hinges	Original?	H	P/Missing	
		Latches	Original?	H	Missing	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Stable 3 doors	Double hung timber doors with metal bars	Original?	H	VP	
		Hinges	Original?	H	P	
		Latches	Original?	H	P	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Hay/loft door	Timber	?	H	F	
		Hinges	?	H	F	
Western façade						
						
Western façade	Walls	Sandstone – un-coursed squared rubble	Original	E	P	
		Downpipe – square profile	Late 20 th C	L	VP	
		Drain - brick	Original/Early	M	VP	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Door	Cross-braced timber slab door	?	M	P	
		Door knob	?	M	P	
	Roof	Corrugated iron sheeting	Late 20 th C	E (form only, material may be replaced like-for-like)	F	
		Louvered Roof skylights	Late 20 th C	L	Not inspected	
		Guttering – Quad profile	Late 20 th C	L	P	
		Eaves – wire netting	Late 20 th C	L	F	

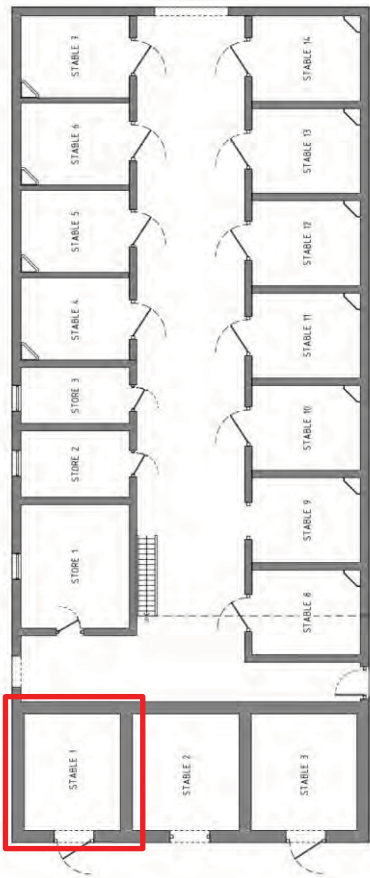
Element	Component	Materials	Time Period	Grading	Condition	Image
Southern façade						
Southern façade	Walls	Sandstone – un-coursed squared rubble Fibrous sheeting (Gables) External light	Original ? Modern	E L L	P/V/P VP Not inspected	
	Window	Timber frame four pane fixed window	Original?	H	P	


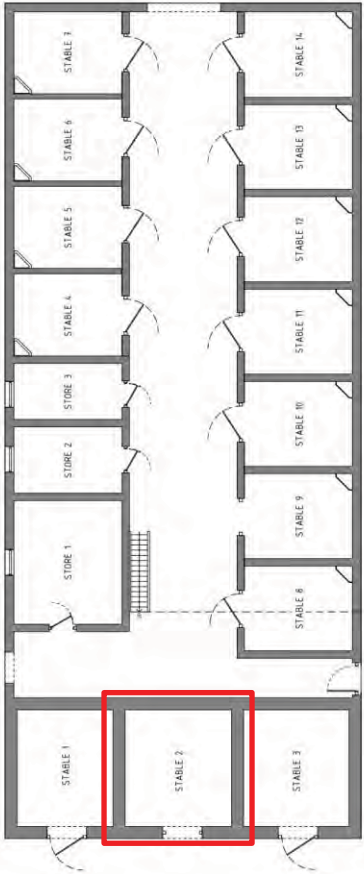

Element	Component	Materials	Time Period	Grading	Condition	Image
Eastern façade	Wall	Sandstone – un-coursed squared rubble Downpipe – square profile Drain - brick	Original	E	P	
			Late 20 th C	L	VP	
			Original/Early	M	VP	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 1	Timber framed four pane single hung sash window	Original	H	VP	
	Window 2	Timber framed four pane single hung sash window	Original	H	VP	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 3	Timber framed four pane single hung sash window	Original	H	Failed	
	Door Note: door itself is missing	Frame	?	L	P	

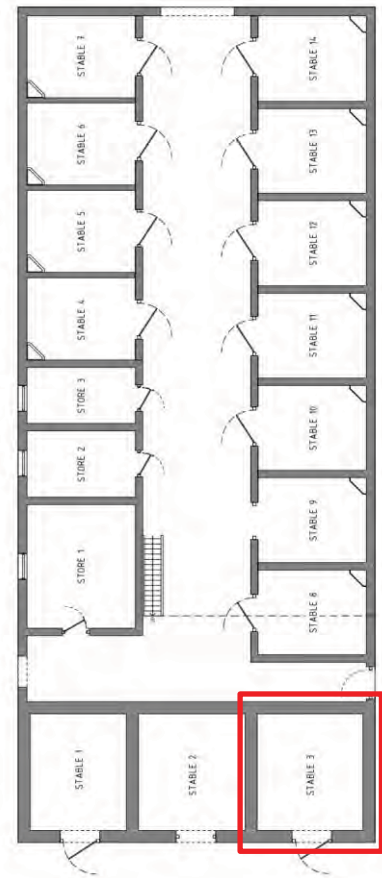
Element	Component	Materials	Time Period	Grading	Condition	Image
Interior						
Stable 1	Walls	Random rubble sandstone Timber board on timber batons	Original	E	P	






Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Concrete	Original?	M	F	
						
Room 2	Walls	Random rubble sandstone Render <ul style="list-style-type: none"> Two tone paint 	Original Original? Original?	E H H	P VP VP	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Concrete	Original?	M	F	

Stable 3

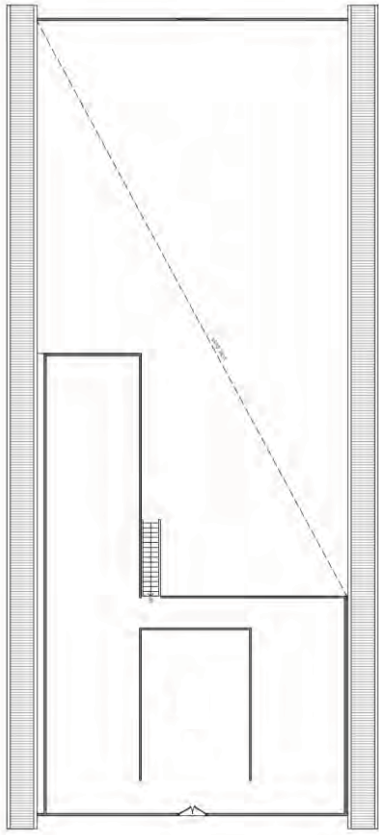



Element	Component	Materials	Time Period	Grading	Condition	Image
Room 3	Walls	Random rubble sandstone Render <ul style="list-style-type: none"> • Two tone paint • Modern concrete repairs 	Original Original? Original? Modern	E H H I	P VP VP P	 
	Floor	Concrete	Original?	M	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
Internal circulation space						
Internal circulation space	Floor	Concrete	Late 20 th C/Modern	L	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Internal walls	Random rubble sandstone Render <ul style="list-style-type: none"> Two tone paint Modern concrete repairs 	Original Original? Original? Modern	E H H I	P VP VP P	
	Fittings & Fixtures	Storage boxes	?	M	P	
		Water pipes and taps	Original with modifications /fixes	L	P	
		Lighting	Late 20 th C & Modern	L	Not inspected	


Hay Loft




Element	Component	Materials	Time Period	Grading	Condition	Image
Loft	Floor	Timber	Original?	M	F	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Stairs	Timber railing Timber steps (open riser)	Original?	H	F	
			?	M	F	

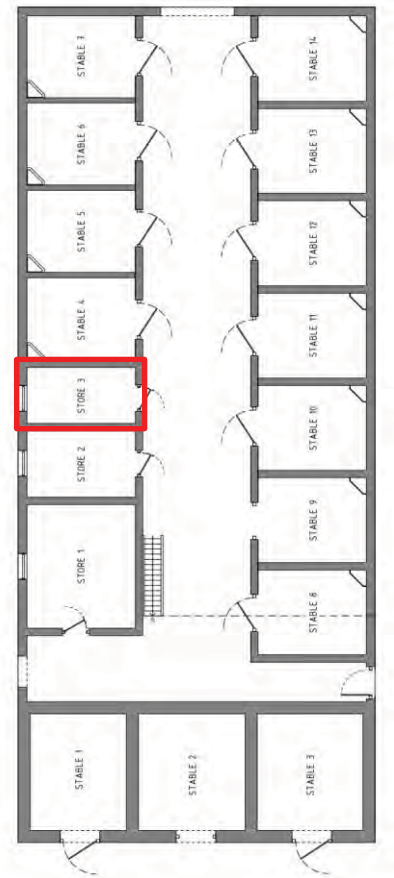
Element	Component	Materials	Time Period	Grading	Condition	Image
Store 1	Walls	Random rubble sandstone Render Paint	Original Original? Original?	E H H	P VP VP	
	Floor	Concrete	Modern?	L	F	
	Door	Timber board door Door knob	Original? Original?	H H	F P	




Element	Component	Materials	Time Period	Grading	Condition	Image
Store 2						
Store 2	Walls	Random rubble sandstone Render Paint	Original	E	P	
			Original?	H	VP	
			Original?	H	VP	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	Fibrous Sheet	Original	M	P	
	Door	Timber board door	Original?	H	F	
		Door knob	Original?	H	P	



Store 3 (tack room)





Element	Component	Materials	Time Period	Grading	Condition	Image
Stall 12	Stable Door	Timber frame and metal bars Hinges Bolts	Original? Original? ?	H H ?	F F F	
	Wall	Random rubble sandstone Render <ul style="list-style-type: none"> Two tone paint Modern concrete repairs 	Original Original? Original? Modern	E H H I	P VP VP P	 


Horse Ring

Note: investigation of the fabric indicates that the roof superstructure was constructed first, probably in the 1930s, with the timber panel walls being added at a later date.



Element	Component	Materials	Time Period	Grading	Condition	Image
Horse Ring	Roofing	Corrugated iron with venting on timber beams Unmilled timber uprights	Original Original	H H	P P	
	Inner fencing	Timber framing and lining	Mid/Late 20 th C	M	P	

Corrugated Iron Shed

Element	Component	Materials	Time Period	Grading	Condition	Image
Shed 1	Walls	Corrugated iron on timber frame	Early/Mid 20 th C	M	P	
	Stall	Timber lining on timber batons	Early/Mid 20 th C	M	P	


Element	Component	Materials	Time Period	Grading	Condition	Image
	Timber framing	Unmilled timber uprights, beams and braces	Early/Mid 20 th C	M	P	
	Floor	Concrete, incised	Late 20 th C/Modern	L	F	


Corrugated Iron Stables



Element	Component	Materials	Time Period	Grading	Condition	Image
Corrugated Iron Stables	External Walls	Corrugated iron	Modern	L	F	
	Inner Walls	Timber panelling on timber supports	Modern	L	F	
	Floor	Concrete	Modern	L	F	


Iron Tank House

Element	Component	Materials	Time Period	Grading	Condition	Image
North Facade						
						
North façade	Door 1		Early 20 th C	M	P	
	Wall	Corrugated iron	Early 20 th C	H	F	
	Roof	Corrugated iron	Early 20 th C		P	

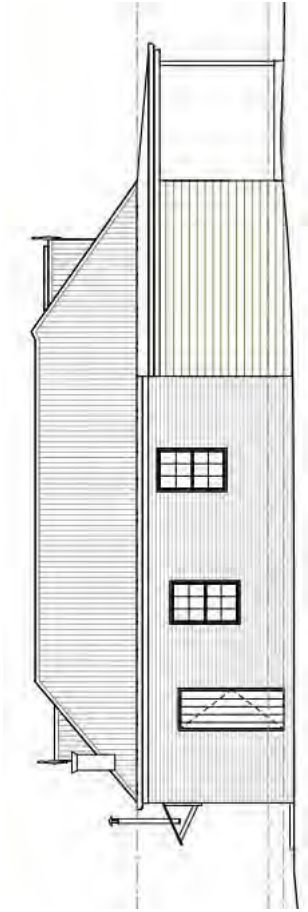
Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 1	Fixed timber framed four panel window	Early 20 th C	H	VP	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 2	Timber frame single hung sash four pane window	Early 20 th C	H	VP	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 3	Timber frame single hung sash 12 pane window	Early 20 th C	H	P	
	Awning	Corrugated iron on timber frame	Original?	M	P	
	Fire Flue (in awning)	Metal	Early 20 th C	L	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Door 2	Timber panel	Late 20 th C?	L	P	

West Façade







Door 3 Window 4 Window 5


Element	Component	Materials	Time Period	Grading	Condition	Image
North façade	Chimney	Iron sheeting	Late 20 th C	L	F	
	Wall	Corrugated iron	Early 20 th C	H	F	
	Deck	Timber	Late 20 th C	L	Failed	
	Window 4	Timber frame single hung sash 12 pane window	Early 20 th C	H	P	

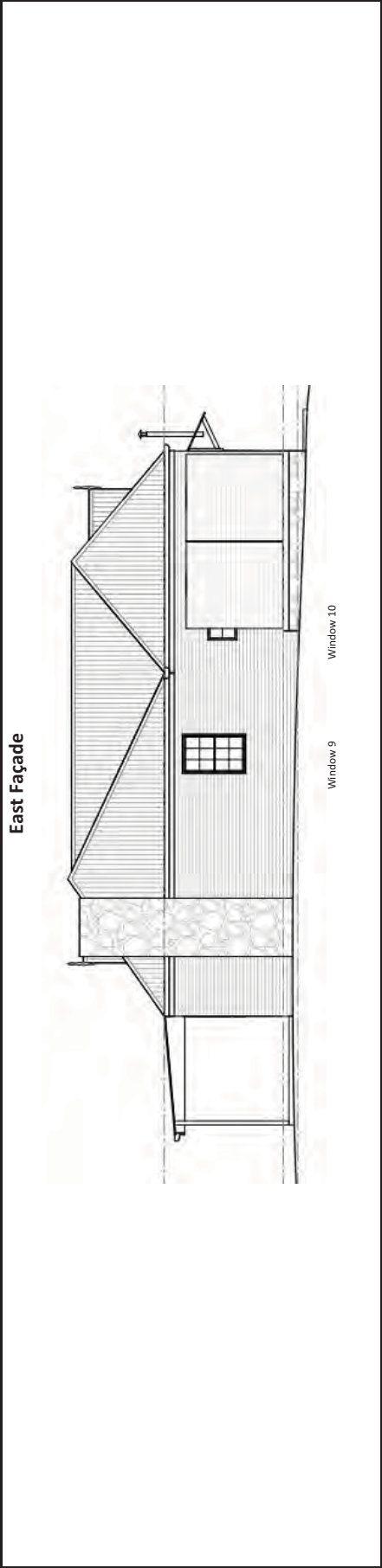
Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 5	Timber frame single hung sash 12 pane window	Early 20 th C	H	P	
	Door 3	Timber panel	Mid/Late 20 th C	L	P	




Element	Component	Materials	Time Period	Grading	Condition	Image
<div> <div>South Façade</div> </div>						
South façade	Wall	Vinyl weatherboard	Late 20 th C	I	P	
	Roof	Corrugated iron	Late 19 th C	H	F	
		Timber vent	Late 19 th C	H	F	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 6	Timber frame single hung sash four pane window	Late 19 th C	H	VP	
	Window 7	Timber frame single hung sash four pane window	Late 19 th C	H	VP	

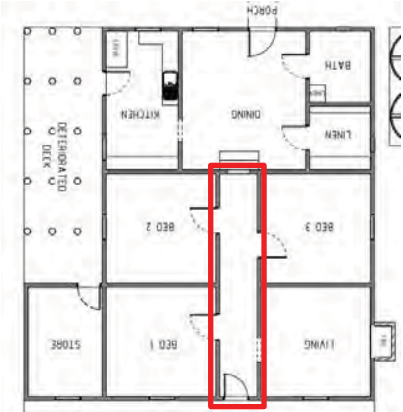

Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 8	Timber frame single hung sash four pane window	Late 19 th C	H	VP	
	Door	Four panel door Glass panels Door knob	Mid 20 th C Mid 20 th C Mid 20 th C	L L L	P F P	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Verandah	Concrete floor Steel support posts Timber beams	Late 20 th C/Modern	I	P	





Element	Component	Materials	Time Period	Grading	Condition	Image
East façade	Wall	Corrugated iron	Late 19 th C & Early 20 th C	H	F	
	Tanks	Corrugated iron tank Sandstone and concrete base	Modern Early 20 th C	L M	Not inspected F	
	Chimney	Dressed sandstone	Late 19 th C	H	P	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Window 9	Timber frame single hung sash 12 pane window Timber and corrugated iron awning	Early 20 th C ?	H L	P F	
	Window 10	Fixed timber framed four panel window	Early 20 th C	H	P	


Element	Component	Materials	Time Period	Grading	Condition	Image
Interior						
Room 1 – Hall						
Room 1			Late 20 th C	L	P	
	Walls	Plaster board			P	
	Floor	Timber boards	?	M	P	
	Ceiling	Fibrous board Light fitting	Late 20 th C Late 20 th C	L L	P Not inspected	




Element	Component	Materials	Time Period	Grading	Condition	Image
<div> <div>Room 2 – Bed 1</div>  </div>						
Room 2	Walls	Plaster board Wallpaper Paint	?	M	P	
			Late 20 th C	L	P	
			Late 20 th C	L	P	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Timber boards	?	M	P	
	Door	Two panel timber door	Late 20 th C	L	P	
	Ceiling	Plaster? Light fitting	Late 19 th C? Late 20 th C	H L	P Not inspected	

Room 3 – Living Room



Element	Component	Materials	Time Period	Grading	Condition	Image
Room 3	Walls	Plasterboard	?	L	VP	
	Fireplace	Sandstone and brick Render	Late 19 th C Late 19 th C	H H	VP VP	
	Floor	Timber boards	?	M	P	




Element	Component	Materials	Time Period	Grading	Condition	Image
	Ceiling	Fibrous board Note: it is unclear whether the earlier ceiling is preserved beneath the current ceiling level. This should be determined prior to works being undertaken on this room	Late 20 th C	I	P	
<div> <div>Room 4 – Bedroom</div>  </div>						
Room 4	Walls	Plasterboard	?	L	VP	




Element	Component	Materials	Time Period	Grading	Condition	Image
	Door	Two panel timber door	Late 20 th C	L	F	
	Floor	Timber boards	?	M	P	
	Ceiling	Tray vaulted plaster Light fitting	Late 19 th C Late 20 th C	H L	P Not inspected	



Room 5 – bedroom








Element	Component	Materials	Time Period	Grading	Condition	Image
Room 5	Walls	Plaster board Wallpaper Paint	? Late 20 th C Late 20 th C	M L L	P P P	
	Door	Removed	-	-	-	
	Floor	Timber boards	?	M	P	
	Ceiling	Tray vaulted plaster Light fitting	Late 19 th C Late 20 th C	H L	P Not inspected	


Element	Component	Materials	Time Period	Grading	Condition	Image
<div> <div>Room 6 – Dining Room</div>  </div>						
Room 6	Ceiling	Pressed metal (tray vaulted form) Light fitting	Early 20 th C Early 20 th C	H L	P Not inspected	
	Walls	Pressed metal	Early 20 th C	H	P	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Timber boards	?	M	P	
Room 7 – Kitchen						
Room 7						
	Ceiling	Pressed metal Light fitting	Early 20 th C	H	P	
			Early 20 th C	L	Not inspected	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Wall	Pressed metal – standing seam pattern Sink backsplash	Early 20 th C Late 20 th C	H L	P P	
	Fittings and fixtures	Kitchen cabinetry (fibre board) Stove & Oven	Late 20 th C Late 20 th C	L L	P Not inspected	
	Floor	Timber board Concrete and sandstone base for previous cooking range	? Original?	M H	VP P	


Element	Component	Materials	Time Period	Grading	Condition	Image
Room 8 – Store						
Room 8						
	Fittings		Mid/Late 20 th	M	F	
	Timber shelving		C			




Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Timber boards	?	M	P	
	Walls	Pressed metal – standing seam pattern	Early 20 th C	H	F	
	Ceiling	Pressed metal – square pattern	Early 20 th C	H	F	
	Door	Timber four panel door Door knob	Early 20 th C	H	F	
			Early 20 th C	H	P	


Element	Component	Materials	Time Period	Grading	Condition	Image
Room 9 – Bathroom						
Room 9	Floor	Timber boards	?	M	P	



Element	Component	Materials	Time Period	Grading	Condition	Image
	Walls	Pressed metal – standing seam pattern	Early 20 th C	H	P	
	Ceiling	Pressed metal – square pattern	Early 20 th C	H	P	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Fittings and fixtures	Shelving Water heater	Late 20 th C	L	P	
			Late 20 th C	L	Not inspected	

Element	Component	Materials	Time Period	Grading	Condition	Image
Room 10 – Store						
						
	Wall	Pressed metal – floral pattern	Early 20 th C	M	VP	 
	Shelving		Late 20 th C	M	VP	
	Ceiling	Pressed metal – square pattern	Early 20 th C	M	VP	

Element	Component	Materials	Time Period	Grading	Condition	Image
	Floor	Timber boards	?	M	P	

DRAFT

Appendix C

Comparative Analysis Tables



DRAFT**Appendix C Comparative Analysis Tables****Table 14 Californian bungalows listed on the State Heritage Register**

Item Name and No.	Address	Statement of Significance/Description	
Belvedere #00320	7 Cranbrook Ave, Cremorne	The house is generally regarded as one of the finest individual California Bungalow designs in NSW, described by J.M. Freeland as 'an eloquent sculptural statement' which 'anticipated later domestic work by nearly half a century'. The R.A.I.A regard it as 'the best work of a highly individual designer' (architect Alexander Stuart Jolly)	http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5045243
Dobell House #01985	47 Dobell Drive, Wangi Wangi	Dobell House is of state significance for its strong association with prominent Australian artist William Dobell and his work. Dobell House is an eclectic building with a series of additions to the original two-room holiday house.	http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5053903
Egglemont #0321	11 Cranbrook Ave, Cremorne	<p>The house was built c1916-18 and is one of the best examples of an early Californian Bungalow style house in Australia. The proportions, materials and craftsmanship are typical of the early examples of the style.</p> <p>The house is large and contains a billiard room, large sunroom, dressing room and ensuite bathroom to the main bedroom, kitchen, laundry and scullery configured for use by domestic staff. The house is little altered in the past 60 years with the exception of extension of Bedroom 3 into the northern verandah and kitchen cupboards installed in the 1960s. The laundry contains early (probably original) china laundry double tubs and pedestals and a copper and finishes (photo 41), which are to be removed (Branch Manager's IDA report, 5/2001).</p> <p>It comprises a large and low set single storey residence (c.1916 (Sydney Morning Herald, 2011) / 1918) in Californian Bungalow style. It has a low pitched spreading roof and</p>	http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5045237




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Item Name and No.	Address	Statement of Significance/Description	
		gables supported on heavy timber beams, with small leadlight windows above rough dressed stone walls and massive circular verandah piers	
Rosemount #00286	36 Village Road, East Saratoga	Rosemount is rare and intact late Federation style residence located on a corner block of approximately 0.5 hectares in area at Saratoga. Set in landscaped grounds that are integral to its setting, it has features of Californian bungalow style including its weatherboard construction, single gables and squat brick columns in its verandah. Rosemount is a historical landmark in the Saratoga area and is associated with the Callen and Bourke families who were two pioneering land-owning families of the Davistown/Saratoga area.	http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5045148

DRAFT**Table 15 State and locally listed homestead complexes dating 1900 to 1930**

Item Name, No., Address and Significance	Image
<p>Disputed Plains Homestead – 1480 Bentley Rd, Bentley. LGA: Richmond Valley Listing: Richmond Valley LEP #1001</p> <p>The homestead is historically significant providing evidence both of early settlement (c1866) and, more specifically pastoral-based land use. It is associated with the Alexander Armstrong family of Disputed Plains, who were noted horsemen and women. It is representative of the second generation homesteads built during the period 1910 -1920. Pressed metal ceiling and wall linings are a feature of this homestead.</p>	
<p>Virginia – Charleyong Rd, Mayfield. Palerang LGA</p> <p>1920s weatherboard homestead.</p> <p>Virginia has State significance as one of the earliest land grants and settlements in the Shoalhaven River area, that is able to demonstrate patterns of land allocation and use in southern NSW over three distinct phases of development from the mid 19th, late 19th and early 20th centuries. The various structures at the property are tangible evidence of these three phases of settlement and farming activities. The strong visual grouping of the homestead, outbuildings, school house, shearing shed complex and</p>	





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Item Name, No., Address and Significance	Image
<p>mature landscaping has Regional significance as a historic rural setting that is able to evoke 19th and early 20th century pastoral activity in the region, that has remained largely intact since this time.</p> <p>SHR #01374</p>	
<p>Emohruo – 249 Paupong Rd, Beloka LGA: Snowy River Listing Snowy River LEP I37 The house is a representative example of an Inter-War Period, bungalow style rural domestic construction.</p>	
<p>Farm Homestead Complex – 89 Carters Rd, Lake Munmorah. LGA: Wyong</p> <p>Wyong LEP #I23 An aesthetically significant, intact orchard and farmhouse, with outbuildings, unique in the area. The group reflects the early pattern of permanent settlement and agriculture in the area.</p>	
<p>Farmhouse and dairy (Ellensville) – 340 Burragorang Rd (cr Monks Lane), Mount Hunter. LGA: Wollondilly Listing: Wollondilly LEP. Good example of a traditional farm cottage. Landmark value due to its hill top siting, visible from a vehicle travel route.</p>	

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Item Name, No., Address and Significance	Image
<p>Federation Farmhouse – R37 Castlereagh Rd, Castlereagh. LGA: Penrith Listing Penrith LEP As representing the variety of such houses built in the 19th and early 20th Century.</p>	
<p>Foxlow and outbuildings – 2707 Captains Flat Rd, Primrose Valley. LGA: Palerang Listing: Palerang LEP Foxlow was one the earliest farms to be taken up in the Molonglo Valley and was initially selected by John Hosking in the 1830s, and subsequently owned by well known NSW's pastoralists the Rutledges, followed by the Osbornes and then the Falkiners. The homestead, designed by Howard Joseland, and outbuildings form an harmonious group set amongst mature trees, which contribute to character of the place. Historic (a), associational (b) and aesthetic (c) heritage significance</p>	
<p>Glen Miln – 7707 The Snowy River Way, Jindabyne. LGA: Snowy River Listing: Snowy River LEP The old chimney and orchard relics are tangible evidence of the first settlers to the district. The architectural style of the Glen Miln homestead, Spanish Mission, is a relatively unusual style for rural districts. The homestead is a good example of a modest Spanish Mission house. The outbuildings contribute to the heritage significance of the site.</p>	

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Item Name, No., Address and Significance	Image
<p>Groom's Cottage – Trundle Rd, Condobolin. LGA: Lachlan. Listing Lachlan LEP Demonstrative of the architectural style of the early 1900's. A good example of staff housing of the period. The building is demonstrative of the need for security and marks the entrance to the Station.</p>	
<p>Heatherbrae – 2475 Yaouk Rd, Yaouk. LGA: Snowy River Listing: Snowy River LEP #I205 Heatherbrae is a representative example of an Inter-War period vernacular style homestead and farm complex.</p>	
<p>House and Barn – 897 Sackville Rd, Sackville. LGA: Hawkesbury. Listing Hawkesbury LEP This site includes a tall slab barn, characteristic of the Hawkesbury district.</p> <p>The house is a very good example of a substantial Inter-war bungalow featuring contrasting brick and render work, broad gables and leadlight windows.</p>	
<p>Jimenbuen – 2830 Jimenbuen Rd, Jimenbuen. LGA: Snowy River Listing: Snowy River LEP #I142 Jimenbuen is an historic property first settled by pioneer Amos Crisp in 1829. The homestead is a good representation of a Monaro Inter War bungalow built in a rural setting and a fine example of architect GD Cochran's work albeit slightly altered. The homestead, with its poured concrete walls, is one a small</p>	

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Item Name, No., Address and Significance	Image
<p>group of buildings on Monaro which were constructed in this way.</p> <p>Kurrawong – 126 James Rd, Croom. LGA: Shellharbour Listing: Shellharbour LEP I024 Kurrawong' is a Federation farmhouse built high on a hill ridge overlooking the old Princes Highway at Dunmore. In addition to its setting, the property includes significant trees and dry stone walls.</p> <p>'Kurrawong' belongs to the James Road farm group and has historic associations with nearby James family properties ('Rosemont', 'Bravella' site, 'St Ives', 'Aronda' in Shellharbour Village and 'Clover Hill' near Macquarie Pass).</p> <p>'Kurrawong' was built for John James, The founder of the Australian Milking (Illawarra) Shorthorn Society. The property was deliberately sited having a clear view line to 'The Hill' (Dunster family) and nearby James family properties.</p> <p>Stone walls are representative of the north Kiama/Dunmore construction type. Figs are representative of Illawarra farm plantings and provide an increasingly scarce habitat for regional fauna.</p>	
<p>Mayfield – Off Mayfield Rd, Lower Boro. Multiple LGAs Listing: Water NSW S.170 Heritage and Conservation Register</p> <p>Mayfield is of State significance for its ability to demonstrate the processes of settlement, survey and land grants from the 1830s in the southern counties within the limits of settlement in NSW, in particular the smaller, less wealthy settlements. This significance is demonstrated by the archaeological evidence of c1830-40s huts, a former inn</p>	

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Item Name, No., Address and Significance	Image
<p>and roadway alignments located within their original landscape setting.</p> <p>Mayfield has State significance for its ability to demonstrate changing patterns of settlement and farming patterns from the mid 19th to the early decades of the 20th century. The property retains evidence of both phases as demonstrated by the homestead, shearing shed complex and grouping of staff cottages, and has remained largely untouched since the 1920s. The c1860s shearing shed, dairy and stables have State significance for their ability to demonstrate early construction methods and technologies for such rural and vernacular structures. The c1920s staff cottages are rare examples of such accommodation in NSW, which demonstrate the prosperity and status of Mayfield during the early decades of the twentieth century in the district.</p>	
<p>Milroy – 3502 Yaouk Rd, Adaminaby. LGA: Snowy River. Listing Snowy River LEP #128 Representative of an Inter War farm complex on Monaro which was further developed in the 1950s.</p>	
<p>Severn Park – 579 Black Range Rd, Bodundara. LGA: Snowy River Listing Snowy River LEP #184 A rare group of farm buildings dating from 1850 and demonstrating the evolution of farming practices and building techniques, materials and styles over 150 years. The homestead was designed by GD Cochran, Monaro architect from 1890 to 1930, who was responsible for</p>	


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Item Name, No., Address and Significance	Image
<p>many of the districts fine homesteads. The Monaro traditional use of stone is demonstrated in the homestead and two other buildings.</p>	
<p>Swansea Farmhouse – 152 Croom Rd, Croom. LGA: Shellharbour Listing: Shellharbour LEP #I198 'Swansea' has strong local historic associations with the important local dairy industry and with the Youll family who were prominent dairy farmers in Albion Park, and important contributors to the Albion Park Agricultural Society. The Junior Farmers Pavilion at the Albion Park Showground was named in honour of Donald Youll.</p> <p>Swansea is a good example of a weatherboard cottage in the Federation style with some modifications and setting changes, although the oval spatial relationship retains a rural setting.</p>	
<p>Tallawa – 6031 The Snowy River Way, Dalgety. LGA: Snowy River Listing: Snowy River LEP #I131 Tallawa is significant [sic] as a well built and designed Inter War stone homestead. One of the Cochran group of houses on Monaro, it has a high degree of original integrity and intactness particularly interior joinery and plaster ceiling work.</p>	
<p>Terramungamine Homestead – 63 Burraway Rd, Dubbo. LGA: Dubbo Listing: Dubbo LEP The property itself has considerable historic interest. The late Edwardian style house has some special architectural and aesthetic significance and makes an impressive contribution to the local landscape, including its historical connection to the</p>	

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Item Name, No., Address and Significance	Image
<p>nearby Dulcidene homestead</p> <p>Tulloch House – 1149 Myocum Rd, Myocum. LGA: Byron. Listing: Byron LEP #166 A fine example of a large scale timber homestead set in established gardens built by one of the settler families, the Macgregors.</p>	
<p>Woodside Park – 94A Tannery Rd, Berry. LGA: Shoalhaven. Listing: Shoalhaven LEP #196 A large 1920s country house in individual Bungalow style with strong Inter-War California Bungalow and Federation Arts and Crafts influence. Good use of stone, render, terracotta and shingles. Large attic storey, open flat roofed verandahs with stone piers and balustrading.</p>	
<p>Yovelton Farmhouse and Silo – 2 Wilga Close, Albion Park Rail. LGA: Shellharbour. Listing: Shellharbour LEP#1059 Yovelton is aesthetically rare in the Albion Park Rail locality. It is the last Federation era farm house in the area. It has local historic associations with the Bonser family and dairying. Edwardian era, federation style house. Features: asymmetrical presentation, hip roof with Dutch gable roof vents, gable to one side containing strap work, detached roof verandah, roof clad in corrugate metal, brick chimney with proud drip courses located in valley where gable meets hip, weatherboard walls, timber single double hung sash 2 pane windows, corner entry door with fan light above, enclosure side and rear verandahs.</p>	

DRAFT**Table 16 Examples of pressed metal listed on LEP**

Item and listing no.	Address	Description/Statement of Significance	Photograph
Bangalow Creek Farm House Wyong LEP	119 Cutrock Road, Ourimbah	The site and residence are a good intact example of an early vernacular timber building clad in weatherboards with a hipped sheet iron roof to a standard asymmetrical villa plan with verandah. The interiors and general architectural details compliment the significance and character of the dwelling http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2720274	
Nellie Ville Wyong LEP	35 Chittaway Road, Ourimbah	Generally intact single storey bungalow with later addition below, and barn refurbished as garage adjacent. Decorative pressed metal and fibrous plaster interiors conserved. Fibrous plaster ceilings of local origin.	No photograph available
House – Ellawatta	Camp Street, Temora	A dark brick building with return verandahs, original slate tiles on the main multi-hipped roof, and iron on the bull-nosed verandah. It features pressed metal ceilings (some hand-painted), and a stained glass surround and front door which incorporates the house name.	No photograph available
Rosebank – Federation weatherboard cottage and garden Shoalhaven LEP #I024	21 Albany St, Berry	Single storey, Federation style, weatherboard house based on the vernacular Victorian Georgian symmetrical form with a hipped, corrugated metal roof. Internally the house is very intact and has timber floors, timber lined walls with diagonal boarding to the hall and pressed metal ceilings.	No photograph available
Riverview Residence	30 Woodburn-	Private residence of the Federation period with verandah on three sides.	No photograph available

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Item and listing no.	Address	Description/Statement of Significance	Photograph
Richmond Valley LEP #1175	Coraki Rd, Woodburn	The interior plan is no [sic] symmetrical with central hall, living room on the left and bedroom on the right. The kitchen and laundry are at the rear of the house. The ceiling height is 3.6 metres. The internal walls are vertical tongue and groove lining boards. The ceilings of the main rooms are pressed metal, the other ceilings are tongue and groove lining board.	
Heslington Moree Plains LEP	Terry Hie Hie	The building is symmetrical and constructed of timber weatherboards, timber double hung and casement windows and timber panelled doors and a dominant gambrel style corrugated metal roof which extends to form a wide verandah which surrounds the house with boxed bay windows at each front corner. The interior features a wide central hallway with timber panelled walls and dado rail and decorative pressed metal ceilings throughout the principal rooms.	No photograph available
Terlings Moree Plains LEP	Bogabilla Rd, Moree	The building is of timber weatherboards, timber double hung and casement windows and timber panelled doors and a corrugated metal roof which extends to form a verandah. The verandah is supported on timber posts with decorative timber brackets. The interior features timber panelled walls and decorative pressed metal ceilings throughout the principal rooms.	No photograph available
Residence – Oban Inverell LEP #1069	27 Brae Street (60 metres north of Andrew Street), Inverell	A single storey stretcher bond red brick Federation style house having a complex hipped and gabled roof with roughcast and half timbered boarded gable, tall moulded painted brick chimneys, corner bay with octagonal dome above a central atrium. Interior has polished cedar joinery, plaster and boarded cypress pine ceilings with roses, marble chimney pieces, and bay windows with arched recesses. Remarkable central atrium, lit by coloured glass clerestorey is ringed by round-arched openings, some blind, and	No photograph available



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Item and listing no.	Address	Description/Statement of Significance	Photograph
		features an elaborate coffered ceiling with pressed metal panelling and decorative cornices.	
Weenya Homestead Gilgandra LEP #I91	Warrumbungle	Weenya Homestead is a large Edwardian Bungalow with a prominent hipped roof clad in corrugated galvanised iron. The house and adjacent servants' quarters are clad in rusticated weatherboard. The homestead features wide verandahs and the main rooms have box bay windows. The homestead's central living room is accessed from the front door and features a large Wunderlich pressed metal ceiling.	No photograph available
Glen Luna Eurobodalla LEP #I239	8727-8729 Princes Highway, Tilba Tilba	Victorian Filigree (Edwardian interior detail) Corrugated iron roofing. Timber weatherboard walls. Bullnosed verandah with corrugated iron detailing. Brick chimneys. Elaborate pressed metal ceilings, light ornamentation and walls. Cast iron frieze detail to timber verandah posts.	No photograph available
Carter's House Eurobodalla LEP #I304	44 Princes Highway, Narooma	The dwelling is a Federation styled weatherboard house supported off the ground on large split-timber stumps. It has timber framed windows and a corrugated iron roof. The window frames include small panes of decoratively coloured glass and there is a curved pressed-metal hood over the front (western) window. Internally there are fine painted timber dressings (architraves and internal room dividers) and exceptional pressed metal ceilings and cornice that have a decorative motif.	No photograph available
Dulcidene Homestead Dubbo LEP	22L Dulcidene Rd, Dubbo	Architect designed this grand Federation period house, features multi gabled roof with a central lookout and clerestory. Very detailed pressed metal ceilings with similar ceiling roses and cornices.	No photograph available
Dwelling ("Abbotsford") Clarence Valley LEP	11 Alice Street, Grafton	A single storey symmetrical weatherboard house with hipped iron roof, balanced brick chimneys with patterned render, and a distinctive central spire over the entrance. Interior has broadly	No photograph available

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Item and listing no.	Address	Description/Statement of Significance	Photograph
#190		symmetrical plan with nine rooms with original features including pressed metal ceilings and cornices, timber mantels and picture rails. 1907-1910	
Amandale Clarence Valley LEP	164 Queen Street	An attractive quality built Federation residence with central projecting gable. verandahs on all sides of the residence covered with bull-nosed roof. Main roof corrugated iron hipped and gabled. The verandah is decorated with filigree iron work under the verandah board. Painted chimney intact. French doors open onto the verandahs. Interior contains pressed metal ceilings and vertical lining boards, timber floors.	No photograph available
Dwelling ("Tara") Clarence Valley LEP	133 Bent Street, South Grafton	While not viewed in this study it is reported that internally the house still retains 12ft high pressed metal ceilings	No photograph available
Residence Clarence Valley LEP	42 Ridge St, South Grafton	Photographs show the interior is lined with Wunderlick pressed metal walls and ceilings.	No photograph available
Arcola Clarence Valley LEP	150 Victoria St, Grafton	details are almost all original: etched glass, doorknobs, fireplaces and surrounds, doorbell, rails and dados, pressed metal ceilings, light fittings etc.	No photograph available
House Mumbra Byron LEP #1179	The Pocket Road, The Pocket	Inside, walls and ceilings are lined with pressed metal. C.1910	No photograph available
Allansby (including interior finishes) Byron LEP #1102	103 Federal Drive, Eureka	A large Federation style teak weatherboard house with a moderately pitched multi-gabled roof of corrugated iron. Of note inside the house are a formal entrance and hallway, spacious bedrooms, a study, original polished hardwood floors, high pressed metal ceilings, bay windows and a large kitchen. 1915	No photograph available
House Coral Grove (including original internal	390 The Pocket Rd, The Pocket	A single-storey weatherboard residence built on brick foundation walls on an elevated site looking south over the green pastures of the Pocket dairy lands. The front door case features obscure coloured	No photograph available

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Item and listing no.	Address	Description/Statement of Significance	Photograph
fittings) Byron LEP #1180		glass in the door, sidelights and fanlights. The interior is lined with horizontal lining boards on the walls and pressed metal on the ceilings.	
Bangalow House (including pressed metal ceilings) Byron LEP #1016	32-34 Byron St, Bangalow	A single storey, timber framed, weatherboard clad residence with Federation detailing standing on an elevated site on the eastern side of Byron Street. The interior features pressed metal ceilings, and teak hardwood floors and horizontal timber lined walls. There is a cedar main front door at the north end and French doors giving onto a verandah on the western side. A projecting gable at the south end is a modern addition.	No photograph available
House Bellingen LEP #128	21-25 Ford St, Bellingen	Large Federation house on large allotment. Would appear to predate subdivision. Weatherboard construction. Interior of house features a ball room with 12 foot, pressed metal dome ceiling.	
Bismark House Bega Valley LEP #1578	187-189 Newtown Rd, Bega	Timber framed house with external render, built with steeply pitched corrugated iron roof and pressed metal ceilings. 1908	No photograph available
Disputed Plains Homestead Listing: Richmond Valley LEP #1001	1480 Bentley Rd, Bentley	The homestead is historically significant providing evidence both of early settlement (c1866) and, more specifically pastoral-based land use. It is associated with the Alexander Armstrong family of Disputed Plains, who were noted horsemen and women. It is representative of the second generation homesteads built during the period 1910 - 1920. Pressed metal ceiling and wall linings are a feature of this homestead.	

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Appendix D

Cyclical Maintenance Plan

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In order to maintain the structures of Tarwyn Park and Iron Tank, following cyclical maintenance schedule has been prepared. Please note that the frequency of inspection will be influenced by prevailing factors, such as general condition of the property. The periods indicated here are predicated on the priority conservation works identified in Section 6.0 being carried out in a timely manner. Inspection outside of the cyclical maintenance schedule should be undertaken as and when need is identified, such as following a heavy rain event or unusually strong winds.

Table 17 Cyclical maintenance schedule

Building Element	Maintenance	Period between inspections (years)
Roof – corrugated iron	<ul style="list-style-type: none"> Inspect for loose or raised sheets, rust stains, check that sheets overlap adequately. Check fastenings are tight – loose fittings may indicate batton failure. 	5
Roof – flashings/cappings	<ul style="list-style-type: none"> Inspect for loose, slipped or raised elements. Check for cracking or missing members 	5
Roof – gutters and downpipes	<ul style="list-style-type: none"> Clean debris from gutters, downpipe boxes and outlets. Trim overhanging trees away from gutters. Inspect gutter and downpipe joints for cracks - Are there drips to the underside? Are there loose or missing brackets to gutters and downpipes? Check for growth, moss or stains surrounding downpipes. These things can indicate blockages. Check if downpipes are connected to the stormwater system and, if so, whether joints are sound. Check that stormwater drains are not blocked. Check whether birds are nesting on downpipe offsets and under the gables and whether bird proofing is adequate. 	2
Brickwork/sandstone	<ul style="list-style-type: none"> Inspect for missing, crumbling or decaying bricks/blocks. This includes to chimneys, where present Inspect for decaying or missing mortar in joints. Is the mortar of an appropriate type? Inspect for salt deposits on the surface, which could indicate excess moisture. Check vents are not blocked or covered with soil. Ensure the vents are of an appropriate type. 	5
Timber	<ul style="list-style-type: none"> Inspect for decay and weathering, does the timber require treatment to protect it? I.e. Painting the gables Inspect for termite activity. Engage a professional to undertake an inspection and plan a treatment method, if necessary. Ensure boards are secure. Check joinery around windows and doors are not decaying. Assess whether they need repainting. Ensure inspection includes the timber piers of Farm House 1 and Iron Tank House. 	5

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Building Element	Maintenance	Period between inspections (years)
Joinery	<ul style="list-style-type: none"> Inspect for loose or damaged mouldings, putty and architraves. Inspect internal and external sills for water damage. Oil pulley wheels of sash windows, ensure cords are in good condition. Replace frayed or damaged cords. 	2
Doors	<ul style="list-style-type: none"> Inspect for loose hinges. Ensure moulding is secure and door operates smoothly. Ensure the catches and locks operate effectively. Ensure fanlight is intact, the glass is secure. Ensure that a door stop is fitted and is protecting the internal wall. 	2
Paint	<ul style="list-style-type: none"> Check gables, timber half-framing, window joinery and sills, door frames for paint deterioration and wreathing. Check external walls for flaking or deterioration. 	3
Flooring	<ul style="list-style-type: none"> Inspect for signs of deterioration, creaks, cracks or subsidence that may indicate failure of joists or underlying earlier floor boards. 	3
Services	<ul style="list-style-type: none"> Ensure sewerage outlet is operational and free-flowing. Ensure there are no water leaks, that taps are not dripping. Ensure water is not ponding near foundations. Check for pooling water in the yard as a possible indication of a broken pipe. Compare water bills for usage as possible indication of a broken pipe. Ensure water meter is secure and joints are not leaking. Inspect fuse box for damage or decay. Consider globe usage – globes frequently blowing may be an indication of electrical faults. 	1
Setting, views and vistas	<ul style="list-style-type: none"> The setting, views and vistas must be managed in accordance with the <i>Bylong Coal Project: Visual and Landscape Analysis</i> replicated in Appendix E. Any garden planted to mitigate the impacts should be maintained on an as-needs basis, which will be determined by the nature of the garden. 	5
Security and safety	<ul style="list-style-type: none"> Ensure smoke alarms are operational Ensure any security system is operational <p>Note: Installation of a security system will require consultation with a heritage specialist to ensure impacts to significant fabric is minimised. This consultation should be formally recorded through the preparation of a Statement of Heritage Impact in accordance with Policy 55.</p>	6 months

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Appendix E

Bylong Coal Project: Landscape and Visual Analysis

Bylong Coal Project

Landscape and Visual Analysis for Tarwyn Park Complex and Iron Tank



Bylong Coal Project

Landscape and Visual Analysis for Tarwyn Park Complex and Iron Tank

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Executive Summary

This report has been prepared to address potential impacts on significant heritage views from the Tarwyn Park Farm Complex (comprising the Homestead, Stables and other associated outbuildings), and from the Iron Tank Farm House, as identified in the Draft Tarwyn Park and Iron Tank Conservation Management Plan (hereafter 'the CMP') (AECOM, 2017). Visual impacts are addressed for two periods comprising:

- the approximately 25 year life of the Project; and
- the post mining landscape.

Initial development of the Project will focus on two open cut mining areas with associated haul roads and Overburden Emplacement Areas (OEA). These works will be ongoing over a period of approximately 10 years (including two years of rehabilitation activities of most of the open cut affected areas). Critically, one section of open cut will ultimately provide for storage of coarse and fine reject materials generated by the processing of coal from the longer term underground mining activities.

Construction and operation of the underground coal mine will be in operation for an approximate period of 20 years, commencing in around Year 7 of the Project.

The Project's mining operations and associated surface infrastructure are proposed within the Upper Bylong Valley which forms a small part of the more extensive Bylong Valley and the Bylong Landscape Conservation Area. The Bylong Landscape Conservation Area has been listed by the National Trust of Australia in August 2013 on the National Trust Register.

Tarwyn Park Farm Complex

Visual impacts on the Tarwyn Park Farm Complex will occur over the life of the Project, but will primarily be limited to the first 10 years, after which much of the landscape proximate to the farm complex will have been subject to rehabilitation.

The CMP identified eight key heritage views associated with the Tarwyn Park Farm Complex. This report identified the key long-term visual impact on the farm complex comprising a closely adjoining OEA, which will comprise a new landform element that partially interrupts the visual continuity of surrounding steep forested hills within the Upper Bylong Valley, and is seen in distinct visual relief against the skyline. This view is contained within several of the key heritage views identified within the CMP.

Mitigation of this adverse visual effect is recommended through the introduction of relatively sparse, bands of endemic plant communities layered along the contour as stands of 'paddock trees', in conjunction with small patches of more complex plant associations to the proximate area of the OEA. This approach is proposed to visually break up the visual uniformity of the landform, and reduce the extent to which it is seen against the skyline. The tree planting would be located within an area proposed for cropping.

Iron Tank Farm House

The CMP identified three key heritage views for the Iron Tank Farm House, of which only one view, looking west to the open cut mining operation, was impacted by the Project. However, taking into consideration: the distance of the Project from the farm house; the achievement of the key heritage concern for retention of the openness of the landscape, and the commitment to rehabilitate the land to a condition equal to existing agricultural classes for reinstated pasture, cropping and woodland land cover, the new landform can broadly be expected to visually integrate well with that of the existing landscape.

Additional Mitigation Measures

Additional mitigation measures have been recommended for other areas of OEA visible from Tarwyn Park Farm Complex, comprising:

- further visual modulation of the interface between floodplain, cleared lower slopes, and the steep, forested upper slopes, e.g. with patches of paddock trees as currently in place; and

- bringing a cover of dense forest further down the OEA slopes where practicable, or otherwise introducing bands of endemic plant communities layered along the contour as described above, to better reflect the existing character of the Bylong Valley.

1.0 Introduction

This report has been prepared to address potential impacts on significant heritage views from the Tarwyn Park Farm Complex, and from the Iron Tank Farm House, as identified in the Draft Tarwyn Park and Iron Tank Conservation Management Plan (AECOM, 2017). Consideration was also given to views from Farm House 2. Visual impacts are addressed for two periods comprising:

- the approximately 25 year life of the Project; and
- the post mining landscape.

This report should be read in conjunction with the Bylong Coal Project Environmental Impact Statement (September 2015) and associated Historic Heritage Impact Assessment (AECOM, 2015), the Visual Impact Assessment (JVP Visual Planning and Design, 2015) (hereafter the EIS), and the Draft Tarwyn Park and Iron Tank Conservation Management Plan (hereafter the CMP).

2.0 Methodology

The following method has been employed:

- Review background documentation;
- Undertake a site inspection;
- Analyse landscape character and map;
- Analyse key significant heritage views as identified within heritage reporting - the CMP;
- Consolidate significant heritage views into four key views that contain significant views within them;
- For each key view, prepare a photographic panorama of the 'existing view' and photomontage of the 'final landform view' which has a cropping or pasture land cover in place;
- Undertake an analysis of the four key significant heritage views for 'existing view' and 'final landform view', and assess key visual impacts arising from each;
- Provide a conceptual landscape design that addresses both: the identified visual impacts arising from the final landform for each key view; the CMP view analysis findings, and recommended landscape treatments;
- Provide separate conceptual landscape designs for works to take place: over the period of the Project; and for the final landform;
- Prepare one further photomontage for each key view that illustrates the incorporation of the recommended landscape mitigation measures, and assess residual impacts;
- Prepare an outline landscape management plan; and
- Provide conclusions.

3.0 Project Description

The Project involves the construction of an integrated open cut and underground coal mine in the Upper Bylong Valley, approximately 55km north-east of Mudgee, New South Wales. The Project life is approximately 25 years, comprising a two year construction period and a 23 year operational period, with underground mining operations commencing in Year 7.

The key features of the Project are conceptually shown on Figure 1.

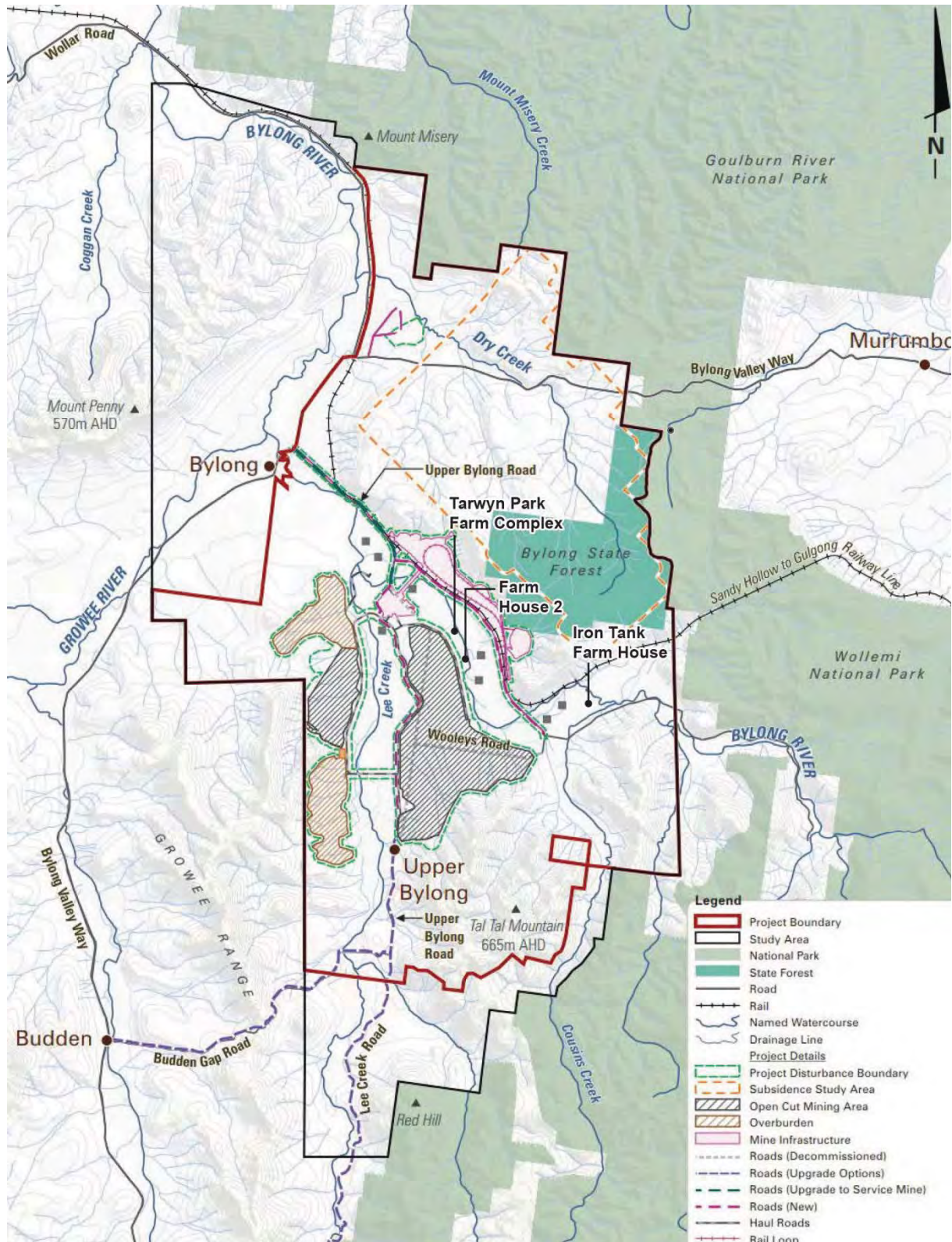


Figure 1 Conceptual Project Layout

Key elements of the Project relevant to this study include:

- The initial development of two open cut mining areas with associated haul roads and Overburden Emplacement Areas (OEAs) (refer Figure 2, Figure 3 and Figure 4), utilising a fleet of excavators and trucks and supporting ancillary equipment;
- The two open cut mining areas will be developed with coal extraction and related activities operating 24 hours a day, 7 days a week over an approximate 10 year period (including two years of rehabilitation activities). Critically, these two areas will ultimately provide for storage of coarse and fine reject materials generated by the processing of coal from the longer term underground mining activities (refer Figure 4 and Figure 5);
- Construction and operation of an Open Cut Mine Infrastructure Area (MIA) comprising administration, workshop, bathhouse, explosives magazine and other open cut mining related facilities (refer Figure 2);
- Construction and operation of an underground coal mine operating 24 hours a day, 7 days a week for an approximate 20 year period, commencing mining in around Project Year 7;
- Construction and operation of facilities to support underground mining operations including personnel and materials access to underground mining area, ventilation shafts, workshop, offices and employee amenities, fuel and gas management facilities;
- Construction and operation of a Coal Handling and Preparation Plant (CHPP);
- Construction and operation of a rail loop and associated rail load facility to the Sandy Hollow to Gulgong Railway Line to facilitate the transport of product coal;
- Upgrades to the Upper Bylong Road and the construction of a Mine Access Road to provide access to the site facilities;
- Relocation of sections of some existing public roads to enable alternate access routes for private landholders surrounding the Project; and
- Infilling of mining voids, progressive rehabilitation of disturbed areas, decommissioning of Project infrastructure and rehabilitation of land following mining operations.

The Project will require approximately 1,160 ha of surface disturbance which will generally be undertaken within the defined Project Disturbance Boundary (refer Figure 1).

4.0 Landscape Context

The Bylong Coal Project is proposed in the Upper Bylong Valley which is located within the eastern portion of the Mid-Western Regional Council Local Government Area (MWRC LGA). The MWRC LGA subsequently forms part of the wider Central West and Orana Region, which neighbours the Upper Hunter Region to the east.

4.1 Bylong Landscape Conservation Area

The Project mining operations and associated surface infrastructure are proposed within the Upper Bylong Valley which forms a small part of the more extensive Bylong Valley and the Bylong Landscape Conservation Area. The Bylong Landscape Conservation Area has been listed by the National Trust of Australia in August 2013 on the National Trust Register. The following description and significance assessment of the Bylong Landscape Conservation Area is taken from the National Trust Register listing. Figure 6 shows the area encompassed by the Bylong Landscape Conservation Area, and Figure 7 shows it in relation to the Project Disturbance Boundary and the Bylong Valley Way, which provides the main route through the Bylong Landscape Conservation Area.

As can be seen from Figure 7, the disturbance area of the Project's open cut operations is small in comparison with the overall area of the Bylong Landscape Conservation Area (in the order of 2.3% of the total area). When taking into consideration views of the open cut operations from public locations,

including key roads, Crown land and private land (not owned by KEPCO), views of the open cut represent in the order of 0.6% of the Bylong Landscape Conservation Area.

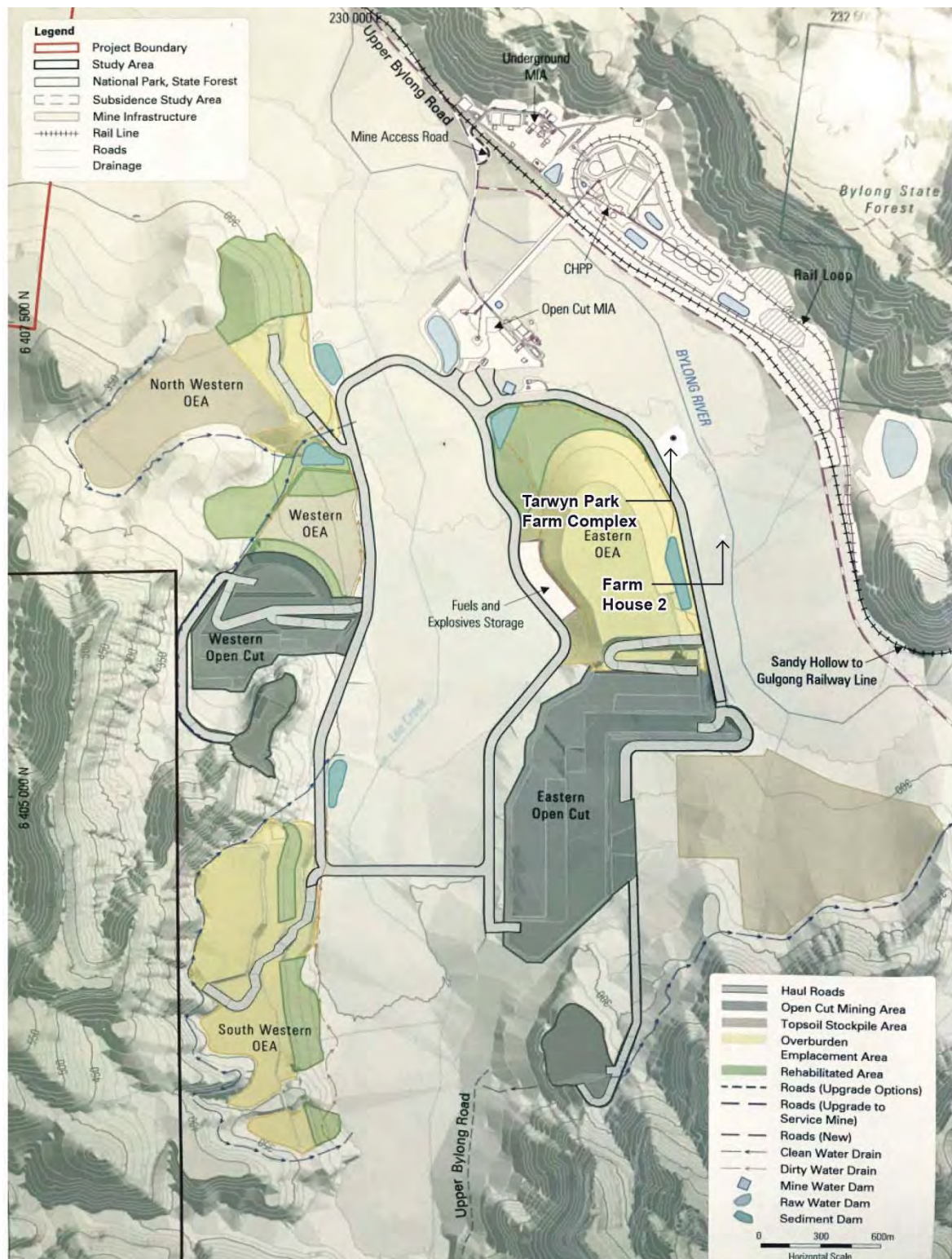
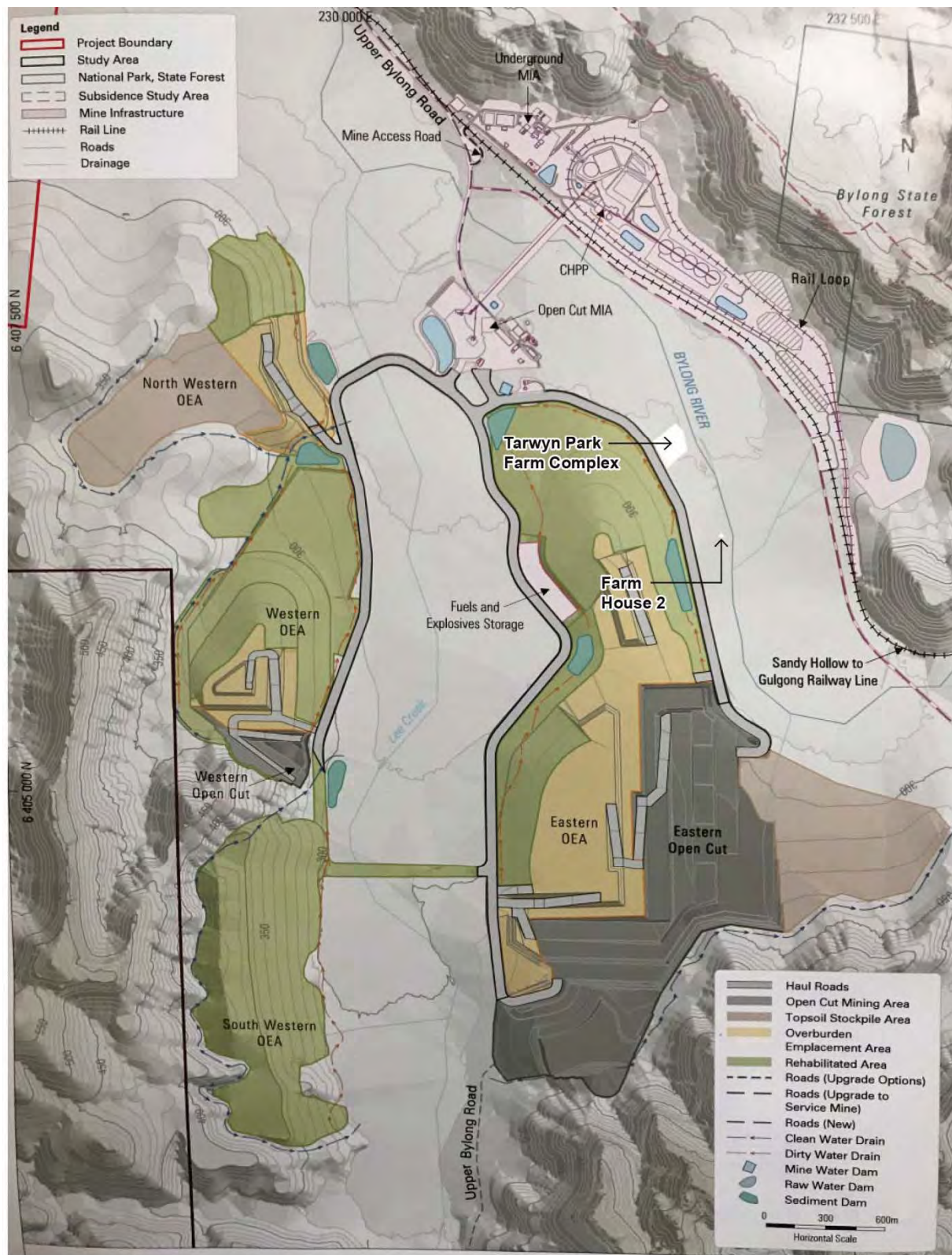
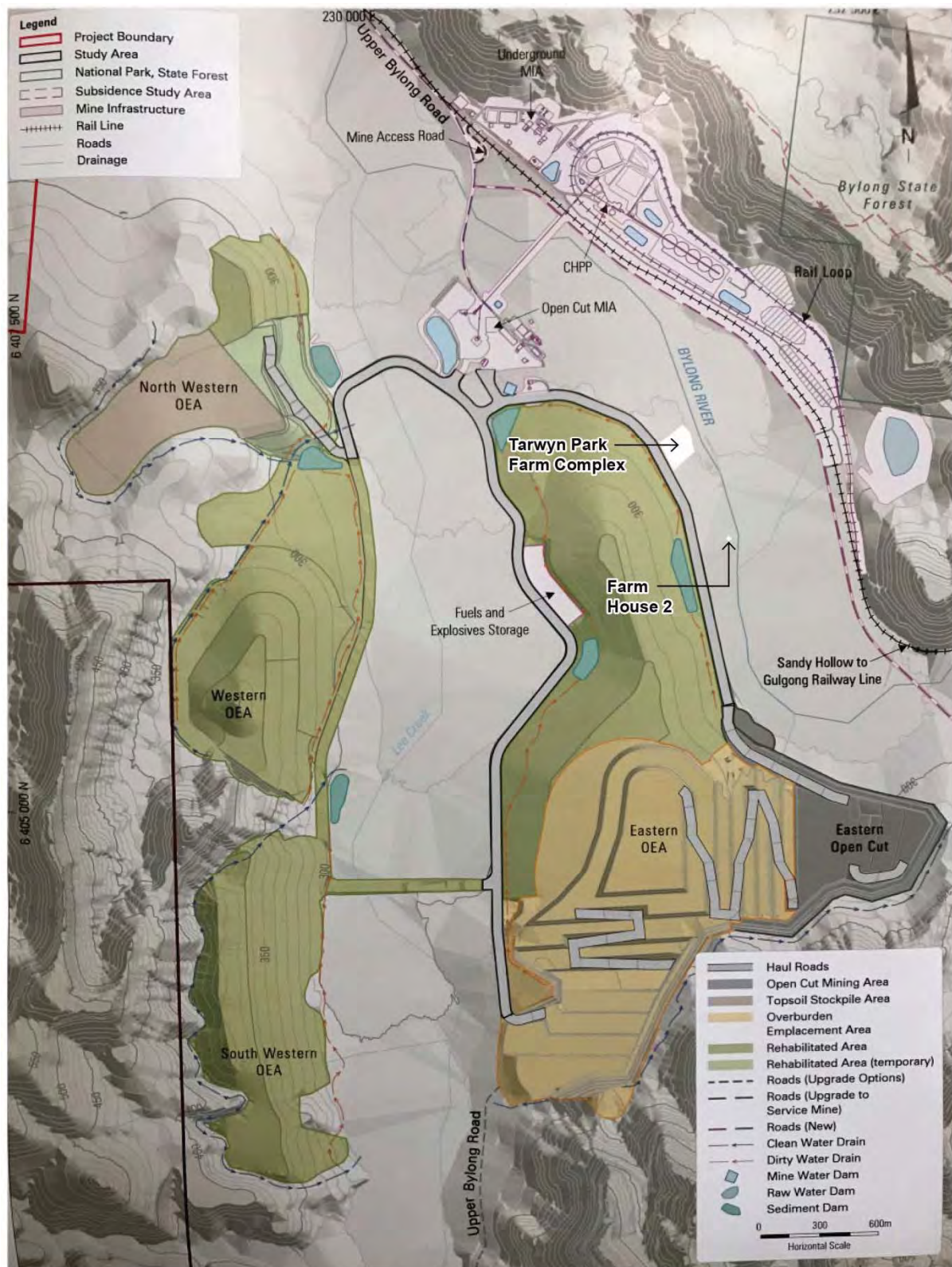


Figure 2 Conceptual open cut mine plan – Year 5



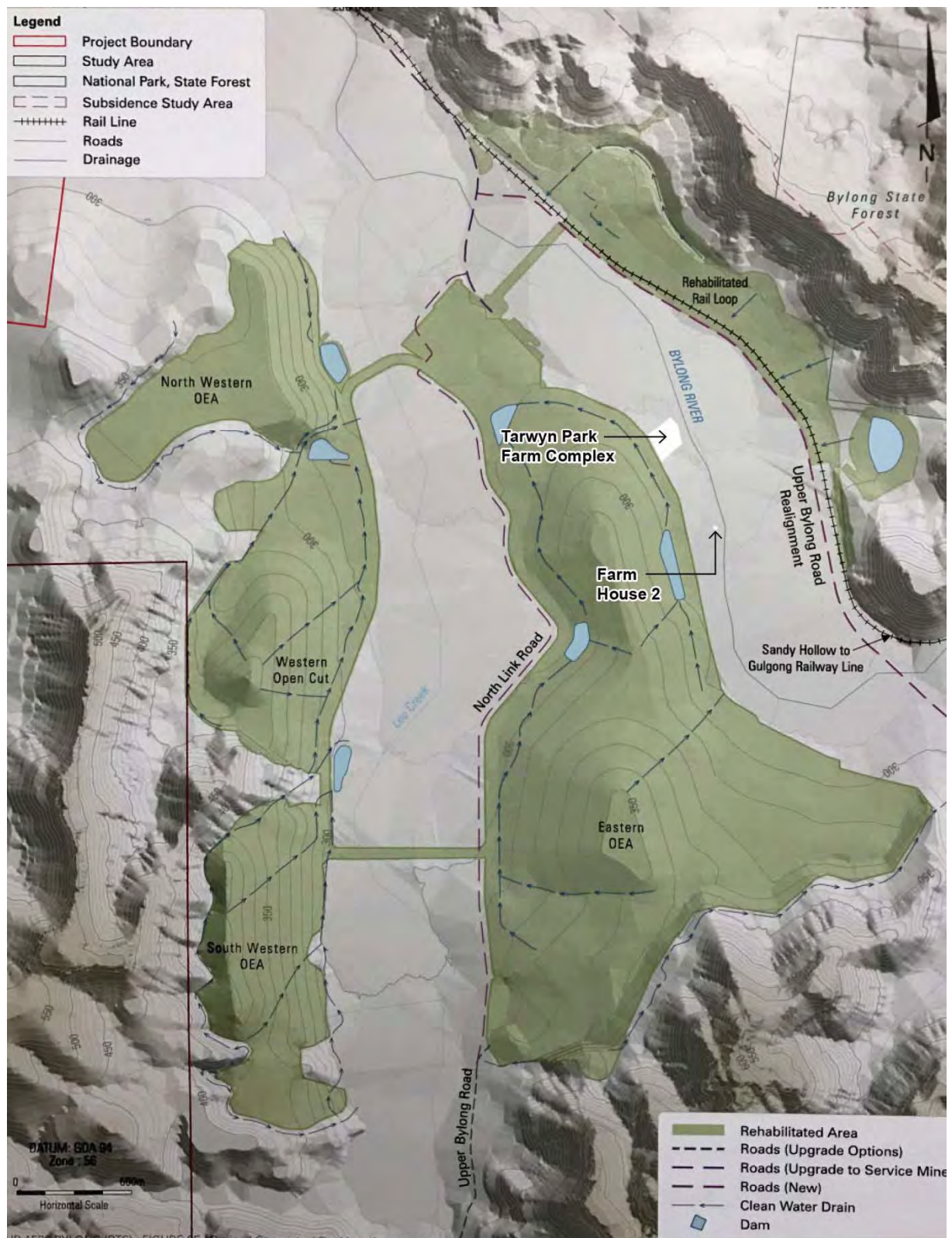
CONCEPT OPEN CUT MINE PLAN - Year 7

Figure 3 Conceptual open cut mine plan – Year 7



CONCEPT OPEN CUT MINE PLAN - Year 9

Figure 4 Conceptual open cut mine plan – Year 9



CONCEPTUAL FINAL LANDFORM

Figure 5 Conceptual open cut mine plan – revised conceptual final landform – Year 25

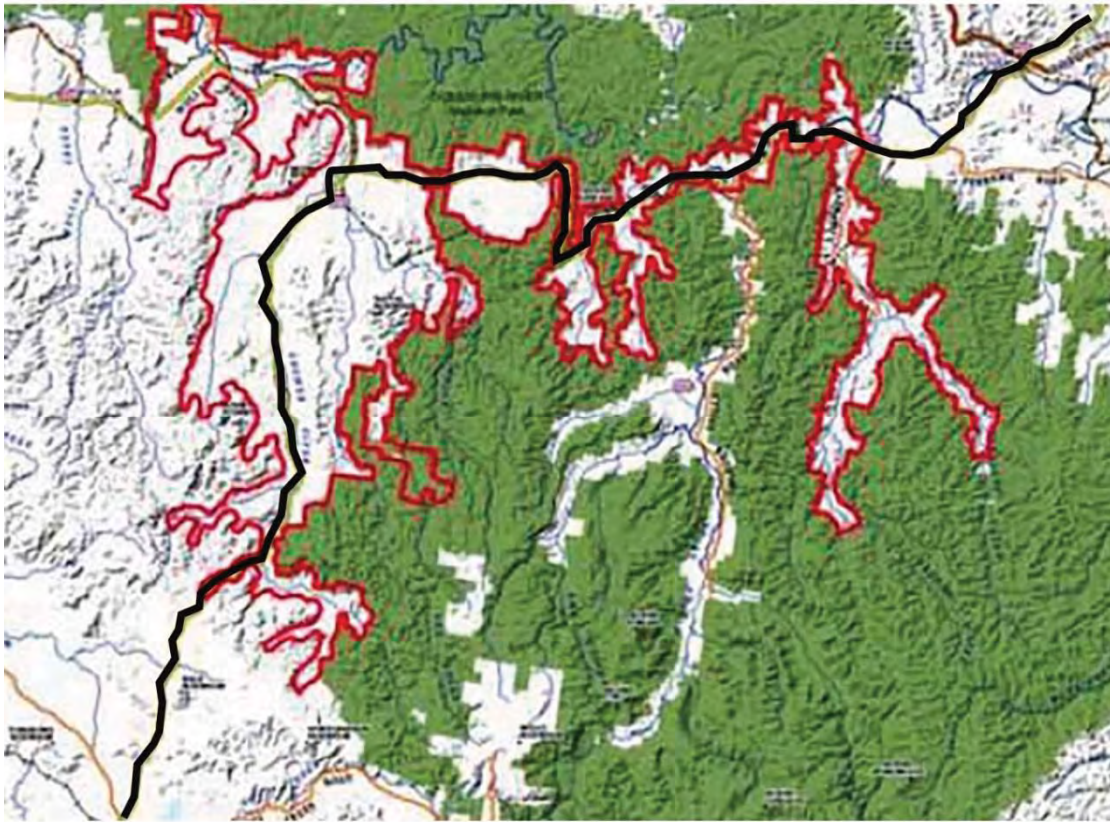


Figure 6 Bylong Landscape Conservation Area (source: National Trust)

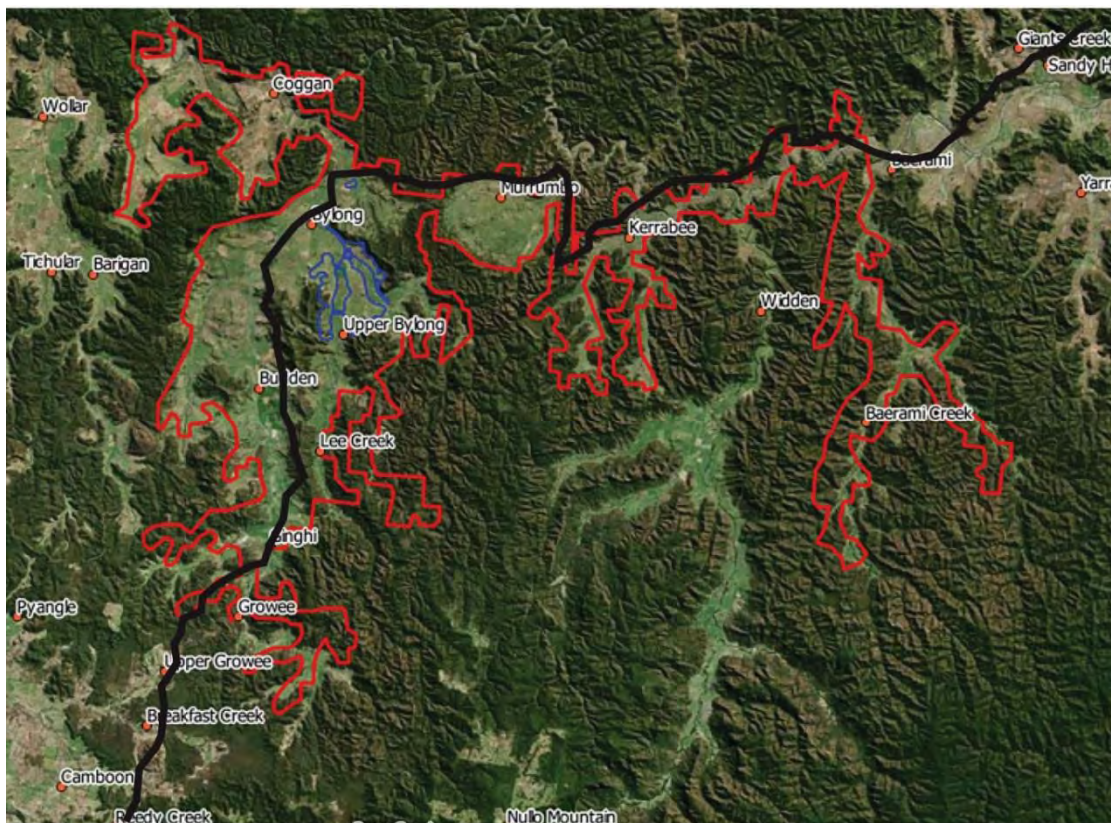


Figure 7 Bylong Landscape Conservation Area with Project Disturbance Boundary (blue) and Bylong Valley Way (black)

4.1.1 Statement of Significance

The Bylong Landscape Conservation Area has significance as prime agricultural land with a rural landscape of exceptional scenic value.

The Bylong Landscape Conservation Area has scientific significance as the site of Peter Andrews development of his Natural Sequence Farming (NSF) at Tarwyn Park based on the principle of reintroducing natural landscape patterns and processes as they would have existed in Australia prior to European settlement.

The Bylong Landscape Conservation Area has historic significance, particularly evident in the historic villages of Bylong, Baerami and Kerrabee.

4.1.2 Description

The Bylong Landscape Conservation Area includes the Bylong Valley Way from its junction with Baerami Creek Road in the east to where it crosses the boundary of the localities of Growee and Upper Growee in the south-west. It includes the valley and pasture landscapes beside Bylong Valley Way, the valleys adjoining the Wollar Road westwards to Razorback Ridge, the valleys of the Growee River and Sawyers and Jumpers Creek, the valley of Cousins Creek, the valley of Kerrabee Creek and the valley of Baerami Creek.

The Bylong Valley was once home to numerous horse studs. The champion racehorse and sire Heroic was born in the area. Much of Bylong Valley Way is nestled between the Wollemi and Goulburn River National Parks.

4.2 Tourism - Bylong Valley Way

Bylong Valley Way comprises the main road through the valley, stretching between the Castlereagh Highway to the north of the town of Ilford to the south and the small rural town of Sandy Hollow on the Golden Highway, west of Denman. Refer Figure 7.

The Muswellbrook Chamber of Commerce and Industry has created a web site for Bylong Valley Way, to promote it as a tourist route. The section of the Bylong Valley Way east of Bylong is also part of two separately promoted tourist routes, comprising:

- A self-drive tour loop route originating in Sandy Hollow, promoted as Upper Hunter Tourist Drive number 4, which uses this section of road to travel west, then turns north on other local roads to re-join the Golden Highway; and
- The Tablelands Way tourist route between Canberra and Muswellbrook uses this section of the Bylong Valley Way as part of the route between Mudgee and Muswellbrook.

4.3 Upper Bylong Valley

As can be seen from Figure 7, Bylong Valley Way runs past and to the north of the Upper Bylong Valley, within which the Project is located. The Project has been designed with a high level of sensitivity to views from this identified tourist route, as well as other publicly accessible locations within this part of the Bylong Valley. As the main scenic values of the Bylong Landscape Conservation Area are viewed from Bylong Valley Way, the Project will not result in adverse impact to these views. Views from the Upper Bylong Road / East Link Road and other local roads will be experienced by the personnel who will utilise this road to travel to and from the Project, and from a single landholding (without a residence) to the east of the Project which is utilised as a four wheel drive park with camping area. Public access into the Upper Bylong Valley will therefore be limited, conserving the landscape character of the Bylong Valley.

4.3.1 Post-mining landscape

Upon completion of the Project, the Upper Bylong Valley will have been rehabilitated, to include areas of modified landform, resulting from the emplacement of overburden materials back into the mined open cut mining areas associated with the Project. These rehabilitated areas will have been reinstated such that they match the existing quality and quantity of agricultural land currently present on the site,

suitable for uses such as grazing and limited cropping as well as the revegetation of areas of trees and shrubs. The nature of these changes to the landscape is discussed in Section 6.2 and Section 6.3.

5.0 Landscape Character

The Upper Bylong Valley comprises a broad, open pastoral valley, visually confined from the north (elevated terrain associated with the Bylong State Forest), then clockwise to west by an impressive ring of large, rugged forested hills comprising the Tal Tal Mountain and associated ranges to the south, and Growee Ranges to the west. Sandstone cliff faces are apparent along the upper edges of the Tal Tal Mountain and associated ranges. The lower slopes of these hills comprise predominantly open pasture with areas of scattered endemic tree cover. A small number of rural homesteads and associated outbuildings are located on these lower cleared slopes, including the 1920's Tarwyn Park house, stables and other outbuildings.

The Tarwyn Park Farm Complex is located within the central portion of the Upper Bylong Valley. The property fringes the western and southern boundaries of the Bylong State Forest. The property comprises the alluvial floodplain associated with the Bylong River, leading up to the lower slopes connected to Tal Tal Mountain to the south. To the north-east, the property is divided by the Sandy Hollow to Gulgong Railway line beyond which the landform extends up to the higher mountains comprising the Bylong State Forest.

Other buildings of note within the valley include: Farm House 2; Iron Tank Farm House; Upper Bylong Catholic Church and Cemetery; buildings associated with an earlier location of Upper Bylong, including the Bylong Upper Hall, Upper Bylong Post Office and Bylong Upper Public School.

The valley is drained from south to north by the Bylong River, and its associated tributaries, including Lee Creek and Cousins Creek. Most of these watercourses have limited forested riparian corridor, with the exception of a reach of some 300 m in length, located adjacent to the Tarwyn Park Homestead. The small village of Bylong is located at the mouth of the Upper Bylong Valley, close to the confluence of the Bylong River with the Growee River, which drains the adjoining and southern part of the Bylong Valley to the west of the Growee Ranges.

The floor of the valley comprises alluvial floodplains, generally evident by a low verdant vegetative cover which visually contrasts with the adjoining hayed-off drier pasture on the lower slopes. In addition to water and nutrient inputs from periodic flooding events, the floodplain is subject to improved pasture practices and irrigation.

The character of the Upper Bylong Valley is typical of much of the Bylong Landscape Conservation Area. It can be summarised as picturesque, with a well-husbanded character of pastoral lower slopes and fertile floodplain, set within a cordon of visually distinctive, rugged and densely forested hills, as illustrated in Figure 8 below.



Figure 8 View of the Upper Bylong Valley looking south from a high point on Upper Bylong Road, approximately two kilometres east of Bylong Village.

5.1 Landscape Character Units

The landscape in the vicinity of Tarwyn Park Farm Complex, Farm House 2 and Iron Tank Farm House can be broadly divided into the below landscape character units (LCU), as illustrated in Figure 9.

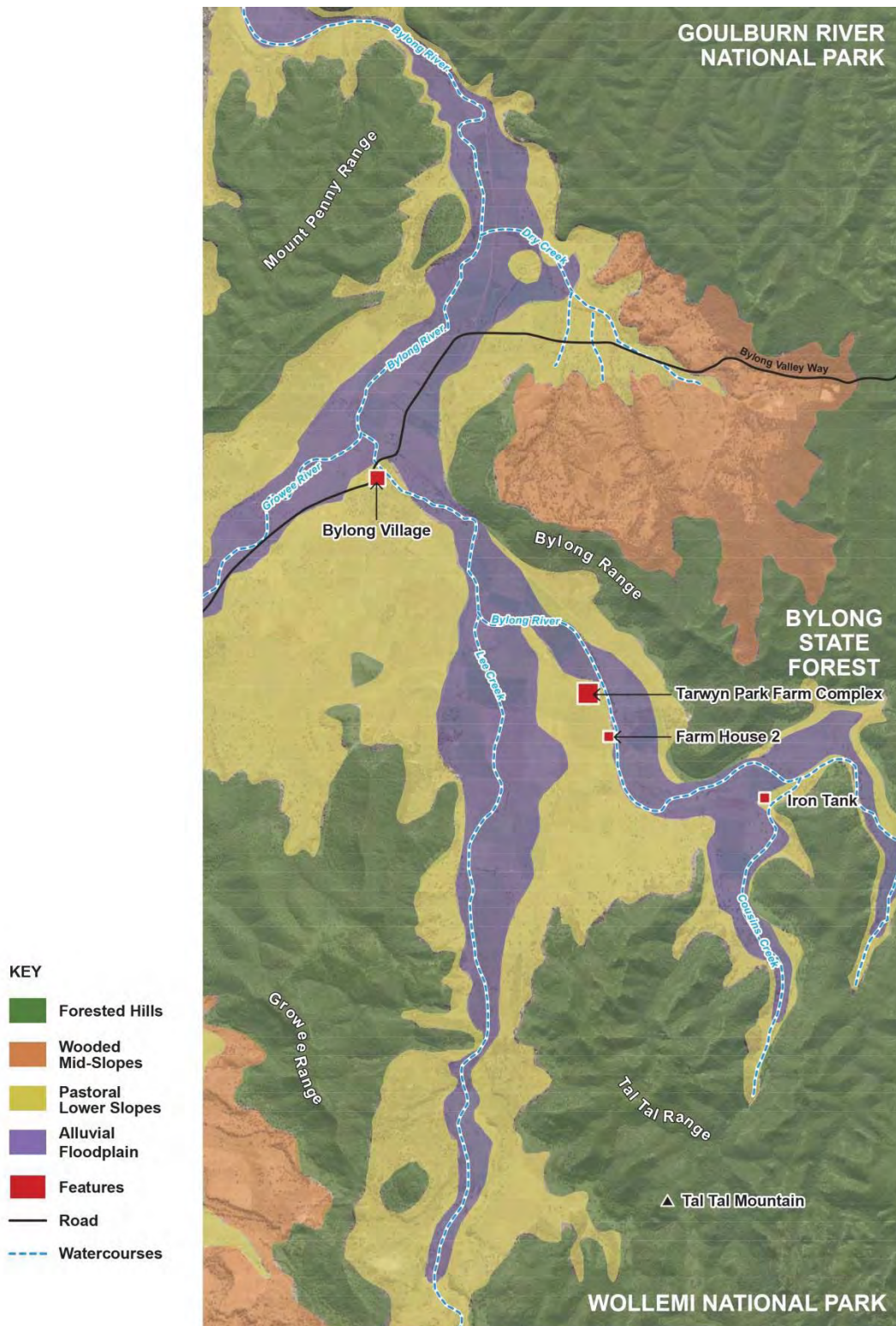


Figure 9 Map showing landscape character units of Upper Bylong Valley

5.1.1 Forested hills

This LCU rises steeply above the lower slopes /foothills of the valley floor, strongly defining the limits of the valley. The hills are densely forested with endemic plant communities, with sandstone cliff faces intermittently visually prominent. Refer Figure 10.



Figure 10 Typical view of Forested Hills LCU defining the valley edges, looking east from Upper Bylong Road to the north of the entry to Tarwyn Park off Upper Bylong Road, with the Bylong River riparian corridor and alluvial floodplain in the middle ground.

5.1.2 Wooded mid-slopes

This LCU occurs outside the visual catchment of the Upper Bylong Valley, within Dry Creek catchment to the north-east of the valley, and to the western slopes of the Growee Range. This LCU is not visible from Tarwyn Park.

5.1.3 Pastoral lower slopes

This LCU occurs on the lower valley slopes / foothills of the valley sides, comprising generally cleared, gently rolling slopes, typically with a cover of remnant dryland, endemic native grasses. These slopes have varying levels of tree cover, ranging broadly from sparse, to a limited number of moderately wooded areas. Refer Figure 11.



Figure 11 Typical view of Pastoral Lower Slopes LCU looking south-west along Wooleys Road about 1.3 km to the west of the Iron Tank Farm House, showing gentle dry slopes with intermittent open tree cover connecting the steep forested hills (left of frame) with a verdant floodplain (right of frame).

5.1.4 Alluvial floodplain

This LCU generally provides strong visual contrast of a fertile floodplain subject to improved pasture and irrigation practices, against the dryland pastures on the Pastoral Lower Slopes LCU. The floodplain typically has a low level of tree cover. Refer Figure 12.



Figure 12 View from Upper Bylong Road looking south-west across Bylong River floodplain to lower slopes and heavily forested Growee Range

6.0 Assessment of Visual Impacts

6.1 Heritage views

Tarwyn Park Homestead, Tarwyn Park Stables and Iron Tank Farm House have been identified in the CMP as the three most significant built structures located within the Tarwyn Park and Iron Tank property. Significant heritage views from Tarwyn Park Homestead and Tarwyn Park Stables have been identified, as shown in Figure 14 and Figure 15. Significant heritage views from Iron Tank Farm House have been identified, as shown in Figure 27. A summary of the key findings of the CMP regarding the heritage significance of the identified views to and from each building are provided below. Refer to the CMP (Section 3) for the full text.

6.2 Tarwyn Park Farm Complex

6.2.1 Views from / to Tarwyn Park Farm Complex

Figure 14 shows key views from the Tarwyn Park Farm Complex. As can be seen, these views would occur from the south-east, travelling clockwise through to the north-east. Views from the Tarwyn Park Homestead and Tarwyn Park Stables within the north-east travelling clockwise through to south-east quadrant are generally screened by much of the closely adjacent 300m long reach of dense riparian forest alongside Bylong River. Refer Figure 13.

Figure 2 shows a conceptual plan of the open cut mine at Year 5. As can be seen, the development of the Eastern OEA would be visually prominent within the foreground of the Tarwyn Park Farm Complex, most of which would not yet have been subject to rehabilitation. Looking west beyond the Open Cut MIA, most of the northern end of the North Western OEA would have been subject to rehabilitation, at a viewing distance of more than one kilometre. Viewing north-west through to north,

much of the CHPP would be highly visible, while parts of the Product Coal Stockpile and associated elevated conveyor would be visible above the existing riparian corridor from the north to north-east.

Figure 3 shows a conceptual plan of the open cut mine at Year 7. As can be seen, most of the northern portion of the Eastern OEA within the foreground of the view from the Tarwyn Park Farm Complex would have been subject to rehabilitation, while works associated with the Eastern Open Cut would be visible to the south at a distance of about two kilometres.

Figure 4 shows a conceptual plan of the open cut mine at Year 9. As can be seen, rehabilitation of the northern portion of the Eastern OEA would be complete as seen from the Tarwyn Park Farm Complex, with the ongoing building up of the Eastern OEA high point visually prominent against the backdrop of the Tal Tal Mountain at a distance of about two kilometres. Additionally, the North Eastern OEA would still contain topsoil stockpiles and an adjoining area subject to temporary rehabilitation.

Figure 5 shows the revised conceptual final landform following Project Year 25. The completion of the Eastern OEA including filling of the Eastern void would take place over the following 15 years using coarse and fine reject materials generated from the processing of coal from the underground mine. All MIAs and other works areas will also have been subject to rehabilitation following mine closure.



Figure 13 View looking west from close to Tarwyn Park Homestead showing screening effect of riparian corridor on Bylong Range

6.2.2 Key heritage views

Assessment of key visual impacts of the Project as seen from the Tarwyn Park Farm Complex has been undertaken using panoramic views from four locations as illustrated below in Figure 16. These locations have been selected to consolidate all eight identified significant heritage views for the Tarwyn Park Homestead and Tarwyn Park Stables, as shown in Figure 14 and Figure 15.

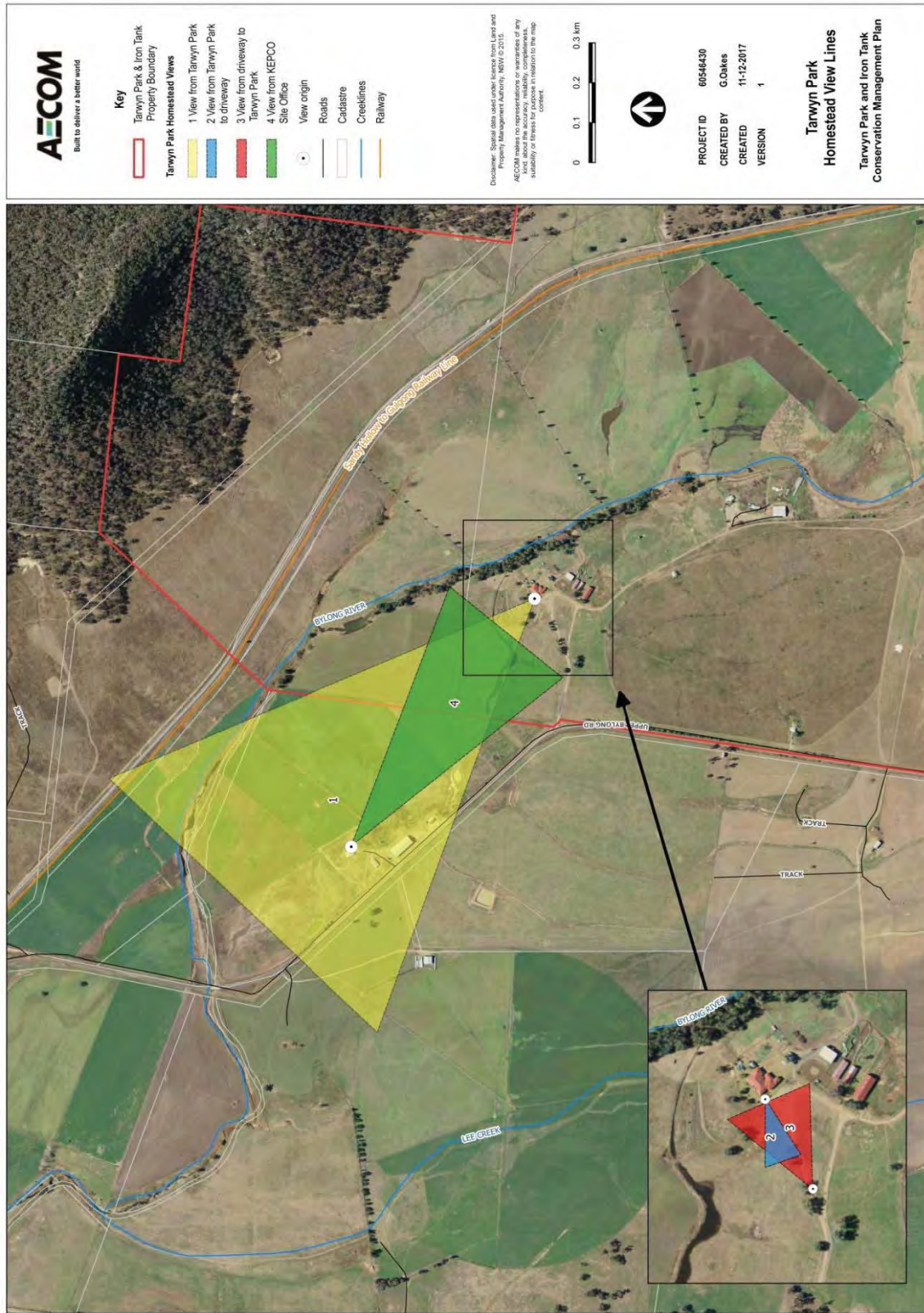


Figure 14 Excerpt from Tarwyn Park and Iron Tank Conservation Management Plan showing significant views to and from Tarwyn Park Homestead



Figure 15 Excerpt from Tarwyn Park and Iron Tank Conservation Management Plan showing significant views to and from Tarwyn Park Stables

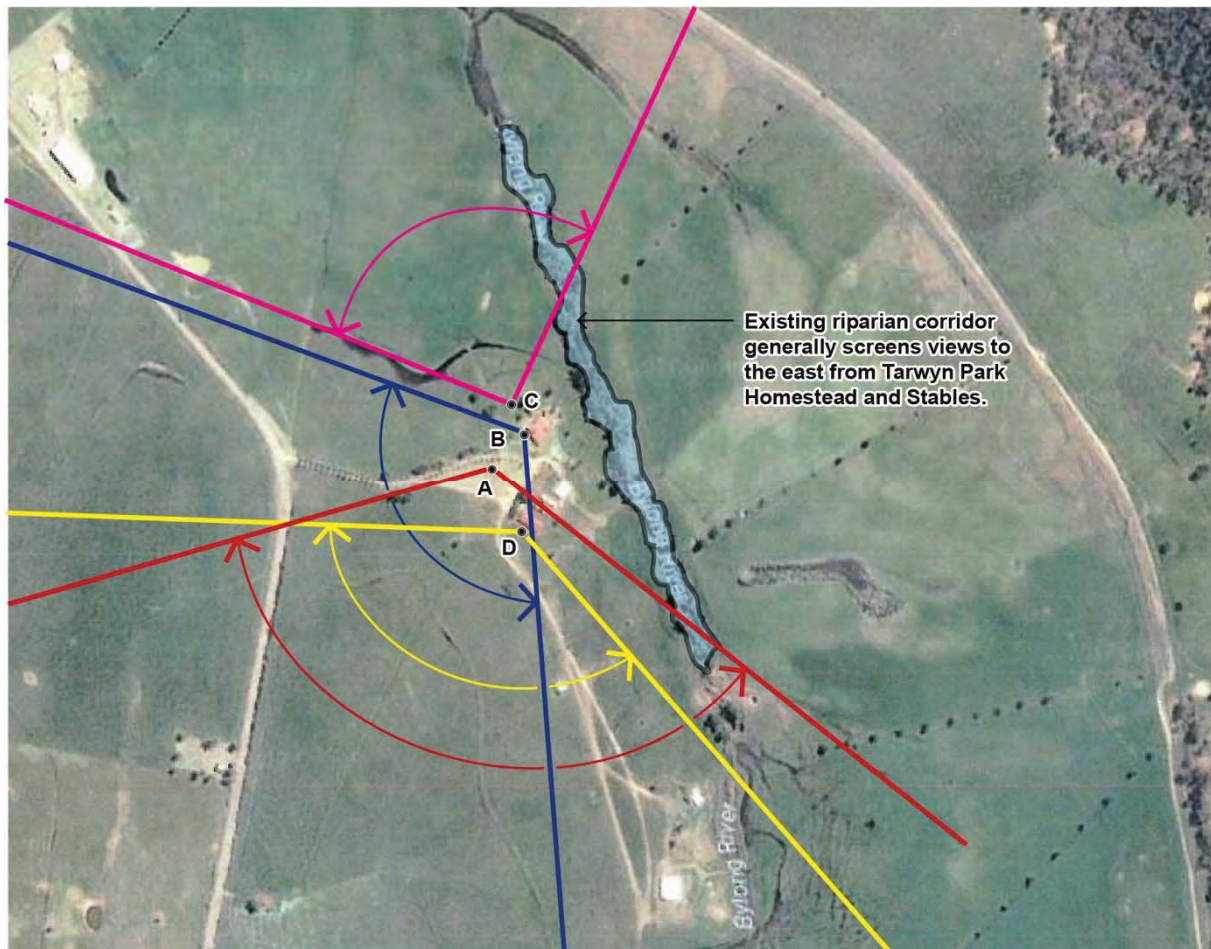


Figure 16 Locations of key representative viewing points for Tarwyn Park Homestead.

6.2.3 View A: Looking south-east through west from Tarwyn Park Homestead driveway

This view incorporates View 2 and View 4 from the CMP (refer Figure 14), and View 5, View 7 and View 8 from the CMP (refer Figure 15). It is taken from a location about 50 metres west of the Homestead within the centre of the driveway loop (refer Figure 16 - View A). It is considered to be representative of the worst case views of the Project components from the Homestead for all views from south-east travelling clockwise to the west, i.e., the extent of the shown view is maximised, potentially beyond the extent of any views able to be experienced from, or from within close proximity to the Homestead. Figure 17 shows the existing view. Figure 18 shows a photomontage with the conceptual final landform.

6.2.3.1 Existing view

The view is a highly open one looking south into the Upper Bylong Valley, across the valley floor and lower cleared slopes. This is bounded by an uninterrupted, enclosing line of steep forested sandstone hills, comprising Tal Tal Mountain and associated ranges to left of centre, and the Growee Range to the right of frame, as seen in the near background. In the far background, forested hills are seen to centre of frame. These comprise the southward extensions of the Growee Ranges, appearing much lower due to these being set further away from the viewing location when compared to the northern ends of the two ranges seen in the near background. This visual contrast in scale reflects the length of the Lee Creek valley which extends more than 10 km to the south of the Project components.

Sporadic stands of trees are evident across the valley floor, along the cleared lower slopes at the foot of Tal Tal Mountain (centre left of frame), and also along the cleared lower slopes of the Growee Ranges (centre right to right of frame). The Tarwyn Park Stables comprise an effective screen for views from south through to south-east (left of frame).

The ground plane from this viewing location can be seen to gently rise from the lower lying Bylong River and Lee Creek floodplains to the base of Tal Tal Mountain. The high visual contrast between the line of the straw coloured, gently undulating valley floor, and the foot of the steep, forested hills creates a clear boundary between these two terrain units, appearing to gently slope from the foot of Tal Tal Mountain down towards the northern end of the Growee Ranges to right of frame, and highlights the visual enclosure of the forested ranges, seen in sharp contrast against the skyline.

6.2.3.2 Heritage view significance

The CMP found that the openness of this view contributes to its significance, and that this should be maintained as evidence of the rural setting.

6.2.3.3 Final landform

The view of the conceptual final landform for the Project from the Tarwyn Park Farm Complex when compared to the existing situation illustrates a significant change to components of the existing landform (refer Figure 18). This new landform, which has been designed to integrate and blend with the surrounding environment as far as practicable, can be seen to:

- gradually rise up to some 23 metres in parts above the existing landform (refer Figure 19 – Section A-B);
- comprise a relatively uniform, gently domed spur occupying the foreground of the view from the Tarwyn Park Farm Complex;
- be viewed against the skyline, in contrast to the unbroken line of forested ranges enclosing the valley as seen in the existing view;
- have long, moderate slopes in the order of 1V:15H which are in contrast to the existing character of the valley, where the gently rising cleared lower slopes abruptly transition to steep forested hills;
- remove the more distant upper Lee Creek valley forested ranges from the view;
- create a visually distinct, moderately sloping edge between the new landform and the Growee Range, the seen extent of which is partially reduced;
- remove much of the views of the existing steep forested slopes and cleared lower slopes interface for this part of the Growee Range; and
- remove views to much of the cleared lower slopes interface between the valley floor and steep forested hillslopes.

However:

- within the context of the key heritage concern for retention of the openness of the landscape, and in conjunction with the commitment to rehabilitate the land to a condition equal to existing agricultural classes, the pasture cover of the new landform can be expected to visually integrate well with that of the existing landscape;
- both the pre-mining slopes (%) and post-mining (rehabilitated) slopes for the affected area fall within the range of 5-10% (refer Figure 20);
- the increased height and mass of the long eastern and western OEA's will moderately redefine the cross-sectional form of the lower reaches of Lee Creek Valley, creating some increase in visual enclosure and associated change in landscape character for this part of the Upper Bylong Valley. While this new valley form would be different to the existing wider, more open valley character (refer Figure 8), it is designed to provide an alternative, visually consistent rural landscape setting that is reflective of the greater Bylong Valley.

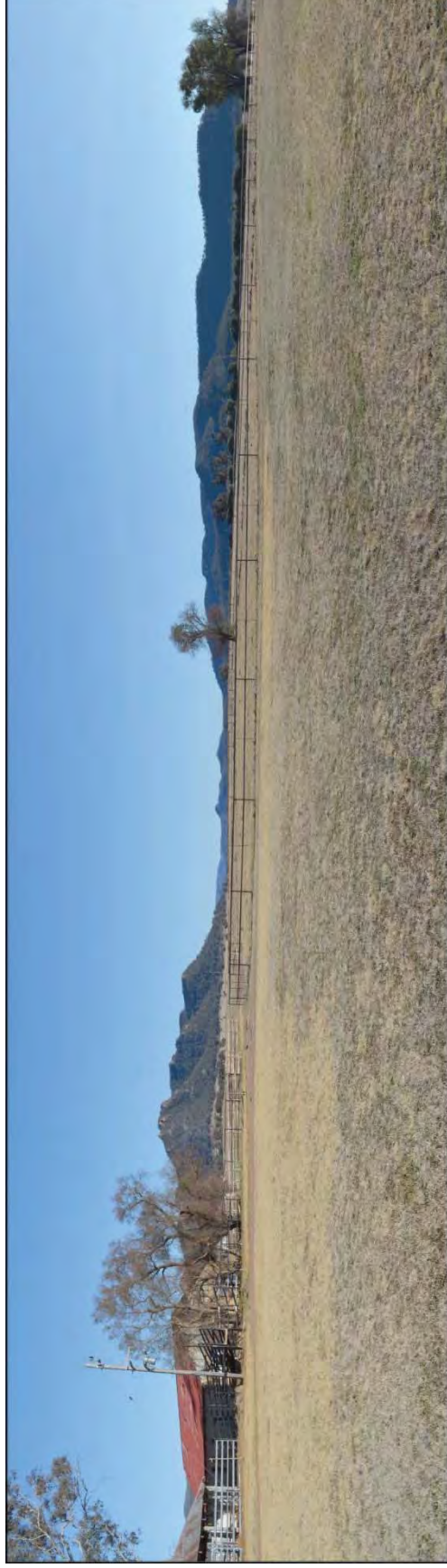


Figure 17 View A – Existing view taken from a location about 50 metres west of Tarwyn Park Homestead looking south-east (left of frame) through to west (right of frame)



Figure 18 View A – Final landform view from above location

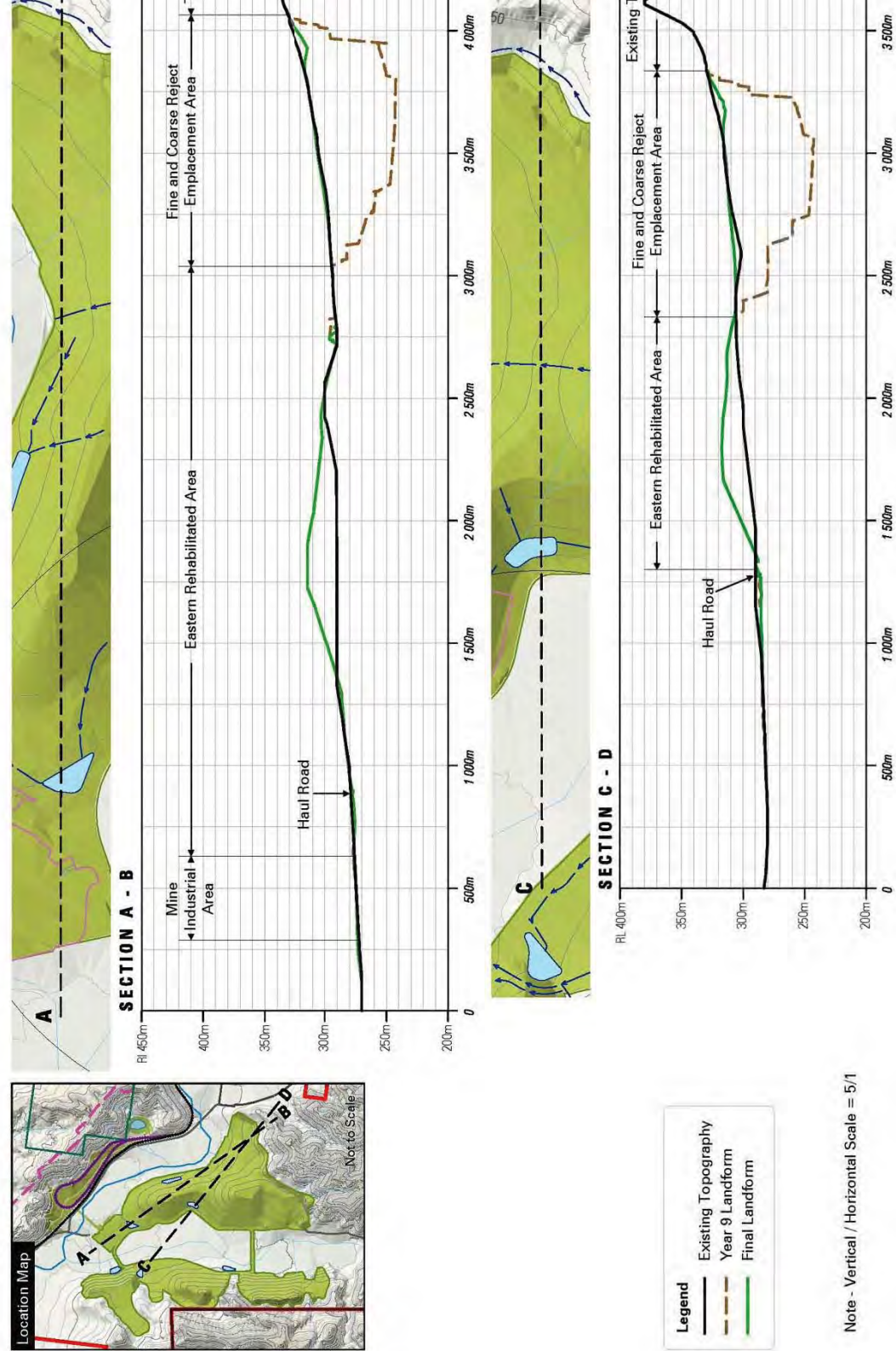


Figure 19 Excerpt from submission to Planning Assessment Commission (19 May, 2017). Section A-B shows change between existing topography and low knoll of final landform. Note: Vertical/Horizontal Scale = 5/1

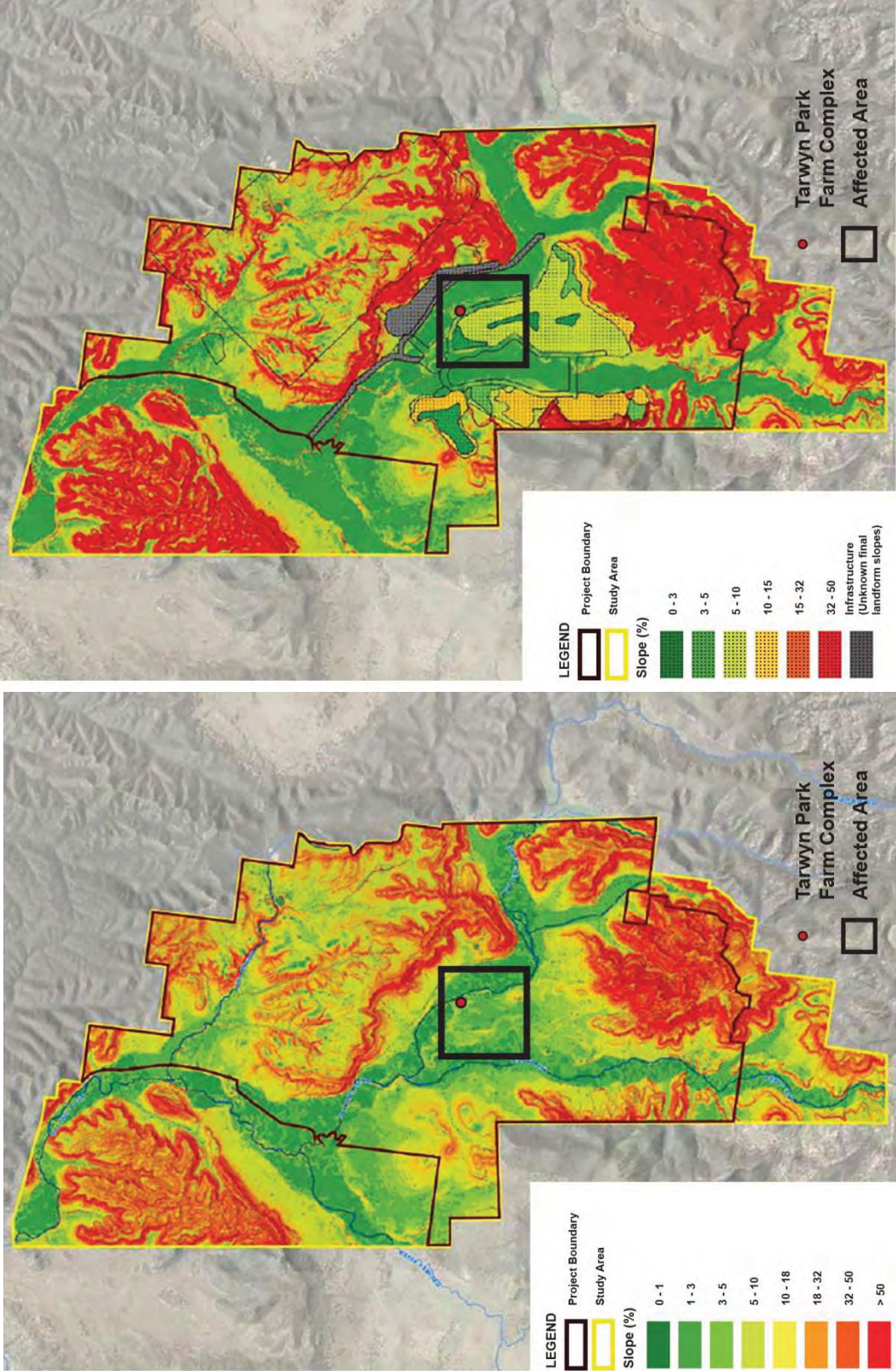


Figure 20 Comparison between pre-mining and post-mining (rehabilitated) slopes showing post-mining slopes continuing to fall within slope range of 5-10%

6.2.4 View B: Looking south through west from Tarwyn Park Homestead

This view incorporates View 2 from the CMP (refer Figure 14), and View 7 and View 8 from the CMP (refer Figure 15) and is taken from the north-western corner of the Homestead verandah (refer Figure 16 - View B). Figure 21 shows the existing view. Figure 22 shows a photomontage with the conceptual final landform.

6.2.4.1 Existing view

The existing view is closely orientated with View A, including the stables and the driveway, with broad open views across farm fencing and the Upper Bylong Valley to encircling forested Tal Tal Mountain and the Growee Ranges. The stables and associated out buildings are an integral part of this view. The views to the west to the Telstra tower hill and adjoining cleared upper slopes marks the southern arm of the mouth of the Upper Bylong Valley, beyond which lies the downstream Growee Valley, seen against the backdrop of Mount Penny and associated range.

The view is framed by the sandstone columns of the verandah, with views to the south partially screened by the stables and adjacent outbuildings, and to centre of frame a visually disparate assortment of trees comprising: small trees in immediate foreground; two tall, palm trees either side of the house paddock gate (potentially contemporary with the period of the house); nine peppercorn trees alongside the driveway from an earlier driveway planting; and a double row of recently planted columnar poplars (deciduous) to the driveway.

6.2.4.2 Heritage view significance

The CMP found that the retention of the open space is the important element of this view in the long term (i.e. on mine closure), as are the trees to mark the line of the driveway.

6.2.4.3 Final landform

The view of the conceptual final landform for the Project from the Tarwyn Park Homestead (refer Figure 22) when compared to the existing situation is broadly similar to View A – Final Landform as above, with the key differences being:

- The view is seen within the context of the Homestead, with paddock fencing, including for the house yard and cultural plantings
- The original and recent driveway plantings are a key feature of the view these;
- The stables, associated out buildings and two large trees remain an integral part of this view, particularly when seen against the backdrop of Tal Tal Mountain;
- The seen area of the new Eastern OEA landform would be reduced over that for View A due to screening by: the driveway trees; the two small trees in the immediate foreground; the large peppercorn tree in front of the stables, and the large eucalypt in front of the horse ring;
- The view extends beyond the forested northern end of the Growee Range, incorporating the cleared Telstra tower hill and open views across the Growee Valley to the Mount Penny Range.



Figure 21 View B – Existing view taken from the front verandah of Tarwyn Park Homestead, looking south-east (left of frame) through to west



Figure 22 View B – Final landform view from above location

6.2.5 View C: Looking west through north-east within close proximity to Tarwyn Park Homestead

This view incorporates View 1 from the CMP (refer Figure 14), and View 6 (refer Figure 15). The photo is taken from near the driveway gate to the Homestead garden, some 15 metres west of the house, shown as View C in Figure 16.

Figure 23 shows the existing view. Figure 24 shows a photomontage with the proposed mine infrastructure in place.

6.2.5.1 Existing view

The existing view is orientated from west (left of frame) through to north-east. Key elements of the view comprise: the broad, open and gently rolling pastoral landscape; the steep and densely forested edge of the Bylong Range in the middle ground, with moderately sloping cleared lower pastoral slopes falling from the Bylong Range forested tree line to the Sandy Hollow to Gulgong Railway Line which can be seen traversing the slope, and then on down to the Bylong River, which is identifiable by the sporadic small stands of riparian vegetation. This static view is periodically subject to the progression of long coal trains moving across the landscape. To centre left of frame, the pastoral Growee River valley floor is apparent in the far background, with a substantial cover of paddock trees, set against the long forested backdrop of the Mount Penny Range. Other notable elements of the view comprise: the paddock fencing; nearby cultural tree plantings, and the adjacent well vegetated reach of the Bylong River to right of frame, which effectively screens all views to the Bylong Range cleared lower slopes from centre right of frame to all areas east of this point.

6.2.5.2 Heritage view significance

The CMP found that the open paddocks contribute to the significance of this view, and that the view should be maintained in this open state as evidence of the rural setting.

6.2.5.3 Final landform

Following mine closure, all rail loop infrastructure will be removed and the site rehabilitated to present as a natural environment. It is not the intention to reshape the site back to pre-development landform levels and grades but to ensure the site is stable, free draining and revegetated. Section 4.7.2 of the Response to Submissions (March, 2016) illustrates the revised conceptual final landform, rehabilitation of the rail loop area and relevant cross sections through this proposed rehabilitation area.

Figure 23 shows the existing evenly falling cleared lower pastoral slopes upslope of the Sandy Hollow to Gulgong Railway Line. This area will be subject to a final landform that will retain the working platforms with associated batters grading up to 3H:1V. This would include platform areas such as the: rail loop; Underground MIA; the mine water dam (filled) at the eastern end of the site, in addition to any batters associated with transitions between the Bylong Range and the Sandy Hollow to Gulgong Railway Line. Given that the site will be rehabilitated to present, it is expected that all areas downslope of the existing tree line will be rehabilitated to pasture.

During the period of the Project, a substantial tree planting corridor is proposed alongside the re-routed Upper Bylong Road (East Link Road), with the southern edge extending down the slope towards the Bylong River. This planting could reasonably be expected to screen much and possibly all of the rehabilitated rail loop working platform (assumed to be the highest platform) and potentially a moderate to high area of the rehabilitated slopes downslope of the retained forested Bylong Range forested edge.



Figure 23 View C – Existing view taken from the front garden of Tarwyn Park Homestead, looking west (left of frame) through to north-east



Figure 24 View C – View with mine infrastructure in place

6.2.6 View D: Looking south-east through west from Tarwyn Park Stables

This view incorporates View 2 and View 4 from the CMP (refer Figure 14), and View 5, View 7 and View 8 from the CMP (refer Figure 15). It is taken from similar to View A, with the key differences comprising:

- a moderately increased field of view including views to the west across cleared lower slopes to the backdrop of western ranges of the Growee Valley some 10 km away;
- increased landscape context including to Our Lady of the Sacred Heart Church to the right of centre of frame, and view to the cleared, extended southern arm of the Upper Bylong Valley, including the cleared Telstra tower hill;
- The view includes Farm House 1 to centre left of frame (to be removed) and Farm House 2 to far left of frame. Paddock fencing (including the fencing for the racehorse training track (to be removed)) is still prominent in the view.

The view location is shown in Figure 16. Figure 25 shows the existing view. Figure 26 shows a photomontage with the final landform.

6.2.6.1 Existing view

The view is similar to that for View A (refer Section 6.2.3.1). The key differences are described above.

6.2.6.2 Heritage view significance

The CMP found that the retention of the open space is the important element of this view in the long term (i.e. on mine closure).

6.2.6.3 Final landform

The view of the conceptual final landform for the Project from the Tarwyn Park Farm Complex when compared to the existing situation illustrates a significant change to components of the existing landform. This new landform, which has been designed to integrate and blend with the surrounding environment as far as practicable, is described in Section 6.2.3.3.

The visually dominant ranges of Tal Tal Mountain are substantially unchanged in seen area. The Growee Range is still visible, although reduced in seen area due to the proximate location of northern end of the Eastern OEA landform.

The rehabilitated knoll of the Eastern OEA removes the view of the open pastoral plain and the Our Lady of the Sacred Heart Church (to be removed). However, the pastoral context of the landscape is conserved, and the open views to the Bylong River floodplain (left of frame) and the Telstra tower hill (right of frame) are retained.

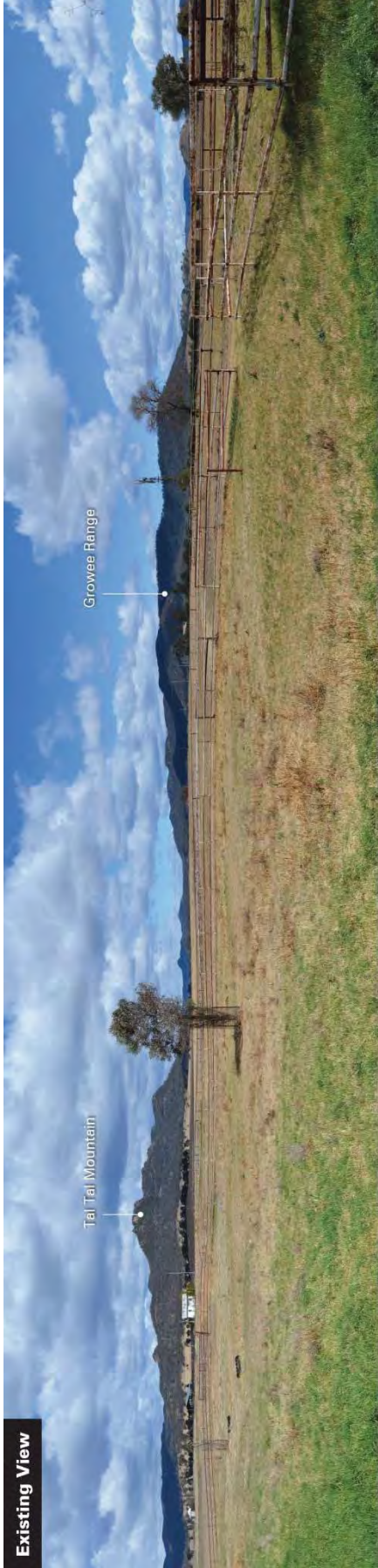


Figure 25 View D – Existing view from Tarwyn Park Stables looking south-east clockwise through to west



Figure 26 View D – Final landform view from Tarwyn Park Stables looking south-east clockwise through to west

6.3 Iron Tank Farm House

The location of the Iron Tank Farm House is shown in Figure 1.

6.3.1 Views from / to Iron Tank Farm House

Figure 2 shows a conceptual plan of the open cut mine at Year 5. As can be seen from Figure 1, views from the Iron Tank Farm House would occur from the south-west, travelling clockwise through to the north-west. The view would be a substantially open one, other than for tree planting within the Helvetia farm house complex near where the East Link Road is proposed to connect to the eastern portion of Wooleys Road.

By Year 5, the Eastern Open Cut will have progressed southwards from adjacent to the Tarwyn Park Farm Complex to a location due west of the Iron Tank Farm House. The development of the Eastern OEA would be visible within the middle ground of the view, at a distance of some two kilometres. Rehabilitation would not yet have commenced to those areas of the OEA visible from Iron Tank Farm House.

Beyond the Eastern OEA: the North-Western OEA and topsoil stockpile would be visible; the Western Open Cut and associated Western OEA would be well progressed; and development of the South-Western OEA would be complete with rehabilitation having taken place to the lower slopes. These components would be visible beyond the Eastern Open Cut at a distance of some four to five kilometres.

Figure 3 shows a conceptual plan of the open cut mine at Year 7. As can be seen, most of the northern portion of the Eastern OEA will be rehabilitated, with the Eastern Open Cut visually prominent at a distance of some two kilometres.

Beyond the Eastern OEA: the North-Western OEA and topsoil stockpile would still be visible; with the development and rehabilitation of the Western Open Cut close to completion; and rehabilitation of the South-Western OEA complete, although this may not be visible due the intervening Eastern Open Cut mining operations.

Figure 4 shows a conceptual plan of the open cut mine at Year 9. As can be seen, rehabilitation of the northern portion of the Eastern OEA would be complete as seen from the Iron Tank Farm House (refer Figure 1), with the ongoing building up of the Eastern OEA high point visually prominent against the backdrop of the Growee Range at a distance of about 2.5 kilometres. Additionally, the North Western OEA would still contain a topsoil stockpile which may be visible above the Eastern OEA.

Figure 5 shows the revised conceptual final landform at Year 25. The completion of the Eastern OEA including filling of the Eastern Open Cut void would have taken place over the preceding 15 years using coarse and fine reject materials generated from processing of coal recovered from the underground mine.

6.3.2 Key heritage views

Key heritage views from Iron Tank Farm House are identified in Figure 27, comprising View 9, View 10 and View 11.

6.3.3 View 9: View looking north-east to Iron Tank Farm House from Wooleys Road

6.3.3.1 Existing view

This view, depicted in Figure 28, is taken from about 50m south-west of the Iron Tank Farm House front door. It contains the farm house, with Bylong River floodplain and cleared lower slopes behind in the middle ground. The steep, densely forested areas of Bylong State Forest within the Bylong Range comprises the backdrop to the view, with the Sandy Hollow to Gulgong Railway Line running along an elevated earth berm at the toe of the slope up from the Bylong River floodplain.

6.3.3.2 Heritage view significance

The CMP identifies the retention of the open space and the ranges behind as the important elements of this view.

6.3.3.3 Final landform

There would be no surface components of the Project located within the field of view for this receptor location, and no changes to the openness of the view, generally due to the distance from the rehabilitated mining areas. There may be some changes to the forested range to the north visible from

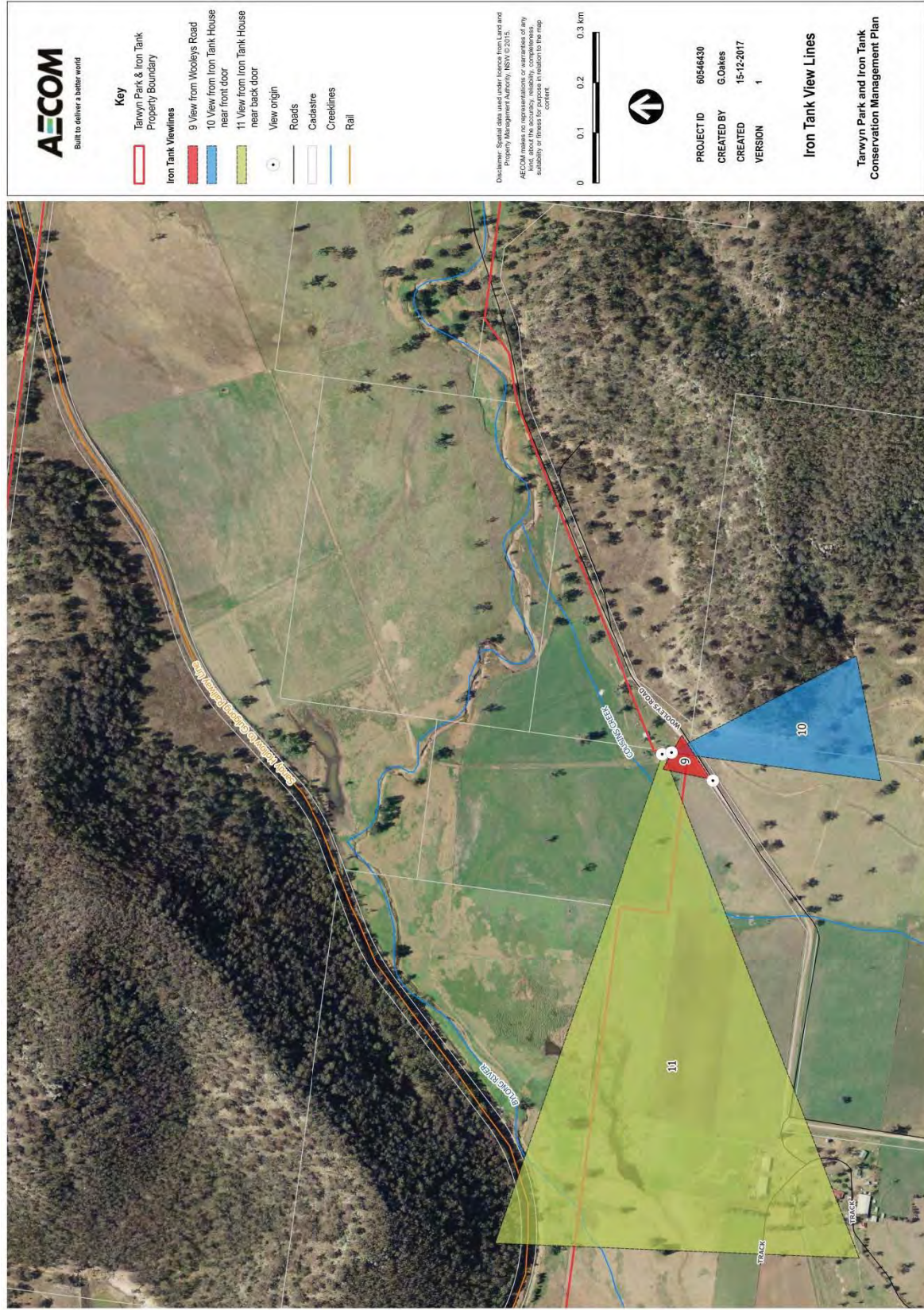


Figure 27 Excerpt from Draft Tarwyn Park Conservation Management Plan showing significant views to and from Iron Tank Farm House

this location due to subsidence effects on cliffs, however these effects appear likely to be limited due to there being only one prominent cliff (C8) located above the Underground Extraction Area, and facing towards Iron Tank Farm House. Based on the experience of the nearby Ulan Mine, rock falls are likely to be experienced from approximately 20% of the length of the cliffs within the Underground Extraction Area (Hansen Bailey, 2015).



Figure 28 View 9: Existing view looking north-east from Wooleys Road to Iron Tank Farm House and Bylong Range

6.3.4 View 10: View looking south-west from Iron Tank Farm House towards Tal Tal Mountain and associated ranges

6.3.4.1 Existing view

This view, depicted in Figure 29 is taken from close to the front door / porch of the Iron Tank Farm House looking south-west. The view looks across a low rise of cleared lower slopes / foothills up to a steep forested spur of Tal Tal Mountain (right of frame) and associated ranges at a distance of about 1.5 kilometres. The forested spur is set in strong profile against the skyline.

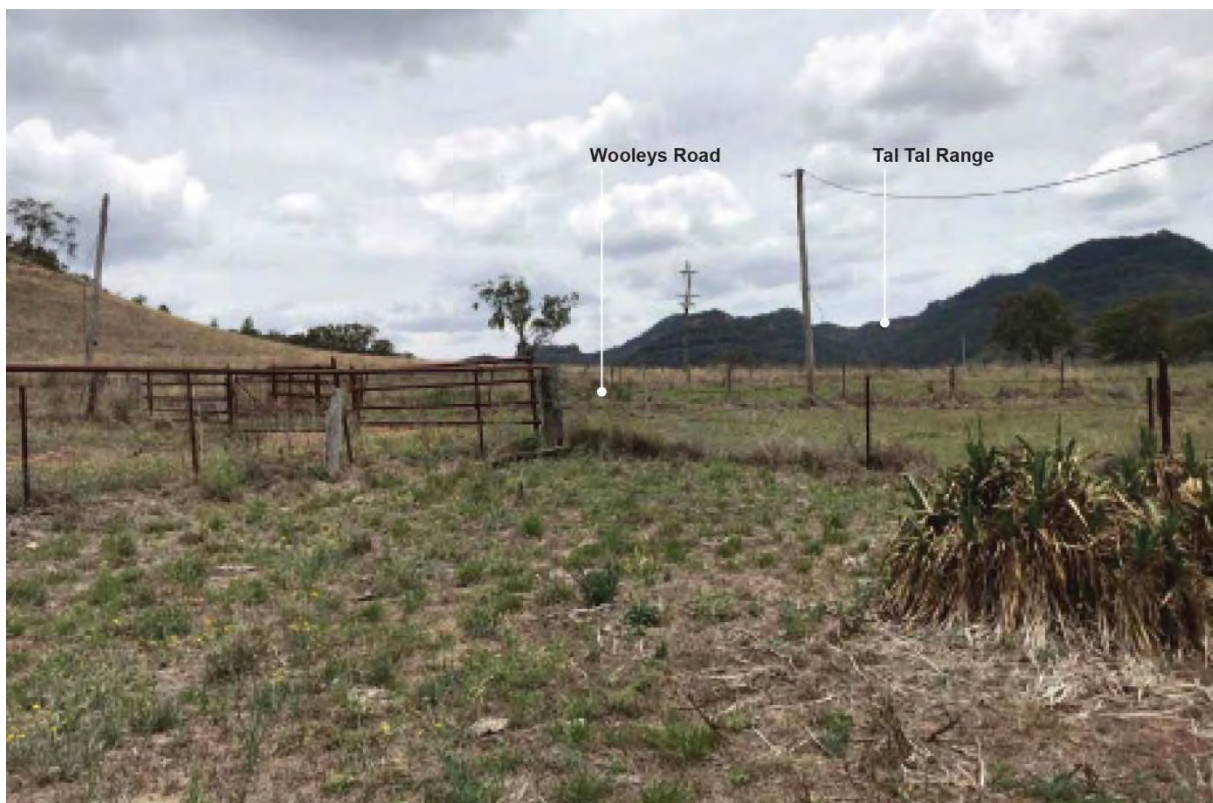


Figure 29 View 10: Existing view looking south-west from Iron Tank Farm House towards the foothills of Tal Tal Mountain (source: AECOM CMP)

6.3.4.2 Heritage view significance

The CMP states that the retention of the open space with views to the foothills of Tal Tal Mountain is an important element of this view.

6.3.4.3 Final landform

There will be no change to the landform in this view, with the Project located further to the west (beyond right of frame). The retention of the open space with views to these foothills would therefore be achieved.

6.3.5 View 11: View looking west from Iron Tank Farm House towards the Project

6.3.5.1 Existing view

This view, depicted in Figure 30, looks west from the back door of the Iron Tank Farm House across the Bylong River floodplain to the Bylong Range in the foreground to right of frame, and buildings of the former Upper Bylong (i.e. Upper Bylong Post Office, Upper Bylong Public School and Upper Bylong Hall) in the middle ground to centre of frame. These elements are seen against the backdrop of the Growee Range at a distance of some five kilometres.

6.3.5.2 Heritage view significance

The CMP states that the retention of the open space with views to the Growee Range in the background is an important element of this view.

6.3.5.3 Final landform

This view would be subject to a moderate level of change resulting from the Project, including: change in the form of the valley floor with the addition of the new Eastern OEA stretching across the full width of the view; and lifting of the line of forest cover to the Growee Range, from visually close to the valley floor, to well up the slope of the lower eastern spur, including the removal of the northern forested end of the spur and replacement with new landform to grazing with cut face up to 50 metres high and in the order of up to 400 m wide.

However, notwithstanding this level of change, and taking into consideration the key heritage concern for retention of the openness of the landscape, and the commitment to rehabilitate the land to a condition equal to existing agricultural classes, the pasture, cropping and woodland cover over the new landform can be expected to visually integrate well with that of the existing landscape.



Figure 30 View 11 - View looking west from the back door of Iron Tank Farm House towards the Project

Further, it would seem reasonable to say that most people taking in this view for the first time after completion of the Project, may not recognise the landscape as having been subject to the proposed change.

6.4 View from Farm House 2

Although not identified as a significant heritage view within the CMP, Farm House 2 is considered to comprise an integral residential structure within the Tarwyn Park and Iron Tank property. Refer Figure 2 for location of Farm House 2. The farm house provides substantial views from the north-east through to the south, seen from the front verandah of the building. Refer Figure 31. Most of this view falls outside the boundary of the mining operations and as such will remain undisturbed. However, mining operations will be visible to far right of frame of this view. The view is similar to View 7 from the CMP (refer Figure 15).



Figure 31 View looking east to south from front verandah of Farm House 2, across Bylong River floodplain to the steep forested valley sides, including Tal Tal Range

A quite different but also substantial view is available from the south through to the west, from an extension of the front verandah that runs along part of the western side of the building (refer Figure 32). The view is taken from a location about 20 metres west of Farm House 2, and comprises a worst case view of what would be seen from the side verandah. Mining operations would be visible across the length of this view.

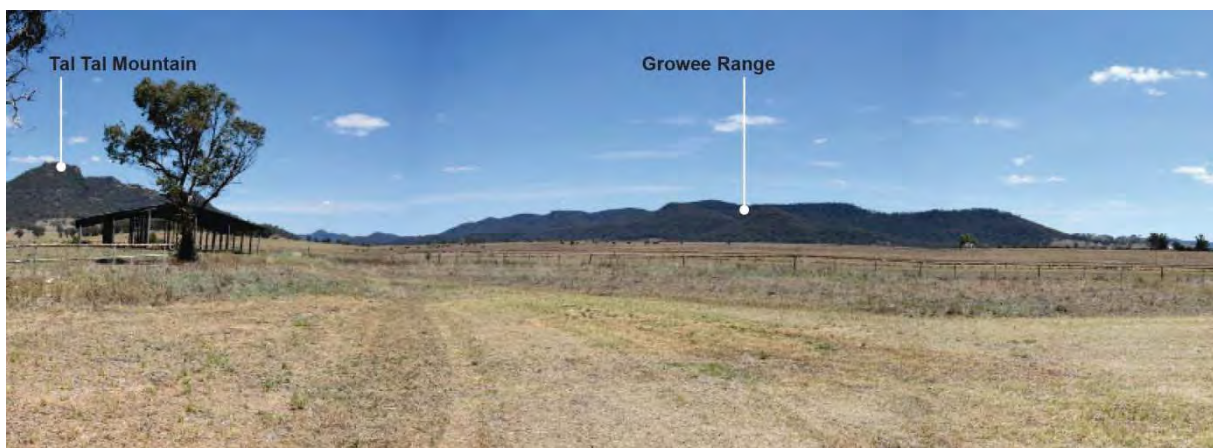


Figure 32 View 20 metres west of Farm House 2, representative of view from the western verandah. View encompasses Tal Tal Mountain and associated ranges in the south, panning west, looking across cleared pastoral lower slopes to the Growee Ranges. Our Lady of the Sacred Heart Church can be seen to far right of frame.

7.0 Conceptual Landscape Design

A conceptual landscape design has been prepared to address any identified and described impacts on the significant heritage views for the period of the Project's activities (refer Figure 34) and final landform (refer Figure 35).

7.1 Conceptual Landscape Design for Project Period

KEPCO is proposing to maintain those areas of the Tarwyn Park Farm Complex not affected by the Project as productive agricultural farming land in conjunction with its other landholdings within the Bylong Valley. The area where NSF has been practiced, on the alluvial floodplains, will not be physically disturbed by the open cut mining activities associated with the Project. KEPCO has therefore committed to maintaining or enhancing the soil hydrology techniques (NSF) on those areas of the Tarwyn Park property not required for the Project. Furthermore, KEPCO is committed to making reasonable access to the Tarwyn Park property for external study. In this regard, KEPCO is looking to establish a collaborative research and education centre at Tarwyn Park to facilitate practical field research on the property. Discussions have been held with the University of New England and Kandos High School in this regard.

The Tarwyn Park Farm Complex should provide a suitable level of amenity for users of the facility, including visual amenity. Figure 16 shows the primary views (view orientation and field of view) that will be available from Tarwyn Park Homestead and from the Tarwyn Park Farm Stables during the period of the Project. Figure 33 shows partial long views of minimally disturbed / undisturbed Bylong Valley landscape available from Tarwyn Park Homestead and Tarwyn Park Stables over the period of the Project.

A conceptual landscape design has been prepared for the Tarwyn Park Farm Complex to address the visual impacts likely to be experienced from this area during the life of the Project, in addition to addressing the important landscape elements of key heritage views to / from Tarwyn Park identified within the CMP. Refer Figure 34.

The key elements of the conceptual landscape design are as follows:

- Key heritage views, or elements of the same that could be retained over the period of the Project have been identified and incorporated into the design (refer Figure 34), comprising:
 - View 1 (partial): Looking north to north-east over open paddocks (refer Figure 14);
 - View 3: Looking east from driveway to the Tarwyn Park Homestead (refer Figure 14);
 - View 7: Looking south-east from southern side of the Tarwyn Park Stables over open paddocks (refer Figure 15).
- A permanent garden design is proposed for the north-western fenced area in front of the house. The garden seeks to use a mixed planting of ornamental and native trees and shrubs to create a semi-formal entrance to the Homestead, which would comprise a historically and culturally appropriate response to the style and form of the Homestead, as recommended within the draft CMP. The garden would provide framed views to the landscape of open paddocks, e.g. View 1 as above, with the potential to selectively screen other areas, e.g. the Underground MIA and CHPP. Refer Section 7.3.3.
- A temporary planting of semi-circular groves of quick growing endemic species such as casuarina, melaleuca and acacia species that would screen the Tarwyn Park Farm Complex from the Project components, while still providing some sense of openness and space around the buildings, and facilitating 'windows' out to the Bylong Valley landscape for View 1 and View 7 as above. These trees would be gradually removed as longer-term permanent treatments to the final landform matured, i.e. land cover for cropping, grazing, woodland, and other stands of tree cover the above as described below (refer Section 7.2.1).
- Retention of select existing plantings, including: the remaining section of the rows of poplar trees on the driveway; the remaining peppercorn trees; the large eucalypt adjacent to the stables, and the two large palms at the western corner of the Homestead.

7.2 Conceptual Landscape Design for Final Landform

7.2.1 Tarwyn Park Farm Complex

The conceptual landscape design for the final landform addresses, where practicable, views to Project infrastructure identified in Section 6.2.1. Refer Figure 35.

The key elements of the concept are as follows:

- The temporary screens of casuarina, melaleuca and acacia provided for the period of the Project may be partially or fully removed, to open up views to the rehabilitated landscape.
- The key heritage views identified in Section 6.2 and Section 6.3 would be reinstated with revegetation treatments (i.e. grazing, cropping and woodland) to minimise the long term impacts to these views.
- Stands of Fuzzy Box Woodland would be reinstated as variously sized stands of tree cover along the toe of the lower slopes landscape (refer Section 7.3.1). Stands of Coastal Grey Box Woodland (refer Section 0) would be reinstated to the lower slopes of the northern end of the Eastern OEA, to break-up the uniform profile of the landform, and minimise views of the landform where otherwise it would be seen against the skyline. The reinstatement of these two communities would comprise stands of both 'paddock' trees within an open pasture setting, and fully structured patches with a diverse array of species. This planting would be gradually implemented, commencing in Year 5 and then on-going in tandem with the restoration of the northern end of the Eastern OEA. Location and species composition of these landscape elements would be subject to a detail design process.

Sporadic stands of these two communities would also be reinstated across areas of the project in conjunction with the site restoration process.

- Within the Homestead garden, understorey planting may be thinned to increase the area of framed views to the open paddocks.
- Dependent on the location of the future driveway to Tarwyn Park Homestead, poplars as per those recently planted would be reinstated (i.e. reinstated to the existing driveway where lost to the Project or to a future new driveway approaching Tarwyn Park Homestead using a different alignment). Peppercorn trees would also be considered as part of the landscape treatment for the driveway.

7.2.2 East Link Road

A further measure provided for within the EIS is the provision of a screen planting of trees along the downslope edge of the East Link Road (re-routed Upper Bylong Road). Refer Figure 35. This work would be commenced shortly after completion of the new road. This planting would be expected to substantially screen views from the Tarwyn Park Farm Complex towards the site of the retained land forming platforms upslope of the Sandy Hollow to Gulgong Railway Line including Underground MIA, CHPP and rail loop (refer Figure 24).

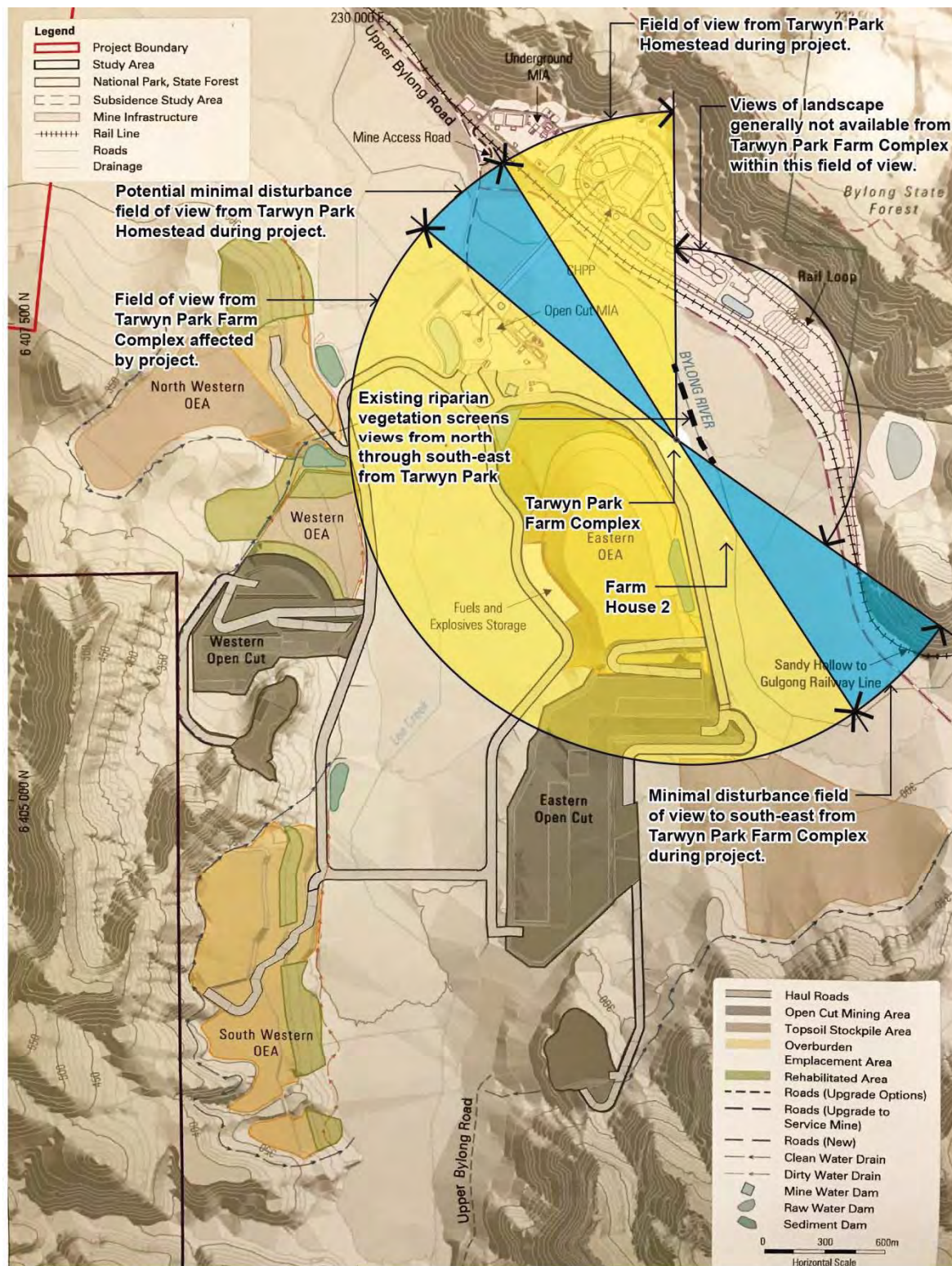
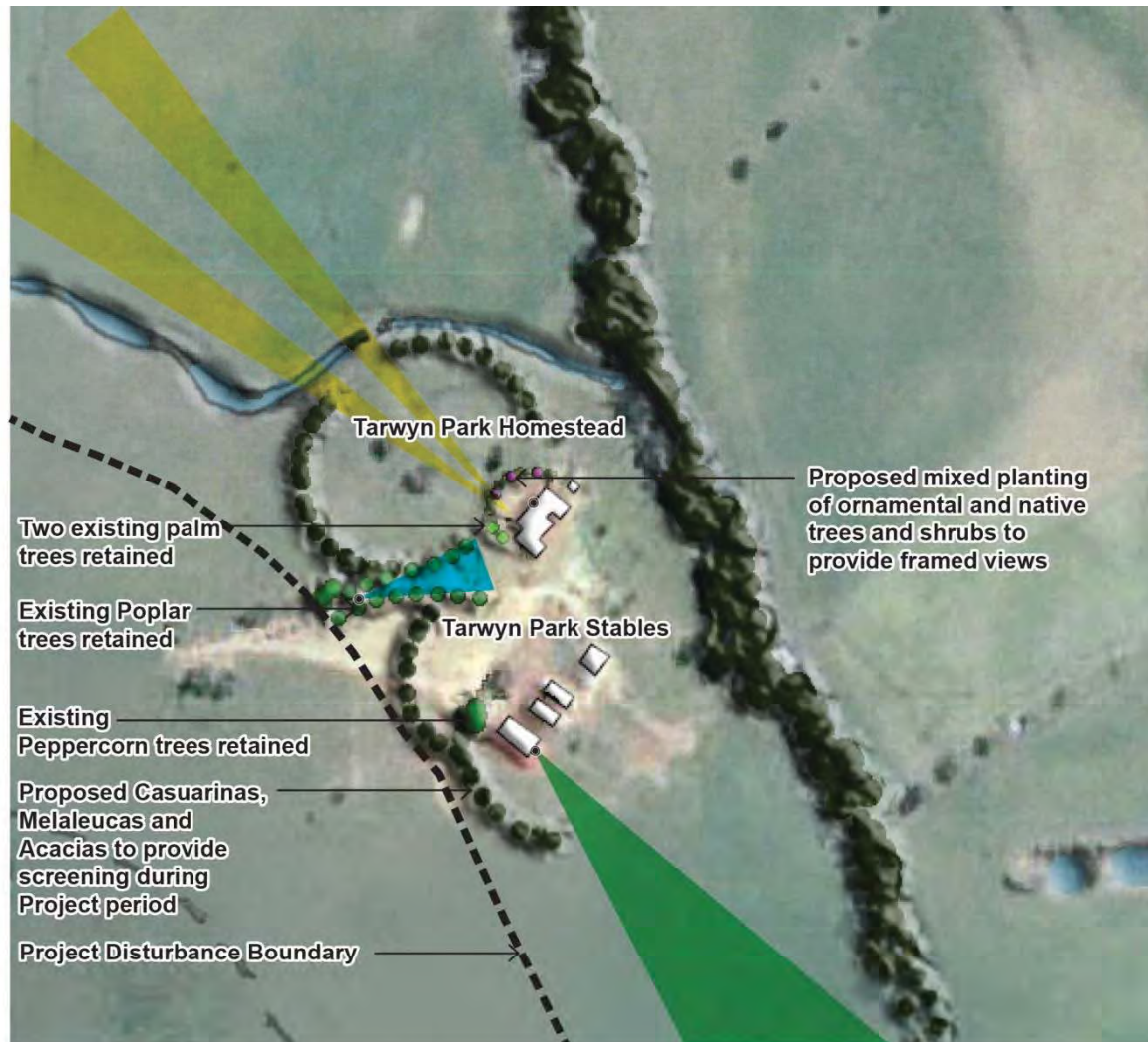


Figure 33 Partial long views (blue) of minimally disturbed / undisturbed Bylong Valley landscape available from Tarwyn Park Homestead and Tarwyn Park Stables over the period of the Project

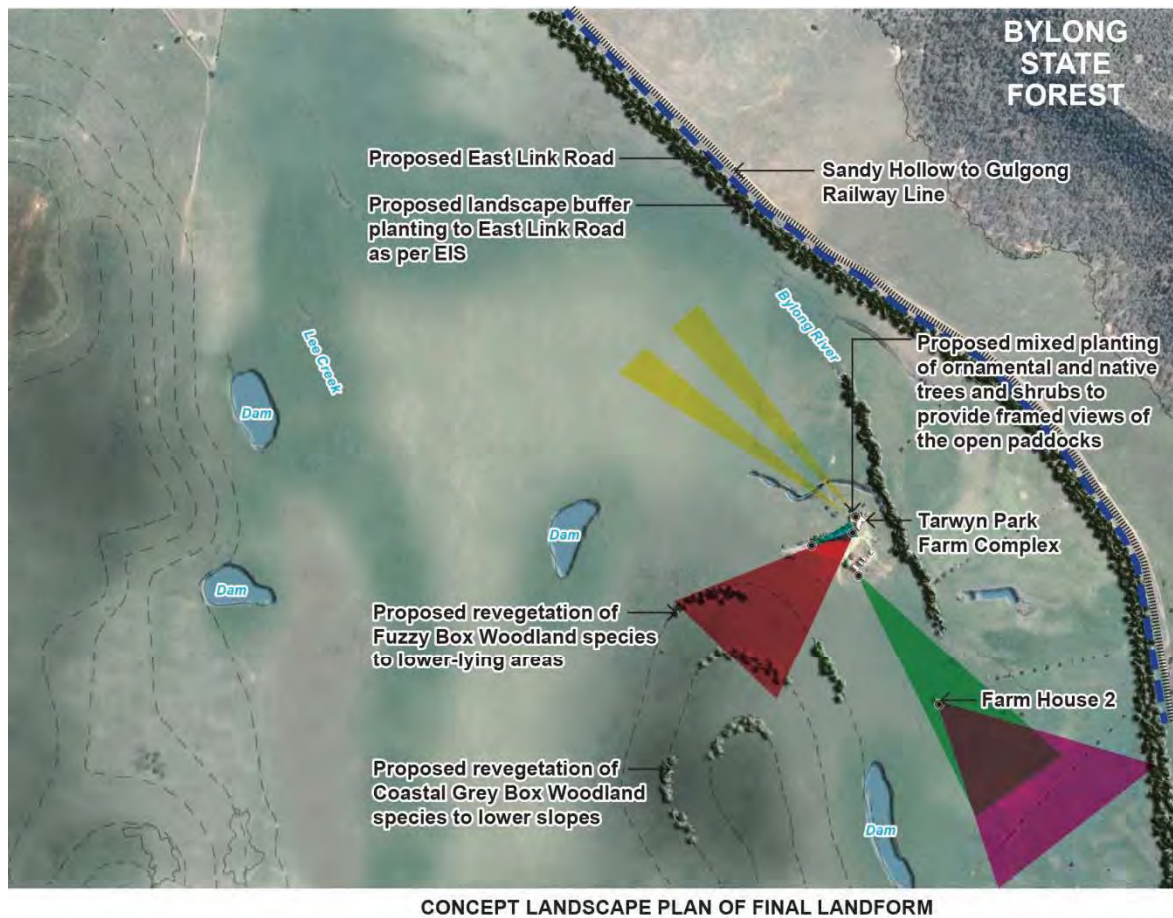


TARWYN PARK FARM COMPLEX CONCEPT LANDSCAPE PLAN

KEY: Important Heritage views retained during project.

- Views (framed) of open paddocks retained
- Long, open view of homestead retained
- View south from south side of stables retained

Figure 34 Landscape concept plan addressing visual impacts over the period of the Project



KEY: Important Heritage views reinstated.













- Views (framed) of open paddocks retained
- View from the homestead after project period with stands of trees
- View from Farm House 2 retained
- View south from south side of stables retained

Figure 35 Conceptual Landscape Plan addressing visual impacts regarding final landform

7.3 Plant Schedule













7.3.1 Fuzzy Box Woodland

The below comprises an outline list of typical species proposed for planting along the toe of the northern end of the Eastern OEA, as discussed in Section 7.2.1.

Tree	Shrubs		Groundcovers
 <p><i>Eucalyptus conica</i> (Fuzzy Box)</p>	 <p><i>Cassinia quinquefaria</i> (Cough Bush)</p>	 <p><i>Eremophila debilis</i> (Amulla)</p>	 <p><i>Ajuga australis</i> (Austral Bugle)</p>
 <p><i>Aristida ramosa</i> (Purple Wiregrass)</p>	 <p><i>Carex inversa</i> (Knob Sedge)</p>	 <p><i>Cheilanthes sieberi</i> (Rock Fern)</p>	 <p><i>Chloris ventricosa</i> (Plump Windmill Grass)</p>
 <p><i>Cotula australis</i> (Bachelor's Buttons)</p>	 <p><i>Dichondra repens</i> (Kidney Weed)</p>	 <p><i>Gahnia aspera</i> (Rough Saw-Sedge)</p>	 <p><i>Glycine tabacina</i> (Variable Glycine)</p>

7.3.2 Coastal Grey Box Woodland

The below comprises an outline list of typical species proposed for planting periodically along the contour to the lower slopes of the northern end of the Eastern OEA, as discussed in Section 7.2.1.

Tree	Shrubs		
 <p><i>Eucalyptus moluccana</i> (Grey Box)</p>	 <p><i>Abutilon oxycarpum</i> (Small-leaf Bluebush)</p>	 <p><i>Atriplex semibaccata</i> (Australian Saltbush)</p>	 <p><i>Maireana microphylla</i> (Small-leaf Bluebush)</p>
Groundcovers			
 <p><i>Austrostipa verticillata</i> (Slender Spear Grass)</p>	 <p><i>Aristida vagans</i> (Threeawn Spear Grass)</p>	 <p><i>Carex inversa</i> (Knob Sedge)</p>	 <p><i>Cheilanthes sieberi</i> (Rock Fern)</p>
 <p><i>Dianella longifolia</i> (Pale Flax-lily)</p>	 <p><i>Einadia hastata</i> (Berry Saltbush)</p>	 <p><i>Glycine tabacina</i> (Variable Glycine)</p>	 <p><i>Lomandra confertifolia</i> (Lime Tuff)</p>

7.3.3 Garden Planting

Outline list of species suitable for formal garden to Tarwyn Park Homestead. Refer Section 7.1.

<p>Trees</p>  <p><i>Albizia julibrissin</i> (Silk Tree)</p>	 <p><i>Angophora hispida</i> (Dwarf Apple)</p>	 <p><i>Grevillea robusta</i> (Silk Oak)</p>	 <p><i>Fraxinus angustifolia</i> (Claret Ash)</p>
 <p><i>Melaleuca linariifolia</i> (Snow-In-Summer)</p>	 <p><i>Melia azederach</i> (Cape Lilac)</p>	 <p><i>Nyssa sylvatica</i> (Black Tupelo)</p>	 <p><i>Ulmus parvifolia</i> (Chinese Elm)</p>
<p>Shrubs</p>  <p><i>Callistemon viminalis</i> (Weeping Bottlebrush)</p>	 <p><i>Geranium sp.</i> (Cranebills)</p>	 <p><i>Hibbertia obtusifolia</i> (Guinea Flower)</p>	 <p><i>Rosa sp.</i> (Pink Rose)</p>
<p>Groundcovers</p>  <p><i>Dianella longifolia</i> (Pale Flax-lily)</p>	 <p><i>Dichondra repens</i> (Kidney Weed)</p>	 <p><i>Lomandra confertifolia</i> (Lime Tuff)</p>	 <p><i>Poa labillardieri</i> (Tussock Grass)</p>

8.0 Assessment of Residual Visual Impacts

8.1 View A: Looking south through west from Tarwyn Park Homestead

Figure 36 shows an artist's impression of the proposed remediated view with stands of Fuzzy Box Woodland and Coastal Grey Box Woodland planted into the final landform. The proposed landscape treatment can be seen to:

- Minimise the visual prominence of the landform against the skyline;
- Provide stands of endemic tree cover that reflects parts of the valley that are currently subject to substantial stands of paddock trees, e.g. those present east of Upper Bylong, and on the cleared lower slopes along the foot of Tal Tal Mountain, and parts of the Growee Range, e.g. west of the Our Lady of the Sacred Heart Church;
- Provide a new rural view for the Tarwyn Park Farm Complex that comprises a more natural rural setting, where: the uniformity of the landform profile and batter slopes is visually diminished; the landform is better integrated into the overall valley view; and views beyond the final landform to the Tal Tal Range and Growee Range are maximised.

8.2 View B: Looking south through north-west from Tarwyn Park Homestead

Figure 37 shows an artist's impression of a similar view and outcomes to View A, framed by the verandah posts and subject to partial interruption by existing trees in the foreground, including retained driveway trees. As above, the proposed landscape treatments can be seen to provide an effective screen to the reinstated lower slopes, while also providing long views across the open paddocks to right of frame.

8.3 View C: Looking west through north-east from Tarwyn Park Homestead

Figure 38 shows an artist's impression of the proposed road corridor planting alongside the East Link Road with the Project still in progress. Following mine closure, all rail loop infrastructure will be removed and the site rehabilitated to present as a natural environment. It is not the intention to reshape the site back to pre-development landform levels and grades but to ensure the site is stable, free draining and revegetated. The proposed landscape treatment can be seen to provide a moderate to high level of screening to the post-mining landscape behind.

8.4 View D: Looking south-east through west from Tarwyn Park Stables

Figure 39 shows an artist's impression of a similar view and outcomes to View A. The distinct line of the final landform seen against the Growee Range is effectively reduced, providing an increased level of visual integration between the landform and the Growee Range.



Figure 36 View A: Proposed view with landscape mitigation in place, taken from a location about 50 metres west of Tarwyn Park Homestead looking south (left of frame) through to west

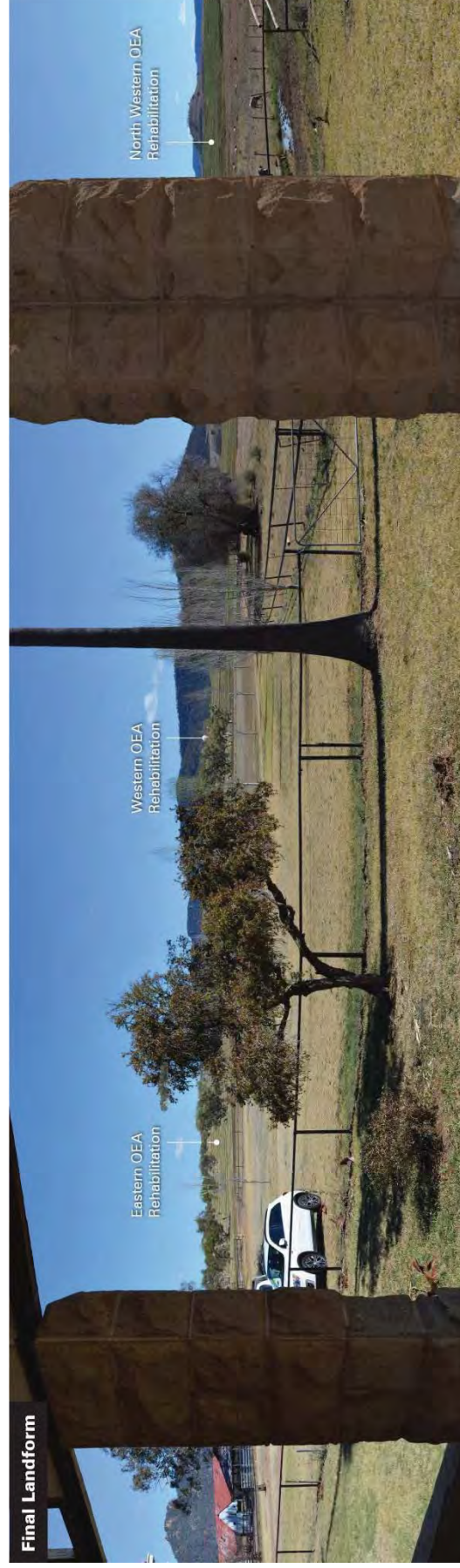


Figure 37 View B: Proposed view with landscape mitigation in place, taken from the front verandah of Tarwyn Park Homestead looking south-east (left of frame) through to west



Figure 38 View C: Proposed view with landscape mitigation in place, taken from the front garden of Tarwyn Park Homestead, looking west (left of frame) through to north-east



Figure 39 View D: Final landform with landscape mitigation in place taken from Tarwyn Park Stables looking south-east (left of frame) clockwise through to west

9.0 Outline Landscape Management Plan

Key elements for the proposed landscape mitigation measures are as follows:

- Consistency with the Rehabilitation Management Plan for the Project;
- Landscaping measures will generally be implemented as outlined within this document;
- Landscape planting will be undertaken with the guidance of a landscape specialist;
- Regular inspections will be undertaken to ensure plantings are maintained. Maintenance will be undertaken, as required;
- The performance of the landscaping measures will be reported in the Annual Review;
- Work associated with proposed paddock tree stands and natural community patches (refer Section 7.2.1) will be undertaken in accordance with the Rehabilitation Management Plan. The Rehabilitation Management Plan will include the implementation, maintenance, monitoring and reporting processes.

A sample outline of recommended maintenance processes and program is provided in Table 1 below.

Task	Description	Frequency of Inspection	Frequency of Work	Specific requirement
Clearing	Clearing of vegetation that obscures view lines	Quarterly	As required	Maintain desired view lines
Weeds	Identify and control weeds	Quarterly	As required	
Watering	Watering plants during establishment	Weekly	Weekly after planting for 12 weeks; monthly thereafter	
Pruning	Prune trees and shrubs to maintain view lines	Monthly	As required	Maintain desired view lines
Replacement Plantings	Replace failed and damaged plantings	Half-yearly	As required	Densities, sizes and species used are to be in accordance with those specified in the landscape plans
Tree guards & stakes	Replace damaged stakes and guards	Monthly	As required	Remove tree guards and stakes after plant establishment
Rubbish	Remove all rubbish materials	Continuous	Monthly	
Fungal and Insect control	Treatment of fungal and insect problems with approved chemical applied as per manufacturer's instructions	Half-yearly	As required	
Mulch	Maintain mulch depth to 75mm.	Half-yearly	As required but should not be necessary more than once per year	Use mulch as specified

Table 1 Sample outline of recommended maintenance processes and program

10.0 Conclusion

The proposed landscaping treatments to be implemented during the life of the Project (refer Section 7.1) will provide a significant level of screening to views from the Tarwyn Park Farm Complex, whilst retaining elements of two key heritage views in place (refer Figure 33). The proposed temporary planting elements will relatively quickly provide effective screening of Project infrastructure and mining operations, whilst also maintaining some sense of space and openness around the farm complex. The proposed formal / semi-formal garden setting to the north frontage of the Homestead would be: culturally appropriate; address a heritage recommendation; facilitate selective access to views during the Project; and provide a small, long-term legacy landscape element for the Tarwyn Park Farm Complex. Refer Figure 34.

This report also recommends landscape integration measures for the northern end of the Eastern OEA final landform as relevant to views from the Tarwyn Park Farm Complex, using bands of endemic plant communities layered along the contour in a manner that facilitates prescribed cropping and grazing land uses, whilst also providing slope stability and habitat benefits. This treatment will be particularly relevant for the northern end of the Eastern OEA due to its proximity to the Tarwyn Park Homestead and Stables, but also for the North-Western OEA which would also be located in view from the farm complex. Refer Section 7.2.1.

The North-Western OEA is considered to comprise a relatively visually uniform landform that would benefit from the following measures:

- further modulation of the interface with the Lee Creek floodplain, potentially including a more visually pronounced interface between cleared lower slopes and the steep, forested upper slopes, e.g. with patches of paddock trees as currently in place east of the Our Lady of the Sacred Heart Church; and
- bringing a full cover of woodland further down the OEA slopes where practicable, and otherwise introducing bands of endemic plant communities layered along the contour as described above, to better reflect the existing character of the Bylong Valley.

These treatments would help to facilitate visual integration of the rehabilitated OEA with existing steep, densely forested ranges, providing sporadic stands of 'paddock trees' to create an agriculturally functional landscape that reflects a strong rural character.

Two of the three significant heritage views from Iron Tank Farm House do not include an open view of the surface components of the Project. Therefore, no visual impacts are anticipated for these two views.

The view west from the Iron Tank Farm House will incorporate the open cut mining operations of the Project. However, this report finds that notwithstanding the change in the form of the landscape, and taking into consideration the key heritage concern for retention of the openness of the landscape, and the commitment to rehabilitate the land to a condition equal to existing agricultural land classes, the pasture, cropping and woodland cover over the new landform can be expected to visually integrate well with that of the existing landscape.

As noted within the EIS, the Upper Bylong Valley is substantially visually separated from the wider Bylong Valley including the tourism listed Bylong Valley Way, with the Project being carefully designed to significantly minimise the visibility of the Project from areas outside the Upper Bylong Valley. As such, the landscape character of the broader Bylong Valley should not be visually impacted by the final landform of the Project with currently proposed mitigation in place. Landscape mitigation measures proposed in this report have the potential to further reinforce this outcome for post-mining visitors to the Upper Bylong Valley, reducing any perceived level of change between the Upper Bylong Valley and the rest of the Bylong Valley Landscape Conservation Area.

DRAFT

Appendix F

Bylong Coal Project: Blast Management Strategy for Tarwyn Park

BYLONG COAL PROJECT

BLAST MANAGEMENT STRATEGY FOR TARWYN PARK FARM COMPLEX

Adrian J Moore
15 November 2017

BYLONG COAL PROJECT

BLAST MANAGEMENT STRATEGY FOR TARWYN PARK FARM COMPLEX

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BYLONG COAL PROJECT

BLAST MANAGEMENT STRATEGY FOR TARWYN PARK FARM COMPLEX

1 INTRODUCTION

Terrock Consulting Engineers were commissioned by Hansen Bailey to develop a blast management strategy for blasting near the Tarwyn Park Farm Complex in support of the Conservation Management Plan (*Tarwyn Park Farm Complex Conservation Management Plan*) which is being prepared in support of the Bylong Coal Project (the Project).

The key structures to be considered are:

1. Tarwyn Park Homestead and associated out buildings.
2. Tarwyn Park Stables.
3. Farm house 2
4. General consideration of other nearby structures including hay sheds, farm cottages and Leaky Weir structures.

2 BACKGROUND

KEPCO Bylong Australia Pty Limited (KEPCO) owns the Bylong Coal Project (the Project) which is located within the Mid-Western Regional Council (MWRC) Local Government Area (LGA) approximately 55 km to the north-east of Mudgee. The Project involves the construction and operation of a coal mine utilising open cut and underground mining methods to recover up to approximately 6.5 Million tonnes per annum (Mtpa) of Run of Mine (ROM) coal for a period of approximately 25 years. The Project will recover approximately 124 Million tonnes (Mt) of ROM coal, including approximately 33 Mt of ROM coal utilising open cut mining methods and approximately 91 Mt of ROM coal from the longer term underground mining operations.

KEPCO submitted an Application for State Significant Development (SSD) Development Consent under Division 4.1 of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 23 July 2015 to permit the development of the Project (SSD 14_6367). This application was supported by the *Bylong Coal Project Environmental Impact Statement* (EIS) (Hansen Bailey, 2015). The application is currently being considered by the NSW Government.

As part of the Government's assessment process, the NSW Planning Assessment Commission (PAC) has completed a review of the Project and made a number of recommendations. KEPCO and its consultants are currently preparing a response to the PAC review report. This draft Blast Management Strategy for the Tarwyn Park Farm Complex will be included within the draft Conservation Management Plan being prepared for the Project.

3 APPROACH

The Noise and Blasting Impact Assessment completed for the Project is presented in Section 7.10 and Appendix Q of the EIS. The Noise and Blasting Impact Assessment assessed the potential impacts from the blasting activities associated with the open cut component of the Project on surrounding structural features, including nearby sensitive features (including heritage items such as Tarwyn Park Homestead and Stables). The assessment also proposed various mitigation and management measures to minimise these impacts.

One of these management measures was to complete further assessments where the Noise and Blasting Impact Assessment had predicted exceedances of the nominated criteria at the nearby sensitive features. This management commitment included the potential impacts to the items located on the Tarwyn Park Farm Complex, including (but not limited to): Tarwyn Park Homestead; and Tarwyn Park Stables.

Whilst this Blast Management Strategy represents only a small component of the overall requirements for blasting, it has been prepared with the consideration of the proposed requirements presented within the relevant Recommended Development Consent conditions for the Project which were prepared by the NSW Department of Planning and Environment (DP&E). These specifically include Schedule 4, Conditions 9 to 17 and Schedule 4, Condition 46 of the Recommended Development Consent conditions.

The location of the Eastern Open Cut Mining Area in relation to the key structures located on the Tarwyn Park Farm Complex are shown in the site plan **Figure 1**.

The physical effects of blasting to be considered are:

- Airblast (Overpressure);
- Ground Vibration;
- Flyrock.

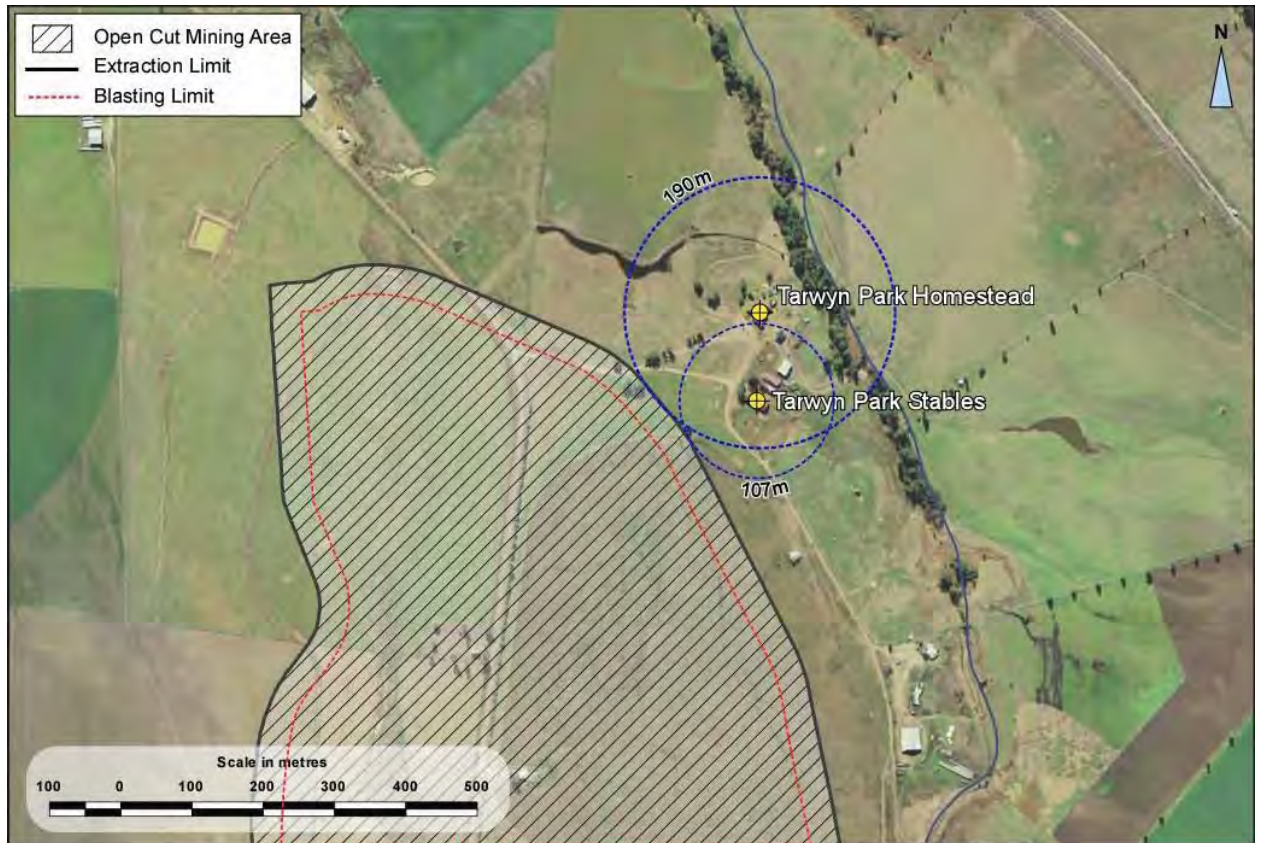


Figure 1 – Basic Site Plan showing Tarwyn Park Farm Complex and Proposed Eastern Open Cut

The following strategies are based on Cockatoo Coal Feasibility Study and the Worley Parsons Dilapidation Report (KEPBYL-010-REP-OHS). The strategies are also informed by the site inspection completed by Alan Richards of Terrock and Bill Jordan of Bill Jordan & Associates on 14 September 2017. The main structures impacted immediately by blasting in the proposed extraction area are the Tarwyn Park Homestead and Stables. Farm House 2 and the Farm Cottages are not susceptible to airblast because they do not have windows. Potential damage from ground vibration can be minimised by the adoption of similar blasting specifications to those near the Homestead to limit the PPV to 15 mm/s.

The closest Leaky Weir is located approximately 330m from the closest blasting. The predicted PPV at 330m is 5.0 mm/s. The other Leaky Weirs are approximately 2,000m from the closest blasting and the predicted PPV at this distance is 0.4 mm/s. The Leaky Weirs are not structures as such, consisting of broken concrete and rock loosely placed across the stream beds that rely on gravity and friction to resist water flows. They are not susceptible to disturbance by ground vibration at the predicted levels of exposure or airblast overpressure.

The Tarwyn Park Hay Sheds are also not susceptible to damage from ground vibration or airblast overpressure.

A proposal has been made to utilise the Tarwyn Park Homestead for site offices or a research facility. If the building is owned by KEPSCO and used for its purposes, human annoyance criteria does not apply. However, the human annoyance criteria may possibly apply if the Homestead is leased to another party and compliance with these limits would require a total review of the blasting design.

The main options for repurposing the Homestead are considered to be:

- Keeping the Homestead unoccupied until blasting moves a safe distance away (300-500m from the Homestead)
- If occupied, evacuate the building during blast times until blasting moves a safe distance away as determined by the Shot firer and/or Mine Manager.

4 GEOLOGICAL PROFILE

Given the proximity of the initial blasting activities proposed within the Eastern Open Cut for the Project to the Tarwyn Park Homestead and Stables, these structures are a primary focus for this strategy. The proposed mine extraction limit is located within 107 m of the stone Stables and within 190 m of the Homestead.

The cross section shown in **Figure 2** has been prepared based on our interpretation of drill hole data from exploration bores BYO269CH, BYO277CH, BYO278CH and BYO368LX and is considered to be typical near the Tarwyn Park Homestead and Stables. A 10 m wide berm assuming free dig material has been allowed for in the cross section. A further 25 m berm has been allowed for to remove the weathered material.

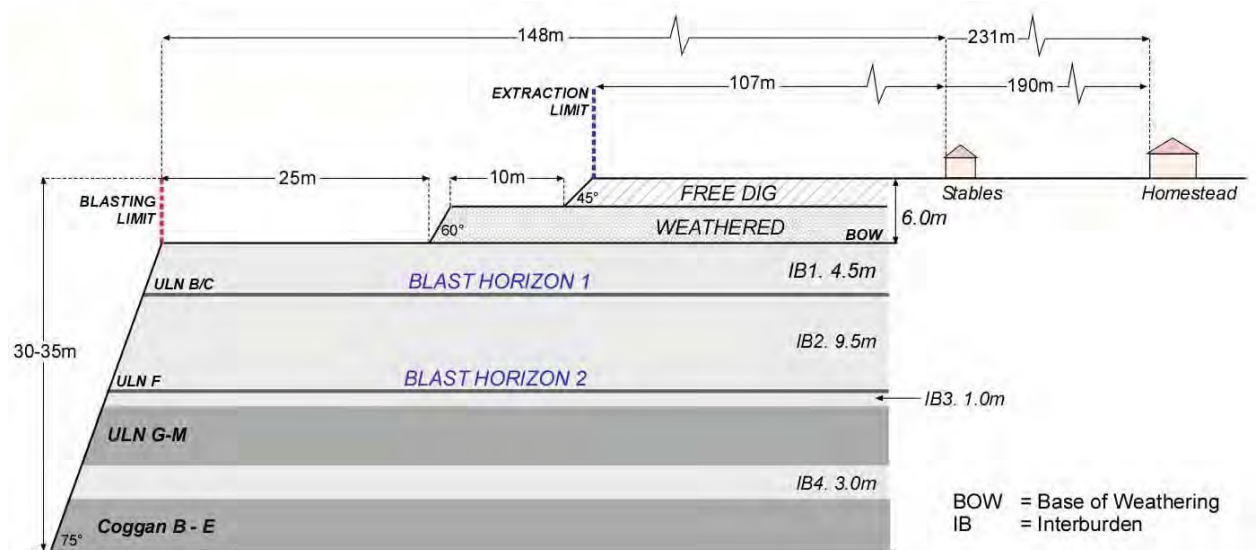


Figure 2 – Geological Cross Section near Homestead and Stables (interpretation)

The interpreted cross section shows:

- the initial blast horizon (Blast Horizon 1) from the bottom of the weathered rock to the ULAN B/C coal seams, which scales off at about 4.5m deep.
- the second horizon (Blast Horizon 2) from the bottom of the ULNC to the top of ULNF seam, at a depth of about 9.5m.

The minimum blasting distance to the Stables is approximately 148m and around 231m to the Homestead.

5 BLAST VIBRATION LIMITS

The blast vibration limits from the Recommended Development Consent Conditions (Table 7) are reproduced as **Table 1**.

Table 1 – (Recommended Development Consent Conditions - Table 7)

Location	Airblast Overpressure (dBL(Lin Peak))	Ground Vibration (mm/s)	Allowable Exceedence
Residence on privately owned land ^a	120	10	0%
	115	5	5% of the total number of blasts over a rolling period of 12 months
All public infrastructure	-	50 (or a limit determined by structural design methodology in AS 2187.2 – 2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Secretary)	0%
Heritage items ^b	133	15	0%
Rock shelters and cultural features ^c	133	50	0%

- a. Unless otherwise agreed with the relevant owner/s of the residence, and the Applicant has advised the Department in writing of the terms of this agreement.
- b. Unless measures to minimise and rectify any blast-related damage to these features have been approved as part of a specific blast management plan for the feature (see condition 16 of this Schedule). Applies to all heritage items outside the disturbance area, as listed in Appendix 6.
- c. Unless measures to minimise any blast-related damage to these features have been approved as part of a specific blast management plan for the feature (see condition 16 of this Schedule). Applies to all rock shelters and significant sandstone features outside the disturbance area, as listed in Appendix 6.

Under “Heritage items”, the airblast overpressure limit is 133 dBL and the ground vibration limit is 15 mm/s. Notation b allows for variation to these limits.

6 BLAST DESIGN CONCEPTS

6.1 Airblast Overpressure

The requirement for relatively shallow blasts located close to the Homestead and Stables has resulted in limiting airblast to be identified as the controlling factor for environmental blast design associated with the Project.

In determining appropriate airblast limits for these Tarwyn Park buildings, the Noise and Blasting Impact Assessment (PEL, 2015), the Cockatoo Coal Feasibility Study and the DP&E Recommended Development Consent conditions all cite the 133 dBL overpressure criterion which is cited from Australian Standard AS2187-2 (2006) as the safe level that will prevent structural/architectural damage from airblast. Schedule 4, Condition 9 and the notes below Table 7 of the Recommended Development Consent conditions allows for this criteria to be amended through the approval of a specific management plan. In this regard, this blast management strategy is suggesting an amendment to this criteria. Because window panes are the structural element most susceptible to airblast damage, the Standard also considers that window damage is improbable below 140 dBL.

The historic Chain of Ponds Inn near Liddell Coal has an airblast limit of 140dBL imposed by the authorities. Accordingly, this blast management strategy is proposing the adoption of this limit as the target design limit for blasting impacts on the structures located on the Tarwyn Park Farm Complex (including the Homestead and Stables). The Chain of Ponds Inn is a 2-storey building of sandstone block and brick masonry construction and has been listed on the NSW State Heritage Register due to its assessed State Level of Significance. A limit of 140 dBL at the Tarwyn Park Farm Complex structures would appear to be appropriate.

The United States Department of the Interior Blasting Guidance Manual (1987) advises:

“There is general agreement among blast vibration experts, governmental regulatory and consultants, that the first damage effects due to airblast take the form of broken window glass. Large plate-glass windows and shop fronts, etc., are more prone to damage than small glass window panes. Structural damage such as plaster cracking due to airblast is not only very rare, but is always accompanied by window breakage.”

The main structural element that can be potentially damaged by airblast is glass window panes. The windows most susceptible to damage are those facing directly towards the blast. Large window panes are more susceptible to damage from airblast than smaller window panes. For example, Siskind (2000) reproduces a summary of earlier research that shows the probability of cracking a bedroom window pane at 140dBL is 10^{-4} (1 pane in 10,000), whereas for a store front window (9.29m²), the probability is 0.005 (1 pane in 200). At 145 dBL, the probability of cracking a bedroom window is 10^{-3} (1 pane in 1,000). The windows at the Homestead (and Stables) are relatively small and the risk of cracking by airblast can be reduced to insignificance by covering over.

There are a few small windows in the Stables (and some sky lights) and if these were temporarily boarded over with 12 mm plywood or similar, it would provide insurance from damage and a higher limit would be appropriate. A limit of 145dBL is proposed at the Stables. The windows of the Homestead (the lead light windows especially) could also be boarded over temporarily as added insurance against damage, whilst adopting the 140 dBL limit. Covering the stable windows would reduce the risk of damage from 1 in 1,000 to a lesser risk. The protection can be removed from the windows when no longer required. The regression analysis **Figure 4** suggests that the protection should remain in place for blasts closer than 400 m.

The sandstone outbuilding at Cottage 2 does not appear to have glass window panes, so airblast limitation seems unnecessary.

Most of the available research into the effect of elevated airblast on structures was undertaken in the USA with reference to sonic booms. Oriard (2002) provides a useful summary of typical overpressure criteria in **Table 2**. An airblast limit of 140 dBL has been applied as a long term safe project specification in the USA which is consistent with the limits proposed above.

Table 2 – Typical Overpressure Criteria (Oriard 2002)

171 dBL	General window breakage
151 dBL	Occasional window breakage
140 dBL	Long-term history of application as a safe project specification
134 dBL	Bureau of Mines recommendation following a study of large scale surface mine blasting

Another approach that can be used to assist in understanding the effect of airblast is to compare the effect that the pressure from wind velocity may have on windows in particular and structures in general.

AS/NZS 1170.2: 2011 gives the following formula for calculating dynamic wind pressure:

The design wind pressures (p) in pascals, shall be determined for structures and parts of structures as follows:

$$p = (0.5 \rho_{\text{air}}) [V_{\text{des}\theta}]^2 C_{\text{fig}} C_{\text{dyn}}$$

where

- p = design wind pressure in pascals
= p_e , p_i or p_n where the sign is given by the C_p values used to evaluate C_{fig}
- ρ_{air} = density of air, which shall be taken as 1.2 kg/m^3
- $V_{\text{des}\theta}$ = building orthogonal design wind speeds (usually, $\theta = 0^\circ, 90^\circ, 180^\circ$ and 270°), as given in Clause 2.3 ($V_{\text{des}\theta} = 41 \text{ m/s}$ [recurrence interval 100 years])
- C_{fig} = aerodynamic shape factor, as given in Section 5 ($C_{\text{fig}} = 0.8$)
- C_{dyn} = dynamic response factor, as given in Section 6 [the value is 1.0 except where the structure is dynamically wind sensitive (see Section 6)] ($C_{\text{dyn}} = 1.0$)

Therefore, $p = (0.5 \times 1.2) \times [41]^2 \times 0.8 \times 1.0 = 807 \text{ Pa}$ (152 dBL).

The regional wind speed for a 100 year recurrence interval at Bylong is 41 m/s. This equates to a dynamic wind pressure of 807 Pa or the equivalent pressure change of 152 dBL. Over its history, the Tarwyn Park Homestead has probably been exposed to winds with pressure loadings of 152 dBL.

Because of the logarithmic nature of the decibels (linear) scale, a 6 dBL increase represents a doubling of pressure levels. A level of 152 dBL is four times the pressure associated with a pressure of 140 dBL.

The adoption of 140 dBL as the airblast limit at the Homestead and 145 dBL at the Stables seems appropriate, especially if the windows are boarded up reduce the risk of damage, thus protecting the most sensitive building element. The lead-light windows may require special protection because of their possible historical significance. Unless the higher limits are accepted, the scale of blasting operations to comply with 133 dBL limit would be impractical at the closest distance and the extraction limit may have to be reviewed. For example, 133 dBL limit would result from the blast specifications in **Table 3**.

Table 3 – Charge Mass/Stemming Height Relationship for 133 dBL @ 230m

Hole diameter (mm)	Charge Mass/m (kg)	Column Length (m)	MIC	Min. Stemming Height (m)
229	49.4	0.4	20	5.0
170	27.2	2.2	60	4.3
150	21.2	2.5	53	3.7
120	13.6	3.0	41	2.9
102	9.8	4.0	39	2.5

Table 3 demonstrates that while 133 dBL is achievable at 230 m, a much smaller scale of blasting would be required. Full blast design and the other implications of the reduced blasting scale has not been explored further.

The airblast calculations made in this report are based on a predictive model developed by Terrock that has been calibrated its use in the open cut coal mining industry for over 15 years and has proven to be reliable.

The model is

$$D_{140} = \left(\frac{ka \times d}{S.H.} \right)^{2.5} \times \sqrt[3]{m}$$

Where: D_{140} = Distance to 140dBL level (m)
 Ka = Airblast Constant ($Ka = 103$)
 SH = Stemming height (mm)
 m = charge mass (kg)

The airblast model should be calibrated for Bylong by analysis of airblast measurements from early blasts.

Airblast attenuates at 9 dBL with doubling of distance. A level of 140 dBL at 230m would attenuate to 115 dBL at 1500m. Compliance with the 115 dBL (95%) limit at external sensitive sites can be incorporated in environmental design elsewhere in the mining areas when blasting closer to the other sensitive sites.

The relationship between airblast (140 dBL distance), charge mass and stemming height is represented in the diagram **Figure 3**. The relationship between airblast and distance is shown in the regression diagram **Figure 4** for 140 dBL and 133 dBL at the 230 m datum.

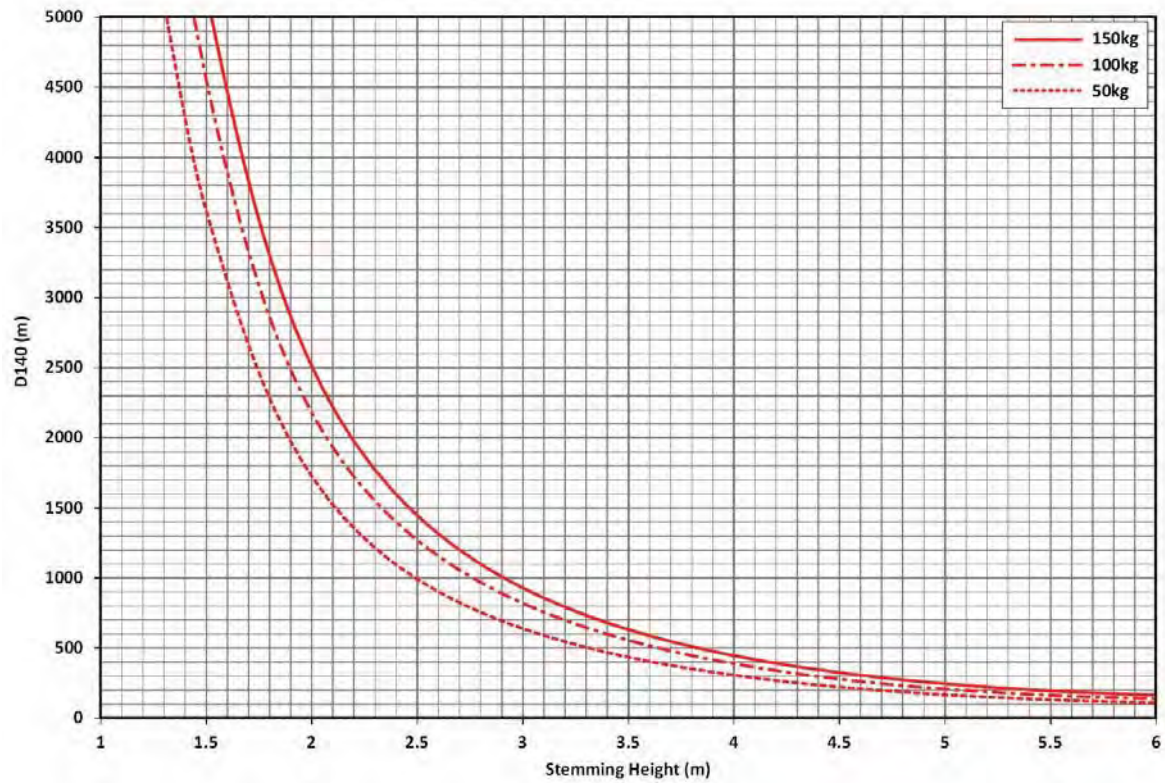


Figure 3 – D140 (dBL) vs Stemming Height for different charge masses

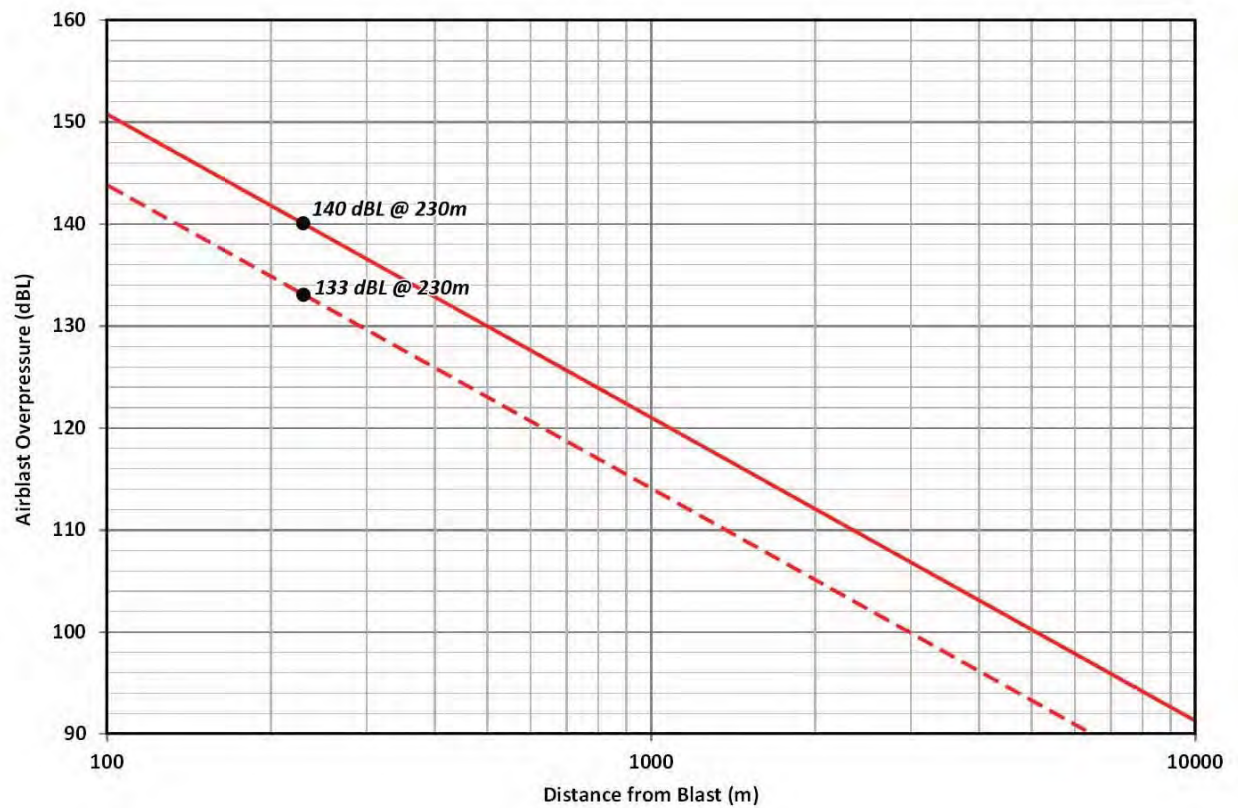


Figure 4 – Airblast Regression (dBL vs Distance)

6.2 Ground Vibration

The Recommended Development Consent Conditions (Table 7) reproduced as **Table 1** lists a ground vibration limit of 15 mm/s for heritage items. This can be demonstrated to be conservative. However, the indicative blast design to limit airblast to 140 dBL at the Homestead demonstrates that a limit of 15 mm/s can be complied with by charge mass limitation during the blast loading process.

Because controlling airblast has been identified earlier to be the limiting factor for blast design for the Project, the main area of blasting where compliance with the limit is in the need of careful management is with the pre split blasting, closest to the Homestead and Stables. The limit will determine the number of blast holes that can be fired simultaneously with detonating cord between surface delays.

The ground vibration predictions made in this report are based on a square root scaled distance model using a site constant of 1000, i.e.

$$PPV = 1000 \left(\frac{\sqrt{m}}{D} \right)^{1.6}$$

Where: PPV = Peak Particle Velocity (mm/s)
 m = Charge mass (kg)
 D = Distance (m)
 1000 = Site Constant kv

The Site Constant of 1000 has been found from experience at close distance blasting at similar open cut coal mines (e.g. Mangoola, Moolarben and Liddell). The model should be calibrated at the Bylong Coal Project by initial blast vibration monitoring after early blasting commences. This model is represented in **Figure 5**, showing the relationship between PPV, charge mass and distance.

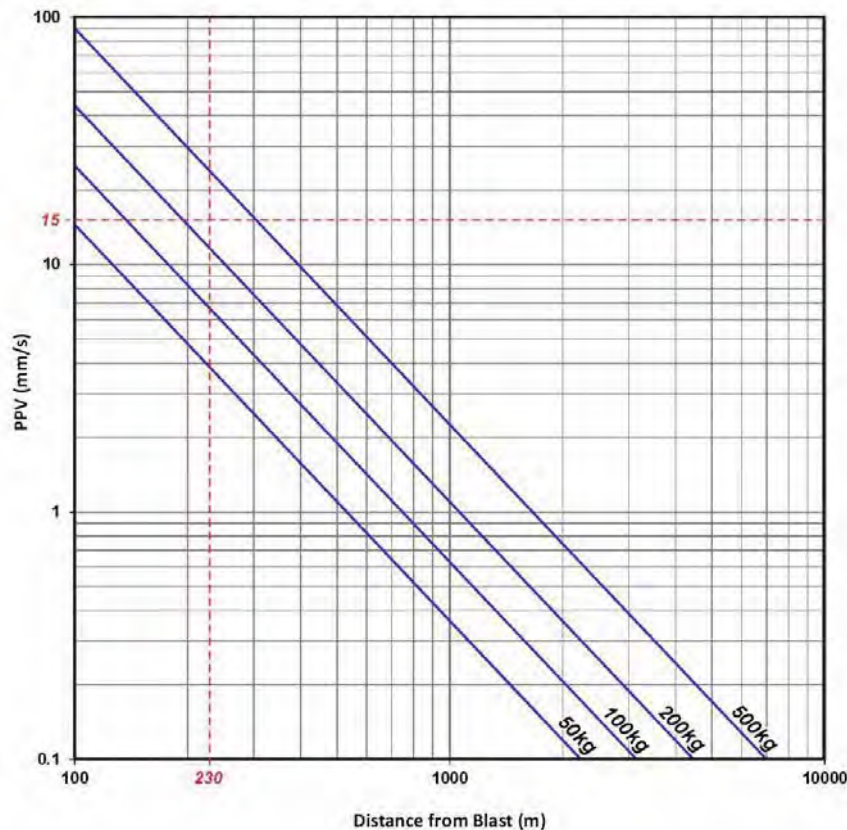


Figure 5 –PPV, Charge Mass and Distance

6.3 Flyrock

The buildings located on the Tarwyn Park Farm Complex are not to be damaged by flyrock from blasting operations.

Flyrock throw distance can be predicted from the following choke blast model developed by Terrock for coal, overburden and interburden blasts which has been calibrated, validated and refined based on data collected in Hunter Valley mines over many years. It should be calibrated for Bylong through a program of flyrock observation and video recording of blasts.

$$L_{max} = \frac{13.7^2}{9.8} \left(\frac{\sqrt{m}}{SH} \right)^{2.6} \sin 2\phi$$

Where: L_{max} = maximum throw (m)
 m = max/m (kg/m)
 SH = stemming height (m)
 ϕ = launch angle (hole angle from horizontal)

The flyrock model for maximum throw (L_{max}) from choke blasts is demonstrated in **Figure 6**.

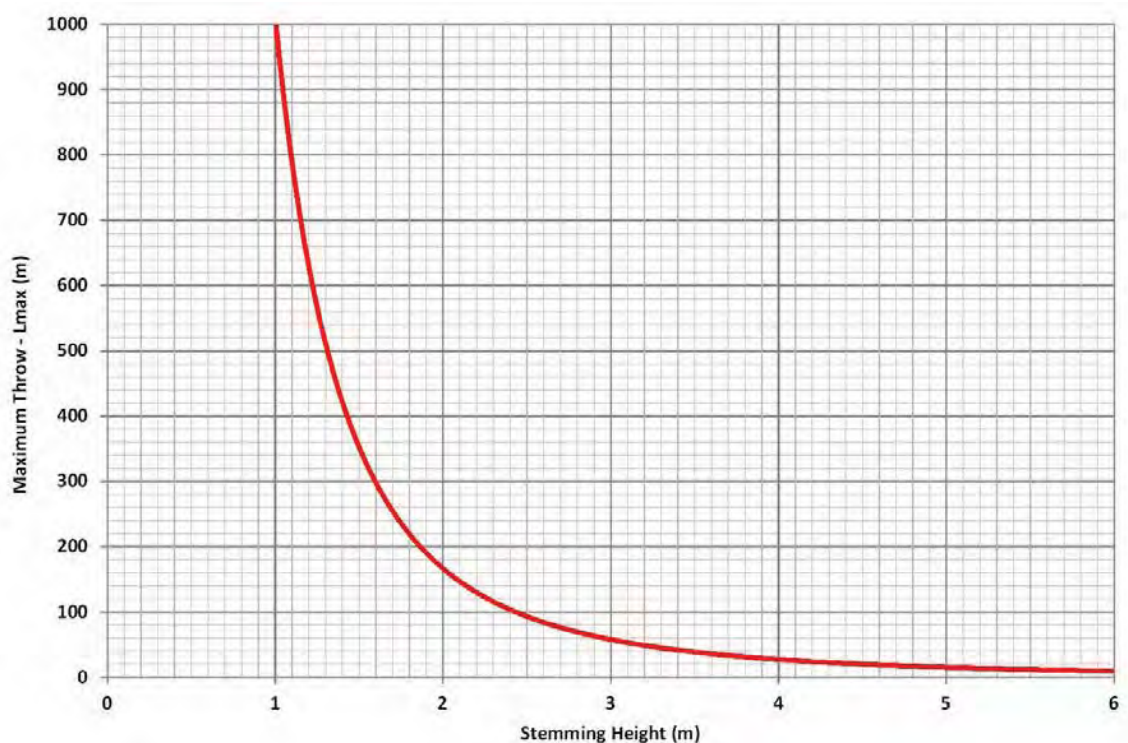


Figure 6 –Stemming Height and Maximum Flyrock Throw for 229 mm diameter holes (49.4 kg/m)

The stemming height used to limit airblast will determine the flyrock throw. The minimum recommended exclusion zones for blasting introduces the concepts of Factors of Safety for different potential receivers.

A Factor of Safety 2.0 times L_{max} is recommended for Mine Infrastructure and Equipment.

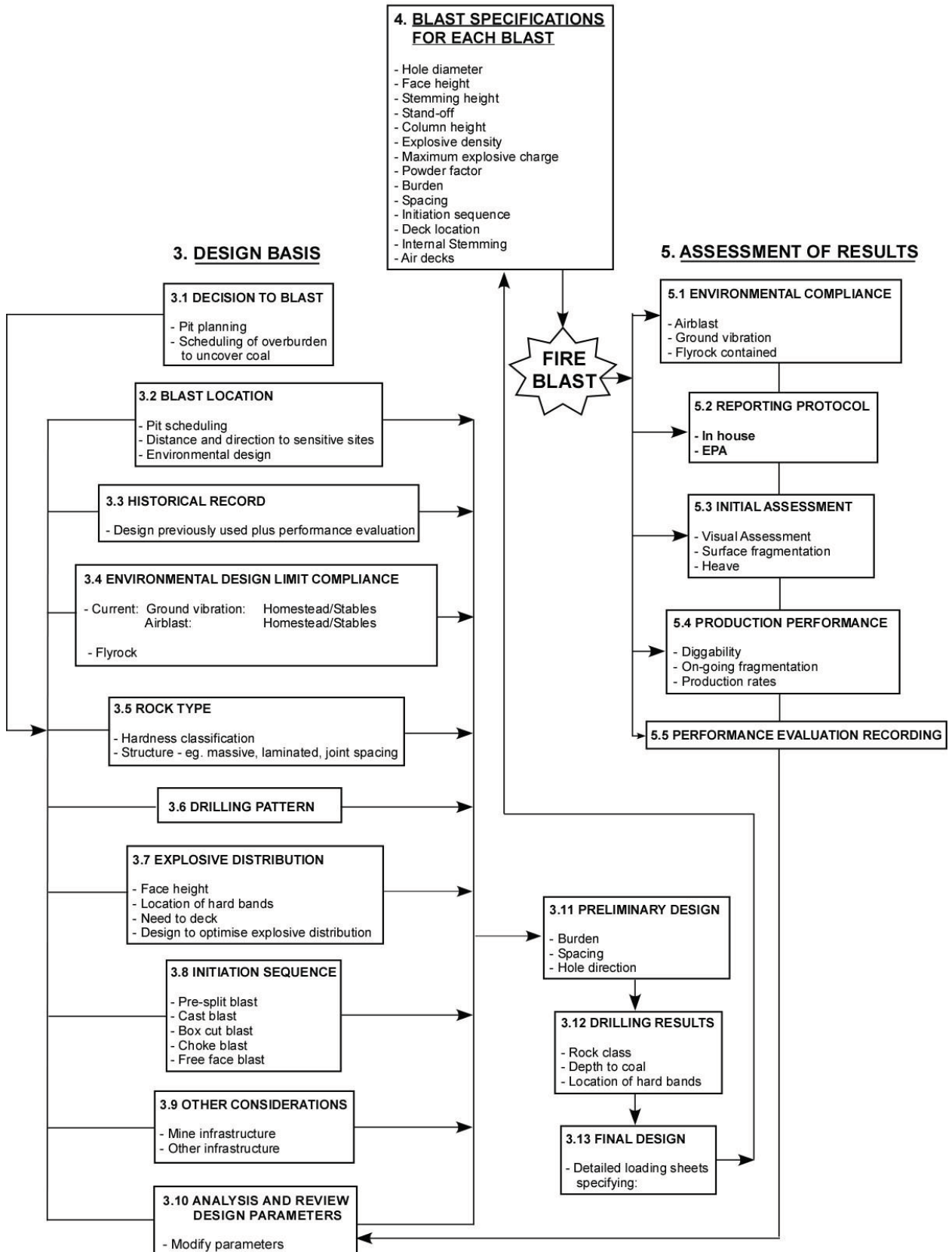
A Factor of Safety 4.0 times L_{max} is recommended for Mine personnel.

The Factors of Safety are applied because of uncertainties in the composition of the rock around blast hole collars and the contact of the stemming material with the blast hole column walls.

7 CONCEPTUAL ENVIRONMENTAL BLAST DESIGN

The blast design process is represented as the flowchart shown in **Figure 7**.

BLAST DESIGN PROCESS



7.1 Blast Horizon 1 – Blasting Depth 4.5m

7.1.1 Airblast

The proposed project Feasibility Study calls for 229 mm diameter blast holes for main production blasts and 170mm diameter holes for coal blasts. Because of the shallow blasts in Blast Horizon 1, a number of strategies were investigated to achieve the target limit. A design objective was to use 229 mm diameter holes as close as possible to the complex and finishing off with 170 mm holes if necessary. The blast specifications trialled are summarised in **Table 4**. The minimum blasting distances are 231 m to the Homestead and 148 m to the Stables. The PPV levels at Farmhouse 2 and the closest Leaky Weirs (5.0 mm/s) are below the 15 mm/s limit for heritage structures.

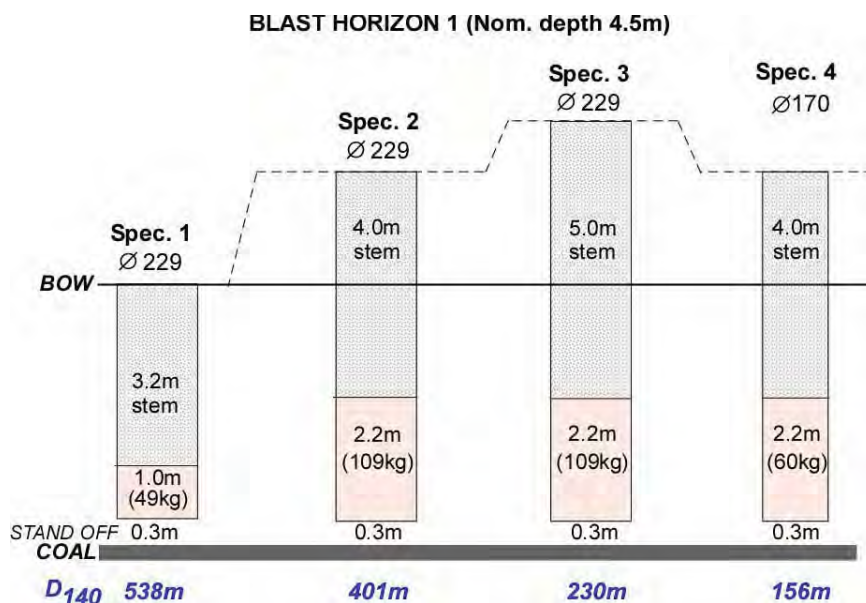
The proposed loading specifications are shown in the cross sections **Figure 8**.

Table 4 – Specifications and Blast Vibration Predictions, Blast Horizon 1

Specification	Ø 229mm			Ø 170mm
	1	2	3	4
Thickness (m)	4.5	6.5**	7.5**	6.5**
Stand Off (m)	0.3	0.3	0.3	0.3
Stemming Height (m)	3.2	4.0	5.0	4.0
Column Length (m)	1.0	2.2	2.2	2.2
Charge Mass/m*	49.4	49.4	49.4	27.2
Charge mass (kg)	49.4	109	109	60.0
Airblast Calculations	1	2	3	4
D ₁₄₀ (m)	538	401	230	156
D ₁₄₅ (m)	366	274	156	106
dBL @ 148m (Stables)	157	153	146	141
dBL @ 231m (Homestead)	151	147	140	135
Ground Vib. Calculations				
PPV @ D ₁₄₀	1.0	2.9	7.1	8.1
PPV @ D ₁₄₅	1.7	5.3	13.2	15.2

*Assume Heavy ANFO S.G. 1.2

**Includes weathered rock above BOW



The calculations in **Table 2** show the difficulties in controlling airblast from shallow blast holes. The explosive energy in the rock must be confined by sufficient stemming, but there is insufficient hole depth if the free dig is taken to the bottom of weathered rock (BOW). Specification 1 blasts, which allow for the stripping of the weathered zone to the BOW, does not permit sufficient stemming to be placed in blast holes to limit airblast at distances closer than 538m from the Homestead. This is not considered to be practical given that blasting activities are proposed within 230 m of the Homestead.

A better solution to control airblast to 140dBL at the Homestead is to leave 2-3m of the rock classified as weathered in situ to provide additional blast confinement. This solution would require the soil and clay overburden to be stripped down to the 2m (or 3m) horizon above the BOW and to use this horizon as the drilling platform.

The loading profiles shown in **Figure 8** have the explosive charge placed in the unweathered material (solid) so most of the explosive energy will be absorbed below the BOW. The role of the weathered material is to prevent cratering and the premature ejection of the energy into the atmosphere.

Specification 2 blasts with an additional 2m of cover to provide coverage can be conducted to within 400m of the Homestead. The areas where the different specifications apply are shown in **Figure 9**.

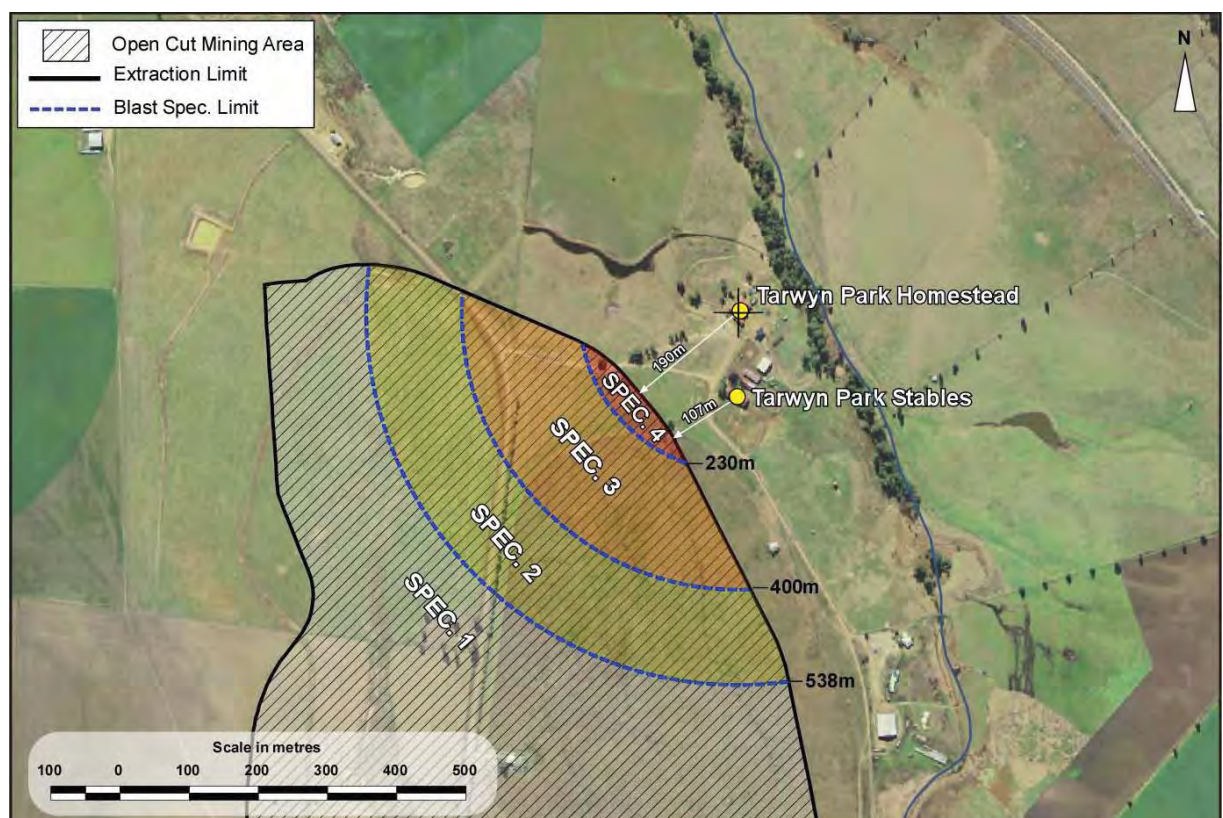


Figure 9 – Blast Horizon 1 Specification Limits (*Specification 1 is considered to be impractical*)

Specification 3 blasts require 3m of additional cover above the BOW to blast to the limit at 230m. The specification to limit the airblast at the Homestead will comply with the Stables airblast limit. With the additional cover proposed, the indications are that there is no need to consider using 170mm diameter blast holes.

The additional cover in Specification 2 blasts could be extended over the area beyond 400m from the Homestead as it would leave some of the weathered material in place that would be removed with the Blast Horizon 1 muckpile. Additional drilling through the weathered material and also additional stemming would be required, but the same quantity of explosives and accessories would be used.

Specification 4 shows an alternative approach to Specification 3 by using 170 mm diameter blast holes. This specification is not considered necessary as it still requires an additional cover of weathered material and can be appropriately managed within this region utilising Specification 3.

The blast design specifications described are for guidance purposes only and represent possible solutions. Calibration of the models for the site by measurement and analysis of early blasts will be required to validate the assumptions made in the designs presented. Compliance with the environmental blast vibration limits is the responsibility of the Mine Manager and Shot firer and the onus is on mine personnel to develop appropriate designs.

7.1.2 Ground Vibration

The PPV predictions listed in **Table 4** show that the ground vibration limits will be below proposed 15.0 mm/s limit as described in **Section 3.2**.

7.1.3 Flyrock

The maximum flyrock throw and recommended blast clearance distances for Blast Horizon 1 specifications are shown in **Table 5**.

Table 5 – Flyrock Calculations, Blast Horizon 1

Specification	1	2	3	4
L_{max} (m)	43	24	14	20
Safety Factor 2 (m)	86	46	28	40
Safety Factor 4 (m)	172	92	56	80

Specification 3 blasts to control airblast to 145 dBL at the Stables at a distance of 148m will limit flyrock to a maximum distance of 14m. With a Factor of Safety of 4, usually recommended as minimum clearance for site personnel and the public, gives a minimum clearance of 56m compared to the 148m separation to the Stables and 232m to the Homestead.

Flyrock is seen as readily controllable by the implementation of appropriate blast management as described within Section 6.3.

7.2 Blast Horizon 2 – Blasting Depth 9.5m

7.2.1 Airblast

Consistent with the strategy provided in Section 7.1, the basic strategy was to use airblast as the design limiter using 229 mm diameter blast holes to as close as possible with increasingly greater depths of stemming to limit airblast. The proposed environmental design is summarised in **Table 6**.

With 4m stemming height, Specification 1 blasting can be used to within 520 m of the Homestead. Specification 2 blasts with 4.5m stemming can be conducted to within 370 m of the Homestead and with 5.0m stemming in Spec 3 blasts, blasting can be conducted to within 270m of the Homestead. Blasting in the next 40 m to the blasting limit can be conducted with either 229 mm diameter holes with a split charge (ie Specification 4b) or with 170mm diameter holes and 4.0m stemming (ie Specification 4a). The minimum blasting distance has increased slightly because of the terminal face batter.

Table 6 – Specifications and Blast Vibration Predictions, Blast Horizon 2

	Ø 229mm			Ø 170mm	Ø 229mm
Specification	2-1	2-2	2-3	2-4a	2-4b
Hole Depth (m)	9.5	9.5	9.5	9.5	9.5
Stand Off (m)	0.8	0.8	0.8	0.8	0.8
Stemming Height (m)	4.0	4.5	5.0	4.0	4.5
Column Length (m)	4.7	4.2	3.7	4.7	1.5 x 2
Charge Mass (kg/m)	49.4	49.4	49.4	27.2	49.4
Charge mass (kg)	232	207	183	128.0	75 + 75
Airblast Calculations	2-1	2-2	2-3	2-4a	2-4b
D ₁₄₀ (m)	516	371	273	201	261
D ₁₄₅ (m)	351	252	186	137	180
dBL @ 151m (Stables)	156	152	148	144	147
dBL @ 235m (Homestead)	150	146	142	138	141
Ground Vib. Calculations	2-1	2-2	2-3	2-4a	2-4b
Homestead PPV @ D ₁₄₀ (mm/s)	3.6	5.5	8.2	7.8*	4.2
Stables PPV @ D ₁₄₅ (mm/s)	6.6	0.2	15.0	15.4*	7.8

**Blasting limit*

Whilst blasting impact predictions for sensitive features were discussed in Section 7.10 of the EIS (Hansen Bailey, 2015), the predictions indicated that modelled overpressure and vibration results were outside the relevant criteria. **Table 6** has further refined and provided an indicative blast design which results in predictions similar to those made within the EIS.

Cross sections of the proposed loadings are shown in **Figure 10**.

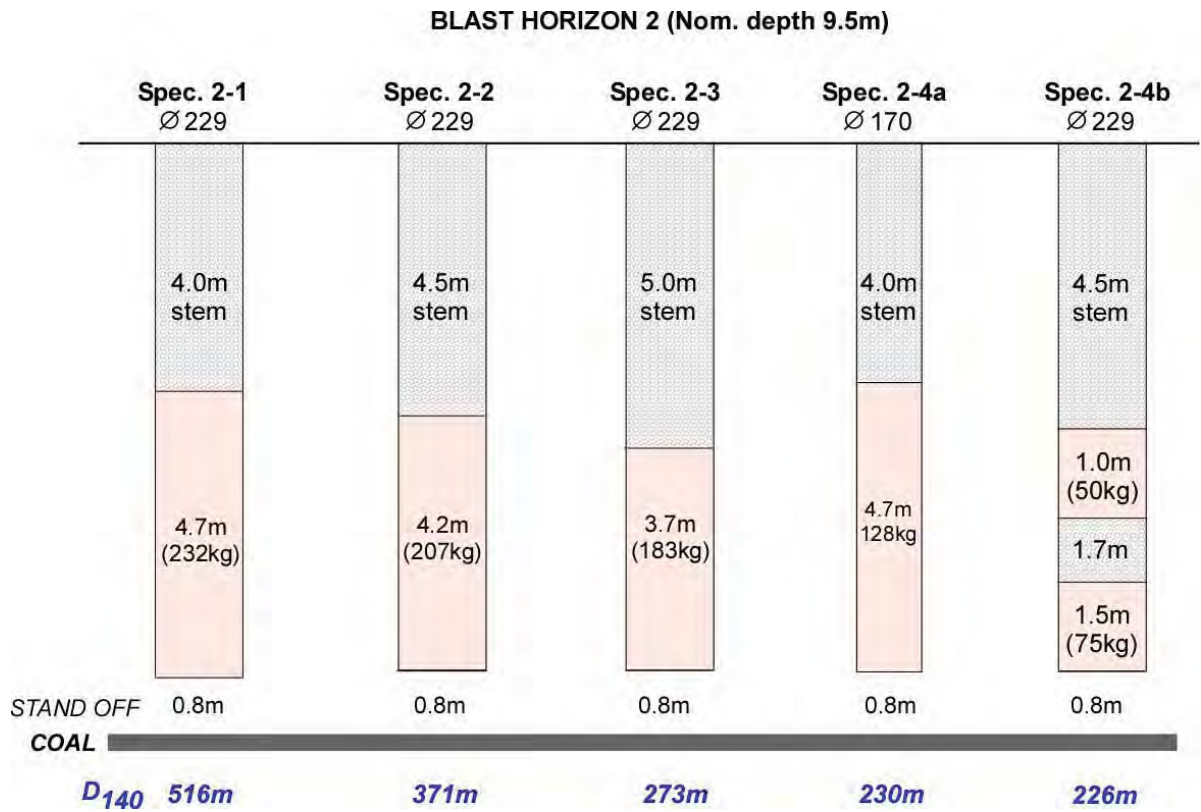


Figure 10 – Blast Horizon 2 Hole Loading Profiles

The areas where the different specifications apply are shown in **Figure 11**.

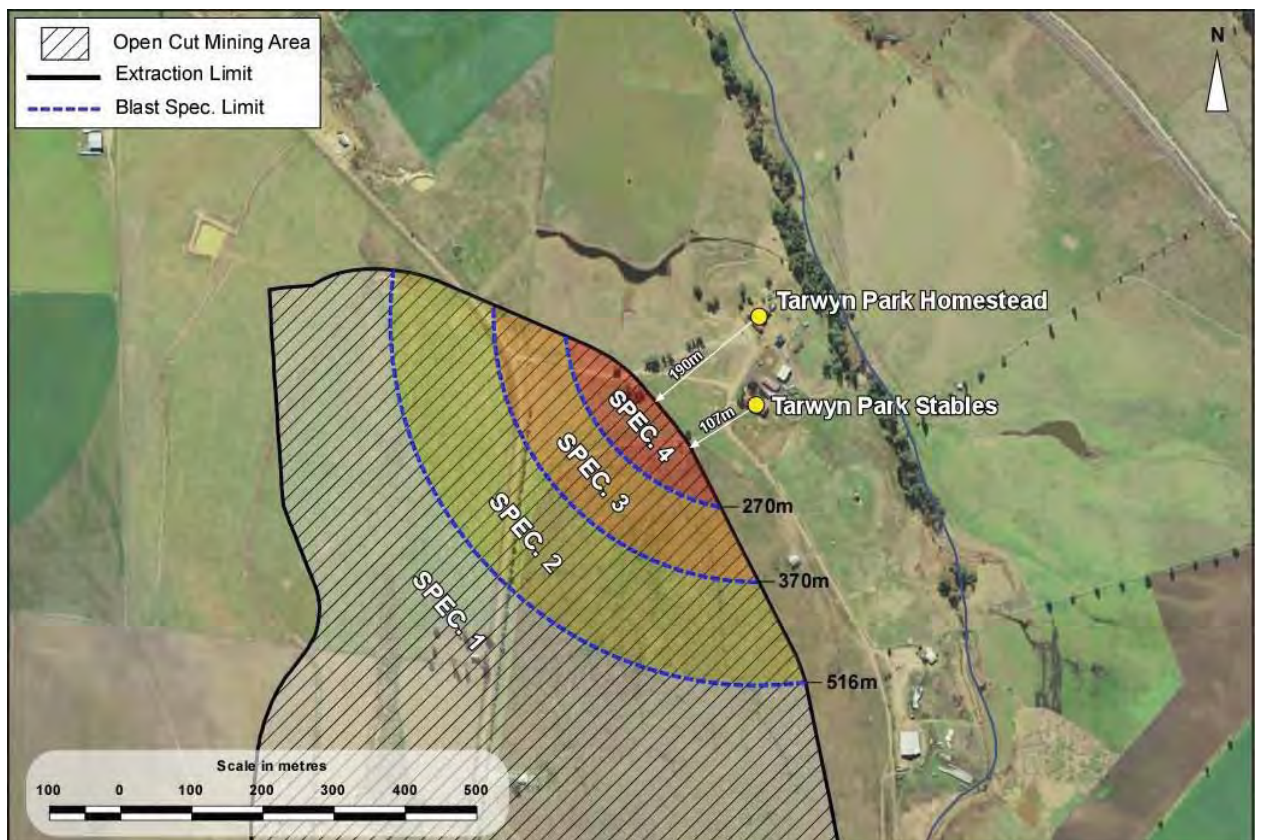


Figure 11 – Blast Horizon 2 Specification Limits

With 4 m of stemming, blasting can be conducted to within 516 m of the Homestead. To blast closer, the stemming height must be incrementally increased. Stemming of 4.5 m will permit blasting to within 370 m, and 5.0 m of stemming to within 270m of the Homestead. Blasting closer than 270 m will require either decked changes within 229 mm diameter holes, or the use of 170 mm holes to the blasting limit.

7.2.2 Ground Vibration

The predicted ground vibration levels are listed in **Table 6**. The maximum predicted PPV levels of 8.2mm/s at the Homestead will result from Specification 3 blasts and 15.0 mm/s at the Stables. This assessment is considered to be conservative because the vibration will travel through the coal seams ULN B & C to reach the Homestead and Stable buildings. Ground vibration does not transmit efficiently through coal seams and therefore a reduction in the assumed Kv factor is expected.

7.2.3 Flyrock

The predicted maximum flyrock throws and recommended clearance distances are shown in **Table 7**.

Table 7 – Flyrock Calculations, Blast Horizon 2

Specification	1	2	3	4a	4b
L_{max} (m)	28	20	15	20	12.6
Safety Factor 2 (m)	56	40	30	25	25
Safety Factor 4 (m)	112	80	60	80	50

It is concluded that flyrock will not be an issue as sufficient clearance distance exists for all blasting zones to the Homestead and Stable buildings. This is of the assumption that the management measures described within Section 6 are implemented.

7.3 Pre Split Design in the Vicinity of the Tarwyn Park Complex

Pre-splitting consists of closely spaced blast holes fired before the main production blast along terminal faces to produce a smooth and stable highwall that is safe to work under. In the vicinity of the Homestead and Stables, in order to limit airblast at the close distances of the terminal face, it is necessary to modify accepted pre-splitting practice. A number of closely spaced holes are drilled in a line at the angle of the final face and lightly loaded by the use of small charges and air bags. A number of holes are fired with detonating cord with a delay between groups of holes to limit the ground vibration by instantaneous charge mass reduction.

The specification for pre splitting in the Feasibility Study document are:

- 229mm diameter holes
- 3m hole spacing
- 0.5 kg/m² powder factor
- Emulsion blend explosives for wet blast holes
- Hole angle 75° (15° to vertical).

In addition, because air blast is the main environmental blast design criteria, it is proposed that the pre splitting will be conducted in two stages:

- Stage 1 - Weathered zone to top of ULN F
- Stage 2 - Base ULN F to base of Coggan E.

Stemming of the collars of the blast holes must also be conducted to limit airblast. With sufficient separation distance from the Homestead or Stables, pre splitting to full face depth could be considered.

Of immediate concern is the weathered zone to the top of ULN F.

Face height approximately $4.5\text{m} + 9.5\text{m} = 14\text{m}$

Area per hole = $14 \times 3 = 42\text{m}^2$

Nominal charge per hole = $42 \times 0.5 = 21\text{kg}$

Charge length = $\frac{21}{49.4} = 0.42\text{m}$.

The loading suggested by this blast design is shown in **Figure 12**.



Figure 12 – Indicative pre split blast hole loading

7.3.1 Airblast

Because the holes are fired with detonating cord, there is an actual small time gap between the firing charge masses. The airblast from pre split holes can be calculated from:

$$D_{140} = \left(\frac{150 \times d}{SH} \right)^{2.5} \cdot \sqrt[3]{M}$$

Back calculating from 145 dBL @ 148m (Stables) with 4m of stemming gives a combined M of 102 kg (5 blast holes). 140 dBL @ 230m (Homestead) gives a combined M of 122 kg (also 5 blast holes).

The design is suggesting groups of 5 holes fired with detonating cord with a delay of 17 ms delay between groups. The 4 m of stemming could consist of 2 m below the BOW and 2m of overlying weathered material that is consistent with the Specification 3 blasts of Horizon 1 preparation. An air bag should be placed 2m below the BOW.

7.3.2 Ground Vibration

At the Homestead:

$$PPV = 1000 \left(\frac{\sqrt{5 \times 21}}{231} \right)^{1.6} = 6.8 \text{ mm/s}$$

At the Stables:

$$PPV = 1000 \left(\frac{\sqrt{5 \times 21}}{148} \right)^{1.6} = 13.9 \text{ mm/s}$$

From the assumptions made, firing 5 holes simultaneously will comply with the 15 mm/s limit at the Stables.

7.4 OTHER BLASTING STRATEGIES

The strategies adopted have been to permit coal in the ULN-B/C plies and ULN-F plies to be extracted to the proposed extraction limit. A cost-benefit analysis by KEPCO will reveal if this strategy is viable as it uncovers the deeper ULN-G-M and Coggan B-E plies. If the upper plies are not financially viable, other options are available such as mining from BOW to the floor of ULN-F in one pass and sending ULN-B/C to the waste dump. This has not been considered in this investigation as it would require a complete, separate environmental blast design.

7.5 OTHER POSSIBLE BLAST DESIGNS TO BE CONSIDERED

7.5.1 Box Cut Blasts

In order to supply a box cut design, information is required confirming the box cut location, width and whether it will be blasted to the bottom of ULND in one blast or two.

7.5.2 Coal Blasts

The minimum depth of coal that can be blasted practically is about 2 m. It would appear that the first coal where blasting could be considered is ULN H-J. More details need to be supplied.

8 MANAGEMENT AND MITIGATION MEASURES

Following the initial field visit inspection of sensitive structures at the Tarwyn Park Farm Complex and with consideration of the predicted blast vibration and airblast at these structures, a number of mitigative actions have been proposed, including:

- Installation of boards on windows to minimise the effects of airblast, especially those close to and facing the blasting;
- The stained glass windows of the Homestead may require additional protection because of their potential historical significance;
- Installation of internal and external structural bracing, where required;
- Installation of chimney supports, where required;
- Installation of veranda column supports, where required.

The monitoring and evaluation of all blasting results and structural behaviour of buildings inside Tarwyn Park Farm Complex will form an integral component of the final Blast Management Strategy and will be undertaken on an ongoing basis for the life of the Project.

Whilst identifying a number of pre-disturbance mitigation and control measures above, it is further expected that an adaptive management approach will be utilised to enable a process of continual improvement and refinement of blast designs and specification, as required.

Following the recommendation of 15 mm/s as mentioned in Section 5, a suitably qualified individual/engineer will be engaged to monitor the condition and structural integrity of the buildings on an ongoing basis, and as necessary, identify further stabilisation measures to be put in place. Part of this ongoing monitoring program will be the installation of blast monitors at Tarwyn Park and accelerometers on sensitive structures. This will enable a deeper understanding of the behaviour of the structures, and assist in identifying what actions are to be undertaken if they are required. All blast monitors used onsite are to be appropriately serviced and calibrated at regular intervals as per the manufacturer's requirements.

Indicative blast designs are provided above in Section 7, although designed to act as a guidance tool, each blast will be individually designed in order to both remain below the relevant impacts criterion and maximise the blasting efficiency. As is common practice within the industry, predictive modelling will be utilised to predict the overpressure and vibrational levels expected as a result of the blast event. Measurements taken from Tarwyn Park Farm Complex will then be used to verify the validity of the model and to further inform the model for subsequent blasts.

8.1 Performance Indicators

As mentioned above, verification against the modelling provided within the EIS should be undertaken on a regular basis, as a minimum, where large and/or consistent variations in the model and blast data are present, further investigation will be required.

This section is to detail the indicators and triggers (e.g. TARPs) that are proposed to be used to judge the performance of blasting activities, e.g. blast comes within 5 dBL of limit.

8.2 Structural Deficiencies and Long term Maintenance

The site inspection and the dilapidation survey photographs of the Homestead and Stables (*Worley Parson 201015 -0027 6 strve dilap 02 – final.doc*) show two obvious pre-existing structural deficiencies that must be addressed for their long term preservation. Of particular concern are:

- Structural movement caused by uneven footing movement due to reactive foundation soils expanding and contracting with changes in moisture content, i.e. inadequate footings. The movement of the footings is transferred to the stepped and tapered cracks in the sandstone masonry walls and the internal cracks in the plaster walls and cornices.
- Salt attack. The damage observed in the lower part of the walls and the discolouration of the sandstone is possibly due to dissolved salts in the rising damp (capillary action) because of a lack of Damp Proof Course (DPC). The dissolved salts within the sandstone matrix form crystals on exposure to the air and expand. This breaks down the outer fabric of the sandstone blocks and mortar. There is some evidence that concentration of roof runoff may also be contributing, especially at the verandah corner column. The source of the salt may be in the ground, ground water or within the sandstone itself.

To address the problem of foundation movement the moisture content of the foundation soil must be kept as constant as possible. The soil can be kept moist by a watering system but this may exacerbate the salt attack. The salt attack may be reduced by keeping the foundations as dry as possible by preventing rainfall or surface runoff penetrating the soil near the walls. One solution that has been successfully applied elsewhere is to pave a 1.2m wide walkway around the footings that slope away from the footings to provide drainage. Stabilising of the footings is to be undertaken by Stone Restorations as part of the maintenance program.

9 REPORTING

Incident Reporting

In the event that vibration and airblast levels are monitored above compliance levels, DP&E and EPA will be notified and the event will be recorded as an incident in accordance with Schedule 6, Conditions 3 & 9 of the Recommended Development Consent conditions. The notification to DP&E will trigger an internal investigation and a review of the blast model, loading procedure and associated actions to identify preventative actions to reduce the potential of reoccurrence.

Complaints and complaint resolution

This draft Blast Management Strategy has been developed to provide guidance to the compliance requirements of blasting activities in proximity to the structures located on the Tarwyn Park Farm Complex. Complaints and community enquiries received in relation to the Bylong Coal Project will be appropriately managed the relevant Community Complaints procedure which will be described within the relevant management plan.

10 REVIEW AND IMPROVEMENT

This Blast Management Strategy will be subject to a periodic review in accordance with Schedule 6, Condition 5 of the draft Development Consent conditions. That is:

- 5. Within 3 months, unless otherwise agreed with the Secretary, of:*
- a) The submission of an incident report under condition 9 below;*
 - b) The submissions of an annual review under condition 11 below;*
 - c) The submission of an audit under condition 13; and*
 - d) The approval of any modification to the conditions of this consent; or*
 - e) A direction of the Secretary under condition 4 of schedule 2;*

The Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary.

If the review leads to revisions to this Strategy, the revised document must be submitted to the Secretary for approval within four weeks of the review. Any changes made to this document must be approved by the Secretary prior to the implementation of the changes.

11 CONCLUSIONS

Preservation of Tarwyn Park can be suitably managed through blast design and implementation. This investigation has demonstrated that the proposed blasting activities can be conducted within the Eastern Open Cut mining area to the designed extraction limit at the closest location to the Tarwyn Park Farm Complex by the adoption of strategies outlined below:

- Adoption of non damaging blast vibration limits. Because the house is owned by KEPCO and is not currently identified as a place of residence, the more stringent human annoyance blast vibration criteria do not apply. Instead, the following non damaging blast vibration limits are recommended:

Airblast limit at the Homestead:	140 dBL
Airblast limit at the Stables:	145 dBL

If the Homestead is to be used by KEPCO as offices or a research facility, the main issue is safety of the occupants and possible evacuation at blast time. If the Homestead is leased to another party, the human annoyance criteria may apply.

- The window panes should be protected temporarily by covering with 12mm plywood or similar. The windows are of comparatively small area and can be readily protected by simple means.
- An interim ground vibration of 15 mm/s is recommended. The peak vibration predicted at the Homestead from the closest blasts is 8.1 mm/s and the Stables is 15.4 mm/s. A non-damaging PPV limit will be the basis of pre split design by determining the number of holes that can be fired simultaneously. The PPV at the Stables can be controlled by an appropriate charge mass for the distance to the blast.
- Using initial environmental blast design from models calibrated from similar blasting operations. Review and update models in the light of experience from blasting associated with the Project.
- The limiting factor for the close distance blasts is limiting airblast at the Homestead. Models are available to adjust the depth of confinement of the explosive charge at appropriate distances to enable the airblast to be controlled to the recommended limits.
- Ground vibration from blasts designed to control airblast will usually comply with the recommended limits, except for pre split blasts where a limit to the number of holes fired simultaneously may be required.
- Continual monitoring and review of the calibration of models as required.



Adrian J Moore

15 November 2017

TECHNICAL REFERENCES

Australian Standard AS2187.2 (2006): *Explosives – Storage and Use, Part 2: Use of Explosives*

United States Department of the Interior (1987): *Blast Guidance Manual*

Siskind D E et al (1980): *USBM Report of Investigation 8485*

Oriard L L (2002): *Explosives Engineering, Construction Vibration and Geotechnology*

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