



Denman BESS

Historic Heritage Due Diligence

PREPARED FOR



Denman BESS Holdings
Pty Ltd

DATE

13 March 2025

REFERENCE

0717735



DOCUMENT DETAILS

DOCUMENT TITLE	Denman BESS
DOCUMENT SUBTITLE	Historic Heritage Due Diligence
PROJECT NUMBER	0717735
DATE	13 March 2025
VERSION	Final
AUTHOR	Victoria Gleeson
CLIENT NAME	Denman BESS Holdings Pty Ltd as a Trustee for the Denman BESS Trust

DOCUMENT HISTORY

				ERM APPROVAL TO ISSUE		
VERSION	REVISION	AUTHOR	REVIEWED BY	NAME	DATE	COMMENTS
Draft	1.0	V. Gleeson	E. Finnegan	L. Baker	30.10.2024	For client review
Final	2.0	V. Gleeson, L. Perchard	E. Mackenzie	L. Baker	17.01.2025	Final
Final	3.0	V. Gleeson, L. Perchard	E. Mackenzie	L. Baker	11.02.2025	Final
Final	4.0	C. Barnett	E. Mackenzie	L. Baker	13.03.2025	Final



Denman BESS

Historic Heritage Due Diligence

0717735



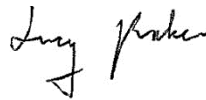
Lorian Perchard

Managing Consultant



Simon Bennett

Principal Consultant & Team Leader



Lucy Baker

Partner

Environmental Resources Management
Australia Pty Ltd
Level 14, 207 Kent Street
Sydney NSW 2000
T +61 2 8584 8888

© Copyright 2025 by The ERM International Group Limited and/or its affiliates ('ERM'). All Rights Reserved.
No part of this work may be reproduced or transmitted in any form or by any means, without prior written permission of ERM.

CONTENTS

EXECUTIVE SUMMARY	1
1. INTRODUCTION	2
1.1 OBJECTIVES	2
1.2 PROJECT AREA	2
1.3 DESCRIPTION OF THE PROPOSED DEVELOPMENT	2
1.4 METHODOLOGY	3
1.5 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)	3
1.6 AUTHORSHIP	4
1.7 LIMITATIONS	4
2. STATUTORY CONTEXT AND REQUIREMENTS	7
2.1 COMMONWEALTH LEGISLATION	7
2.1.1 Environment Protection and Biodiversity Conservation Act 1999	7
2.2 NSW LEGISLATION	7
2.2.1 NSW Heritage Act 1977	7
2.2.2 NSW Environmental Planning and Assessment Act 1979	8
2.3 NON-STATUTORY CONSIDERATIONS	9
2.3.1 National Trust of Australia (NSW)	9
2.3.2 Register of the National Estate	9
2.3.3 The Burra Charter	9
3. HISTORICAL OVERVIEW	10
3.1 ETHNO-HISTORIC BACKGROUND	10
3.2 EARLY COLONIAL EXPLORATION AND LAND TENURE	10
3.3 TWENTIETH CENTURY DEVELOPMENT TO PRESENT	13
3.4 SUMMARY OF PHASES OF HISTORIC LAND USE	17
4. HISTORIC HERITAGE CONTEXT	18
4.1 HISTORICAL ENVIRONMENT	18
4.1.1 Heritage Register and Database Search Results	18
4.2 PREVIOUS REPORTING	19
4.2.1 Historical Heritage Assessment, Anvil Hill Project (Umwelt, 2006)	19
4.2.2 Historical Heritage Assessment, Mt Arthur Underground Project (Umwelt, 2007)	19
5. PHYSICAL ANALYSIS	21
5.1 SURVEY AIMS AND PERSONNEL	21
5.2 SURVEY RESULTS AND DESCRIPTION OF PROJECT AREA	21
6. ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL	23
6.1.1 Summary of Historic Archaeological Potential	24
7. SIGNIFICANCE ASSESSMENT	25
7.1 HISTORIC HERITAGE SIGNIFICANCE ASSESSMENT FRAMEWORK	25
7.1.1 Assessment of Historic Heritage Significance	26
8. IMPACT ASSESSMENT	28
8.1 PROPOSED WORKS	28

8.2	IMPACT ASSESSMENT	28
9.	CONCLUSIONS	29
9.1	RECOMMENDATIONS	29
9.1.1	Recommendation 1 – Heritage Induction	29
9.1.2	Recommendation 2 - Unexpected Finds Protocol	29
10.	REFERENCES	30
	STATEMENT OF LIMITATIONS	31

LIST OF TABLES

TABLE 1-1	SUMMARY OF PROJECT DESIGN	2
TABLE 1.2	SUMMARY OF SEARS REQUIREMENTS FOR ABORIGINAL CULTURAL HERITAGE AND WHERE ADDRESSED IN THE CURRENT REPORT.	4
TABLE 1.3	AUTHORSHIP	4
TABLE 4.1	STATUTORY HERITAGE REGISTER SEARCH SUMMARY	18
TABLE 6.1	GRADING OF ARCHAEOLOGICAL POTENTIAL	23
TABLE 6.2	SUMMARY OF ARCHAEOLOGICAL POTENTIAL ASSOCIATED WITH LAND USE PHASES	23
TABLE 7.1	NSW HERITAGE ASSESSMENT CRITERIA	25

LIST OF FIGURES

FIGURE 1.1	PROJECT AREA	5
FIGURE 1.2	PROJECT DEVELOPMENT	6
FIGURE 3.1	DETAIL OF MAP OF THE COUNTY OF DURHAM (1843) SHOWING PROJECT AREA (APPROXIMATE LOCATION BOXED RED) WITHIN WILLIAM CARTER'S LAND (STATE LIBRARY NSW, RECORD ID: 74VVOJJNDZMM).	11
FIGURE 3.2	DETAIL OF VAUX PARISH MAP (1919), SHOWING PROJECT AREA (BOXED RED) WITHIN PORTION 4. NOTE: PIERCEFIELD HOMESTEAD IS ARROWED (NSW HISTORICAL LAND RECORDS VIEWER, HTTPS://HLRV.NSWLRS.COM.AU/).	12
FIGURE 3.3	PLAN OF THE PIERCEFIELD HOMESTEAD, DENMAN (C.1905) (UNIVERSITY OF NEWCASTLE LIVING HISTORIES, 2013, ID: M5220).	12
FIGURE 3.4	DETAIL OF PIERCEFIELD ESTATE SUBDIVISION PLAN (1909) SHOWING APPROXIMATE LOCATION OF THE PROJECT AREA WITHIN LOT 4 (BOXED RED). THE HOUSE TO THE WEST OF THE PROJECT AREA IS ARROWED RED (STATE LIBRARY OF NSW, RECORD ID: 74VVQWJVLVBG).	14
FIGURE 3.5	DETAIL OF LOT 4 OF PIERCEFIELD SUBDIVISION (1916) SHOWING A NUMBER OF STRUCTURES TO THE WEST OF THE PROJECT AREA AND A DAM AND FENCES WITHIN THE PROJECT AREA (BOXED RED) (STATE LIBRARY OF NSW, RECORD ID 74VVQWJVLVBG).	15
FIGURE 3.6	DETAIL OF VAUX PARISH STATUS BRANCH CHARTING MAP (1972) STATE COAL MINE RESERVE AS WELL AS TRANSMISSION LINE (DASHED GREEN) RUNNING THROUGH PROJECT AREA (BOXED) (NSW HISTORICAL LAND RECORDS VIEWER, HTTPS://HLRV.NSWLRS.COM.AU/).	16
FIGURE 4.1	HISTORICAL HERITAGE SITES WITHIN THE UMWELT STUDY AREA; THE APPROXIMATE LOCATION OF THE CURRENT SITE BOUNDARY IS BOXED AND ARROWED IN BLACK (UMWELT, 2007: 2.2; ERM 2023).	20

ACRONYMS AND ABBREVIATIONS

Acronym	Description
Burra Charter	The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (Adopted 31 October 2013)
BESS	Battery Energy Storage System
CH	Commonwealth Heritage
CHL	Commonwealth Heritage List
EBPC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPI	Environmental Planning Instrument
ERM	Environmental Resources Management Australia Pty Ltd
ha	Hectare
Heritage Act	<i>NSW Heritage Act 1977</i>
HHDD	Historic Heritage Due Diligence
IHO	Interim Heritage Orders
LEP	Local Environmental Plan
LGA	Local Government Area
MWp	Megawatt peak
NHL	National Heritage List
RNE	Register of the National Estate
S170 Register	Section 170 Heritage and Conservation Register
SEARs	Secretary's Environmental Assessment Requirements
SHI	State Heritage Inventory
SHR	State Heritage Register
SSD	State Significant Development
WHL	World Heritage List

TERMINOLOGY LIST

Terms	Description
Project	A Battery Energy Storage System and associated infrastructure as described in Section 1.3
Project Area	The area encompassing the Project delineated by red boundary shown on key figures to which the Application applies (unless otherwise stipulated)
Site Boundary	The property encompassing the Project Area delineated by black boundary shown on key figures; 1711 Denman Road, Denman, NSW (Lot 4, DP 6090)
The Applicant	Denman BESS Pty Ltd as a Trustee for the Denman BESS Trust
Development Footprint	Areas requiring works for the proposed Battery Energy Storage System for the Project (totaling 38.6 hectares).
Survey Area	Area surveyed within the Project Area nominated by the Applicant.

EXECUTIVE SUMMARY

Denman BESS Pty Ltd as a Trustee for the Denman BESS Trust, (the Applicant) is proposing to develop a Battery Energy Storage System with a capacity of 2.4 GW / 4.8 gigawatt hours, located at 1711 Denman Road, Denman, NSW, 2328, within the Upper Hunter Region of New South Wales. The Project will be assessed as a State Significant Development application under the *NSW Environmental Planning and Assessment Act 1979*.

The Applicant has engaged Environmental Resources Management Australia Pty Ltd to complete an Historic Heritage Due Diligence to support an Environmental Impact Statement for the Project.

The historical assessment has determined that there are no known or potential built heritage items within the Project Area. Additionally, it has been determined that there is Low potential for archaeological resources to be present within the Project Area. However, this report has concluded that should any archaeological remains be present; these would be unlikely to provide substantive contribution to research questions relevant to the early history of the site or local area, that is not available from other sources. As such, the Project Area has low archaeological research potential and as such, little to no archaeological heritage significance.

There are no historical built or archaeological constraints for the proposed Project. Therefore, works may proceed with no further historic heritage assessments.

The following are key recommendations that aims to mitigate the impact of the proposed works on the identified heritage values of the Project Area:

Recommendation 1 – Heritage Induction

Prior to the commencement of works, all staff and contractors should be briefed on the requirements of the Heritage Act 1977 and the project-specific Unexpected Finds Protocol.

Recommendation 2 - Unexpected Finds Protocol

In the event that relics are unexpectedly exposed, works should cease immediately. The management of relics should be in accordance with NSW Heritage guidelines and policies, as outlined in the Unexpected Finds Protocol.

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) has been engaged by Denman BESS Holdings Pty Ltd as a Trustee for the Denman BESS Trust (the Applicant) to prepare a Historic Heritage Due Diligence (HHDD) to support the development of the proposed Denman BESS located at 1711 Denman Road, Denman, NSW (the Project). The Project will be assessed as a State Significant Development (SSD) application under the *NSW Environmental Planning and Assessment Act 1979*.

This report has been prepared to assess the potential for historic heritage values to be impacted by the Project.

1.1 OBJECTIVES

This report aims to:

- Identify historic heritage resources within the Project Area, including archaeological potential and built heritage values;
- Present historical contextual data to aid in the development of an archaeological predictive model;
- Evaluate the impact of the proposed works on any identified historic heritage resources; and
- Provide recommendations for the mitigation of impacts and management of identified historic heritage resources.

1.2 PROJECT AREA

The Project Area is at 1711 Denman Road, Denman, NSW (Lot 4, DP 6090; the Site Boundary, totalling 325 hectares [ha]). The Site Boundary is also the boundary of the adjacent Upper Hunter South Solar Farm Project. It is within the Muswellbrook Local Government Area (LGA) (**Figure 1.1**).

1.3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

The project will comprise a Battery Energy Storage System (BESS) with a capacity of 2.4 GW / 4.8 GWh and infrastructure associated. **Table 1-1** summarises the key indicative Project components and specifications.

TABLE 1-1 SUMMARY OF PROJECT DESIGN

Component	Feature	Specification
Energy generation	BESS	BESS with a 2.4 GW / 4.8 GWh capacity.
Electrical Reticulation Network	On-site substations	New high voltage substation proposed along Denman Road.
	Internal electrical reticulation network	Electrical reticulation will connect into the main substation directly via overhead or underground cables and connection to existing 500 kV transmission line.
	Switchyard	Switchyard and other electrical equipment providing connection to the existing 500 kV transmission network.

Component	Feature	Specification
Access Roads	Access to site	Access to the Project Area is proposed from Denman Road, Denman
Additional Infrastructure and associated works	- Underground electrical layout connection; - Internal access roads to connect BESS and ancillary infrastructure; - Operations and Maintenance Building; - Substations; and - Additional Switchyard.	
Temporary facilities	- Temporary construction facilities such as offices, car park and amenities; - Fencing and landscaping works; - Delivery of project components, including panels, battery modules, substations, transformers and associated components; - Installing maintenance and environmental managements processes and equipment; - Internal access roads; - Earthworks required to establish hardstand and laydown areas; and - Installation of underground and overhead cabling.	

The indicative preliminary Project layout is displayed in **Figure 1.2**, which shows the proposed indicative development footprint for the BESS, totaling 38.6 ha.

1.4 METHODOLOGY

This HHDD examines non-Aboriginal (Historic) heritage values within the Project Area. This report has been prepared in accordance with the following guidelines:

- *Assessing Heritage Significance* (NSW Heritage Office 2001);
- *Assessing Significance for Historical Archaeological Sites and 'Relics'* (Heritage Branch, Department of Planning 2009);
- *NSW Heritage Manual* (Heritage Office 1996); and
- *The Australia International Council on Monuments and Sites, Charter for Places of Cultural Significance* (also known as the Burra Charter, Australia ICOMOS 2013).

Preparation of the report has included:

- Heritage register and database searches;
- Desktop research, including publicly available libraries and archives;
- Field surveys of the Project Area;
- Assessment of the potential for impact to known and potential historic heritage values;
- Assessment of heritage significance; and
- Preparation of management and mitigation recommendations.

1.5 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)

The SEARs (SSD-76189216) for the project were issued on 17 October 2024. The requirements for historic heritage assessment and where they have been addressed is summarised in **Table 1.2**.

TABLE 1.2 SUMMARY OF SEARS REQUIREMENTS FOR ABORIGINAL CULTURAL HERITAGE AND WHERE ADDRESSED IN THE CURRENT REPORT.

SEARs Requirement	Where addressed
Assess the impact to historic heritage having regard to the <i>Guidelines for Preparing a Statement of Heritage Impact</i> .	Whole report.

1.6 AUTHORSHIP

This report was prepared by ERM Managing Consultant Victoria Gleeson. Erin Finnegan, ERM Technical Consulting Director - Heritage, provided a technical review and ERM Partner Lucy Baker provided a quality assurance review. A summary of the ERM staff involved in the preparation of this report and their relevant qualifications is provided in **Table 1.3** below.

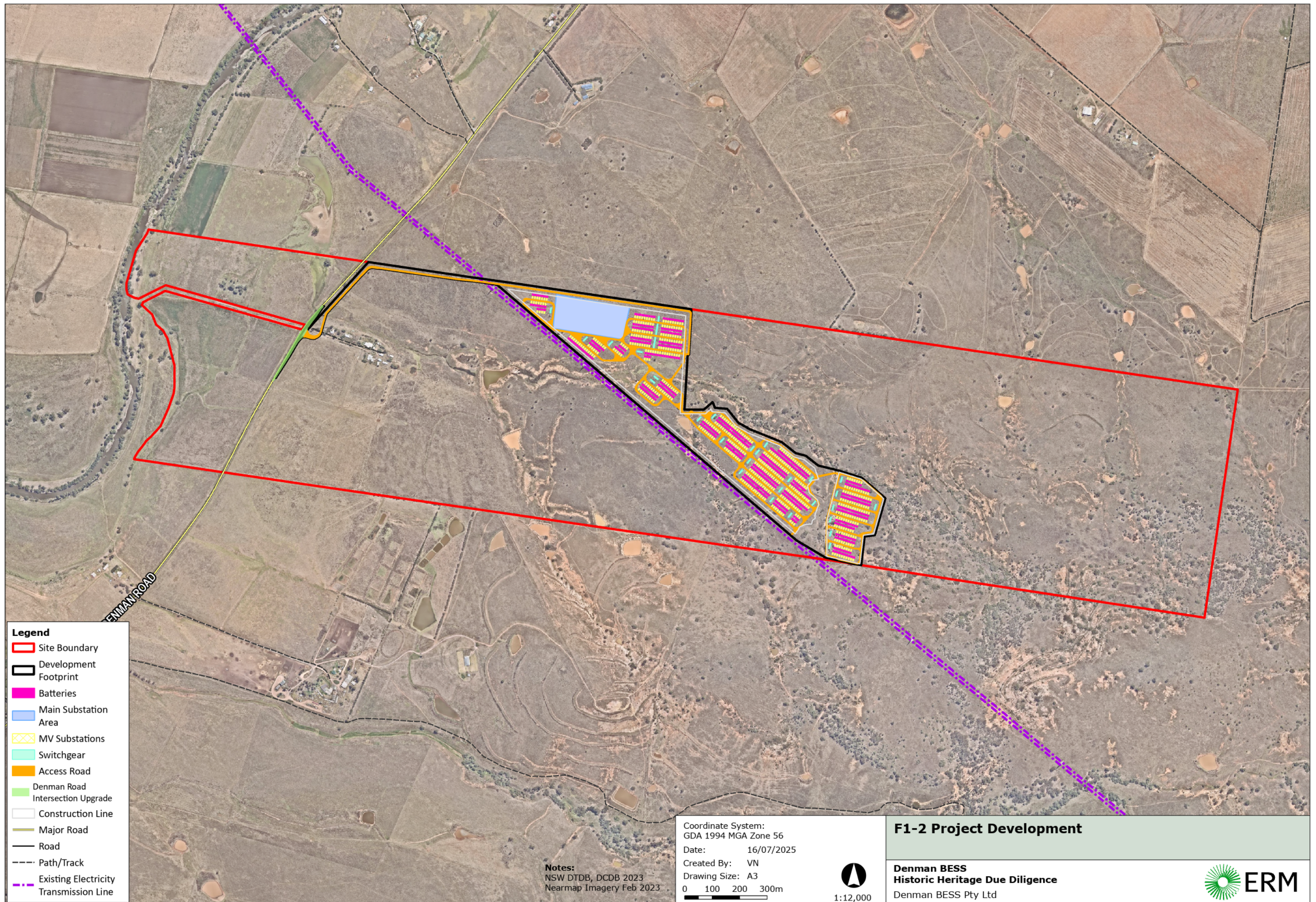
TABLE 1.3 AUTHORSHIP

Name	Title	Role	Relevant Qualifications and years of experience in cultural heritage management
Victoria Gleeson	Managing Consultant - Heritage	Fieldwork, Data manager, Author	- Bachelor of Archaeology (Anthropology), Macquarie University, 2017; and - Six years' professional experience.
Erin Finnegan	Technical Consulting Director - Heritage	Technical Review	- Bachelor of Arts (Cultural Anthropology), Macalester, 1998; - Post Graduate Diploma – Museum and Heritage Studies, University of Cape Town 2003; - Master of Philosophy (Archaeology), University of Cape Town, 2006; and 19 years' professional experience.
Elspeth Mackenzie	Principal Technical Consultant - Heritage	Technical Review	- Bachelor of Arts (Hons) Anthropology & Archaeology, University of Queensland, 2002 - Post Graduate Diploma of Museum Studies, Deakin University, 2003 - Master of Cultural Heritage, Deakin University, 2005 20 years' professional experience
Lucy Baker	Partner	Quality Assurance Review	- Master of Environmental Engineering Management, University of Technology Sydney, Australia, 2008; - Graduate Diploma of Management, Deakin University, Australia; - Bachelor of Engineering Civil, University of Technology Sydney, Australia, 1990; - Registered Planner with Planning Institute of Australia; - Technical Fellow with Engineers Australia; and 30 years' professional experience.

1.7 LIMITATIONS

This HHDD has been prepared with respect to potential heritage impacts arising from the Denman BESS within the areas specified by the Applicant and includes information provided by the Applicant.





Legend

- Site Boundary
- Development Footprint
- Batteries
- Main Substation Area
- MV Substations
- Switchgear
- Access Road
- Denman Road Intersection Upgrade
- Construction Line
- Major Road
- Road
- Path/Track
- Existing Electricity Transmission Line

Notes:
NSW DTDB, DCDB 2023
Nearmap Imagery Feb 2023

Coordinate System:
GDA 1994 MGA Zone 56
Date: 16/07/2025
Created By: VN
Drawing Size: A3
0 100 200 300m



F1-2 Project Development

Denman BESS
Historic Heritage Due Diligence
Denman BESS Pty Ltd



2. STATUTORY CONTEXT AND REQUIREMENTS

Several pieces of Commonwealth and State legislation guide the assessment and management of Historic Heritage in NSW. This legislation also provides the framework for the establishment of heritage registers under their respective legislative purview. A summary of relevant legislation is provided below. A search of the heritage registers associated with the below legislation is provided in **Section 4** and **Table 4.1**.

2.1 COMMONWEALTH LEGISLATION

2.1.1 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act; as amended 2022) provides the framework for the Commonwealth Government's environmental legislation. The EPBC Act outlines a legal framework for the protection and management of nationally and internationally important flora, fauna, ecological communities and heritage places. A number of heritage lists have been established under the EPBC Act including the World Heritage List (WHL), Commonwealth Heritage List (CHL), National Heritage List (NHL), and Register of National Estate (RNE) (now repealed).

The CHL includes natural, Indigenous and historical heritage places owned or controlled by the Australian Government. Items on the list have satisfied the minister as having one or more Commonwealth Heritage values.

The Australian NHL contains natural, historic, and Indigenous places deemed to be of outstanding heritage significance to Australia. Before a site is placed on the list a nominated place is assessed against nine criteria by the Australia Heritage Council.

Results of the Australian Heritage Database search (WHL, NHL, and CHL) are presented in **Section 4.1.1**.

2.2 NSW LEGISLATION

The following section provides an overview of the relevant legislation and guidelines under which this assessment has been prepared.

2.2.1 NSW HERITAGE ACT 1977

The *Heritage Act 1977* (Heritage Act) protects the cultural and natural history of NSW with emphasis on historic (non-Aboriginal) heritage items, including places, buildings, works, relics, moveable objects, precincts, historic shipwrecks and archaeological sites of State or local significance. Protection is provided through protection provisions and the establishment of a Heritage Council and State Heritage Register (SHR). Nominated items are considered by the NSW Heritage Council, which then makes a recommendation to the Minister for Environment and Heritage. The Heritage Council is empowered to place Interim Heritage Orders (IHO) on an item of potential state significance. Section 136 of the Heritage Act allows for the Minister or Chair of the Heritage Council to place a 'Stop Work' Order on a building, work, relic or place, that is not subject to an Interim Heritage Order (IHO) or listed on the SHR and that is being or about to be harmed. Work can be stopped for 40 days, whilst the imposition of an IHO is considered.

Sections 139 to 146, Divisions 8 and 9 of Part 6 of the Act refer to the requirement that excavation or disturbance of land that is likely to contain, or is believed may contain, archaeological relics is undertaken in accordance with an excavation permit issued by the Heritage Council (or in accordance with a gazetted exception under Section 139(4) of the Act).

An archaeological relic is defined as meaning *any deposit, artefact, object or material evidence that:*

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

In particular Section 139 refers to the need for a permit in certain circumstances:

- (1) A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.*
- (2) A person must not disturb or excavate any land on which the person has discovered or exposed a relic except in accordance with an excavation permit.*

The potential for archaeological 'relics' to be present within the Project Area is considered in **Section 6**.

2.2.1.1 NSW STATE HERITAGE REGISTER

The SHR was established under Section 22 of the Heritage Act and is a list of places and objects of particular importance to the people of NSW, including archaeological sites. The SHR is maintained by Heritage NSW and includes a diverse range of over 1500 items, in both private and public ownership. To be listed, an item must be deemed to be of heritage significance for the whole of NSW.

Listing on the SHR controls activities such as alteration, damage, demolition and development. When a place is listed on the SHR, the approval of the Heritage Council of NSW is required or any major work.

Section 170 Heritage and Conservation Register (S170 Register)

Under Section 170 of the Heritage Act, NSW government agencies are required to maintain a register of the heritage assets it owns or controls. Under S170A of the *Heritage Act 1977*, government agencies are required to notify the Heritage Council about decisions affecting assets on the S170 register including removing the item from the register, transferring ownership of a listed item, or vacating and/or demolishing part or all of the item.

Government agencies are also required to maintain properties on the S170 and SHR with due diligence in accordance with State Owned Heritage Management Principles approved by the Minister on the advice of the Heritage Council.

2.2.2 NSW ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) is the main law regulating land use planning and development in NSW, and requires that environmental impacts are considered in land use planning, including impacts on Aboriginal and non-Aboriginal heritage.

The EP&A Act controls the making of environmental planning instruments (EPIs) that identify permissible land use and development constraints. Two types of EPIs can be made: Local Environmental Plans (LEPs) and State Environmental Planning Policies (SEPPs).

2.2.2.1 LOCAL ENVIRONMENTAL PLANS

The EP&A Act allows for the preparation of planning instruments to direct development within NSW. This includes LEPs, which are administered by local government, and principally determine land use and the process for development applications. LEPs commonly identify, and have provisions for, the protection of local heritage items and heritage conservation areas; they usually include a schedule of identified heritage items.

2.2.2.2 STATE ENVIRONMENTAL PLANNING POLICIES

SEPPs cover areas or issues of State or regional environmental planning importance. There are no items listed on the *State Environmental Planning Policy (Industry and Employment) 2021* within the Project Area.

2.3 NON-STATUTORY CONSIDERATIONS

2.3.1 NATIONAL TRUST OF AUSTRALIA (NSW)

The National Trust is a community-based, non-government organisation. The National Trust has a database of important heritage sites across the State. There are no listed places within the Project Area or its immediate surrounds.

2.3.2 REGISTER OF THE NATIONAL ESTATE

The RNE is now an archive of information about more than 13,000 places throughout Australia including many places of local or state significance. The RNE was closed in 2007 and is no longer a statutory list. The closure of the RNE does not diminish protection of Commonwealth heritage places.

The RNE is maintained on a non-statutory basis as a publicly available archive and educational resource. RNE places can be protected under the EPBC Act if they are also included in another Commonwealth statutory heritage list or are owned or leased by the Commonwealth.

In addition, places in the RNE may be protected under appropriate state, territory or local government heritage legislation.

There are no RNE listed places within the Project Area, adjacent to or its immediate surrounds.

2.3.3 THE BURRA CHARTER

The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (Adopted 31 October 2013) (The Burra Charter) sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance including owners, managers and custodians. The Charter provides specific guidance for physical and procedural actions that should occur in relation to significant places. A copy of the 2013 charter can also be accessed at: <http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf>.

This non-Aboriginal heritage assessment report has been prepared in accordance with this document and to the standards it describes.

3. HISTORICAL OVERVIEW

3.1 ETHNO-HISTORIC BACKGROUND

Prior to colonial settlement, the Central Lowlands of the Hunter Valley were inhabited by the Wonnarua¹ people. The Wonnarua were bound to the north by the Geawegal people, to the north-east by the Worimi people, to the south-east by the Awabakal people, to the south by the Darkinung people and to the west by the Wiradjuri people.

The Wonnarua was a large grouping of small individual kinship groups that were related to each other by their kinship classification, common language and law. Kinship groups moved within various allotted areas of their land in search of food, and only occasionally gathered for religious and ceremonial functions, and to discuss important matters concerning their people as a whole (Miller, 1985). People also travelled beyond their own group territories to attend ceremonies with neighbours, to trade and develop social networks; the Wonnarua are recorded as having had social links from the coast to the western plains of NSW (Umwelt, 2007).

The country of the Wonnarua has been described as encompassing extensive grasslands with few trees and extensive floodplains. The Wonnarua followed a hunting and gathering lifestyle; each kinship group moved in a cyclical pattern through their allotted lands.

It is unclear how many Aboriginal people lived in the Hunter Valley prior to the arrival of colonists; however, the population is thought to have declined dramatically following settlement. An influx of settlers caused disruption to the movement of Aboriginal groups, and there was increasing frontier violence throughout the early nineteenth century. The Aboriginal people lost their traditional lands to agricultural pursuits, and the introduction of alcohol, tobacco and disease impacted their health. By the 1860s, Aboriginal people were encouraged to settle on government run reserves; the St Clair Mission (also referred to as Mount Olive) was established in the Hunter region in 1893, approximately 45km east of the Project Area. The Wonnarua people made up a significant portion of the population at the St Clair Mission (Gray, 2019). There is evidence to suggest that the location of St Clair Mission and other reserves in the area were the location of Aboriginal camp sites prior to colonial settlement (Umwelt, 2007).

Despite the impact of colonial settlement on their traditional lands and culture, the Wonnarua people have maintained a strong sense of their cultural identity and links with the land. They continue to reinvigorate their traditional culture, and language (Gray, 2019).

3.2 EARLY COLONIAL EXPLORATION AND LAND TENURE

Colonial exploration of the Hunter Region began as early as 1796, when some fishermen were driven ashore near Port Stephens. In 1801 Lieutenant Grant and Lieutenant-Colonel Paterson led an expedition of the Hunter River. In the same year the Hunter Valley was explored in greater detail by Surveyor-General Charles Grimes and Francis Barrallier (Heritage Council of NSW, 2013: 16-24).

¹ The Wonnarua have also been referred to as Wanaruah, Wonaruah and Wanarua. Wonnarua is the spelling that has been used throughout this report.

In c.1822, on instruction by Governor Brisbane, John Oxley divided the Hunter Region into square 'townships' that were to eventually become parishes; each township was then divided into a grid pattern, with little consideration of the actual topography that characterised the region (alluvial plains, river valleys and ridgelines). In 1823 government surveyor Henry Dangar mapped the Hunter Valley region and substantial settlement followed in the area. The majority of land grants and purchases were allocated according to the grid pattern set in 1822, resulting in a distinct uniformity (Heritage Council of NSW, 2013: 31). The expansive river systems allowed many people to settle in the region because of the richness of the alluvial plains that supported various agricultural pursuits. Settlement was clustered along the Hunter, Peterson and Williams Rivers and their tributaries (Heritage Council of NSW, 2013: 29).

The Project Area is within the historic Vaux Parish of Durham County; the Hunter River forms the western boundary of the Parish. The Project Area is encompassed within historic Portion 4 (1000 acres) that was granted to William Carter in 1828 (**Figure 3.1** and **Figure 3.2**) (Primary Application No. 16391).

In 1837, John Brindley Bettington was granted Portion 3 (2000 acres), to the north of the Project Area; his property was named 'Piercefield' (Primary Application No. 16391). The Piercefield homestead was constructed in c.1860 in Victorian Gothic architectural style, to the north of the Project Area (**Figure 3.2** and **Figure 3.3**). A creamery was also located in close proximity to the homestead. The Piercefield Estate was later expanded, totaling over 8,000 acres and encompassing the entire Project Area; in c.1879, the Estate was acquired by James Withycombe, who maintained ownership into the twentieth century.



FIGURE 3.1 DETAIL OF MAP OF THE COUNTY OF DURHAM (1843) SHOWING PROJECT AREA (APPROXIMATE LOCATION BOXED RED) WITHIN WILLIAM CARTER'S LAND (STATE LIBRARY NSW, RECORD ID: 74VVOJJNDZMM).

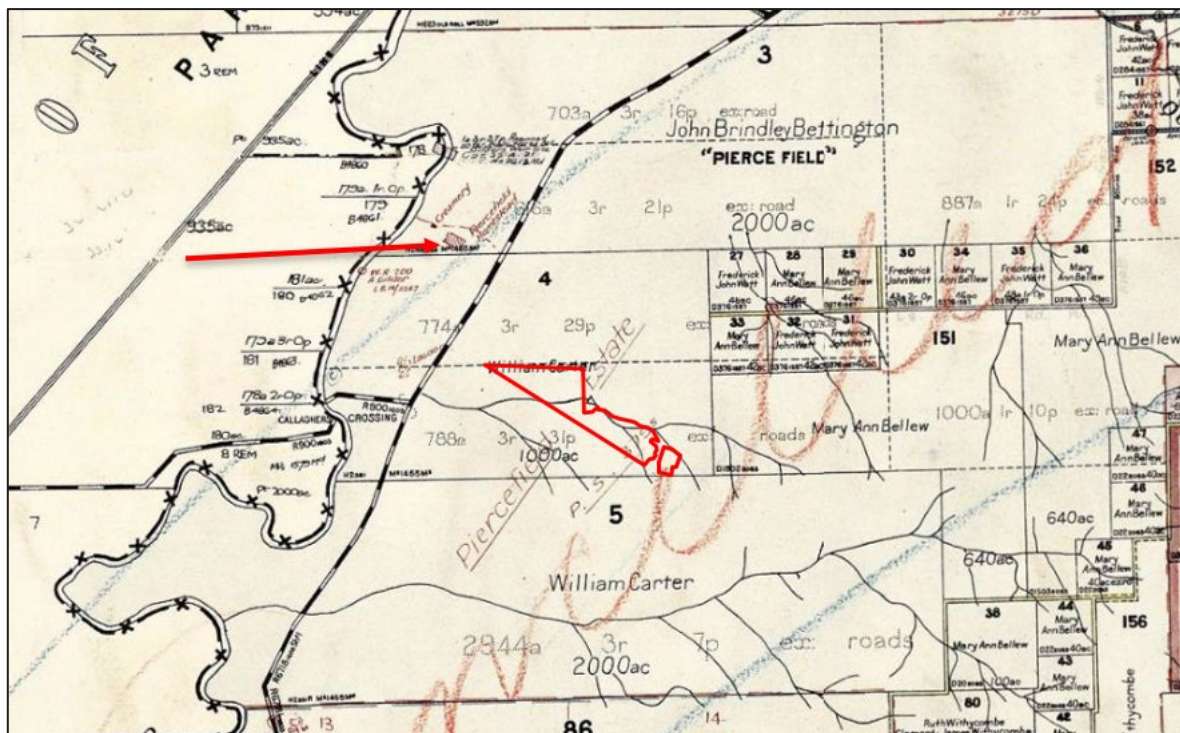


FIGURE 3.2 DETAIL OF VAUX PARISH MAP (1919), SHOWING PROJECT AREA (BOXED RED) WITHIN PORTION 4. NOTE: PIERCEFIELD HOMESTEAD IS ARROWED (NSW HISTORICAL LAND RECORDS VIEWER, [HTTPS://HLRV.NSWLRS.COM.AU/](https://HLRV.NSWLRS.COM.AU/)).

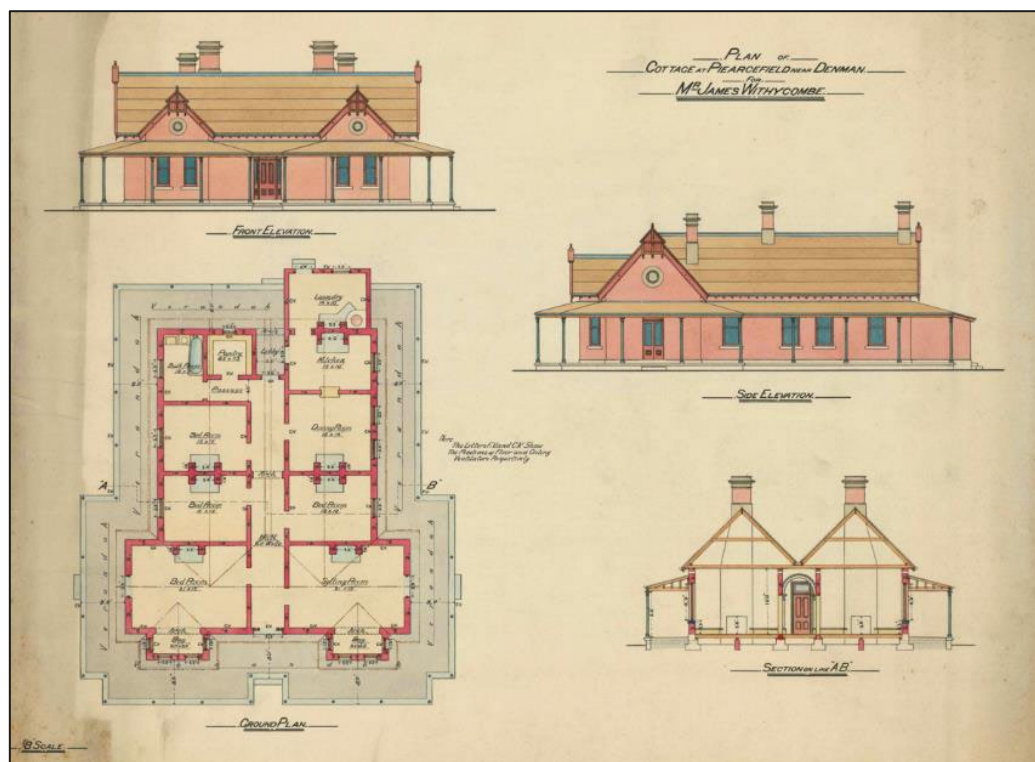


FIGURE 3.3 PLAN OF THE PIERCEFIELD HOMESTEAD, DENMAN (C.1905) (UNIVERSITY OF NEWCASTLE LIVING HISTORIES, 2013, ID: M5220).

3.3 TWENTIETH CENTURY DEVELOPMENT TO PRESENT

James Withycombe subdivided the Piercefield Estate in 1909. The subdivision included seven blocks ranging in size; the Project Area was within Lot 4, totaling 788 acres. The subdivision plan illustrates one 'house' to the west of the Project Area, as well as a series of fences, a lagoon, and dam (**Figure 3.4**).

A 1916 plan of the Project Area shows a house, engine pump and well to the west of Denman Road, as well as a house, hayshed, sty, dam and other outbuildings as well as a series of fences to the east of Denman Road (**Figure 3.5**). Some of these structures remained extant on the property into the mid-twentieth century (**Photograph 3.1**). The former house shown on the 1909 subdivision plan was not indicated on the 1916 plan.

Coal was known to exist in the region since early exploration; however, it was not exploited until the 1890s (Umwelt, 2007: 3.6). Coal mining and electricity generation became major industries in the Muswellbrook region from c.1950s. The land encompassing the Project Area was established as a State Coal Mine Reserve in May 1964 (**Figure 3.6**). In 1988 an easement for the Bayswater – Mount Piper Transmission Line (running north-west to south-east along the western boundary of the Project Area) was gazetted (**Figure 3.6** and **Photograph 3.2**). The Project Area continues to be utilised for agricultural purposes; it remains largely unchanged since the c.1980s (**Photograph 3.2**).

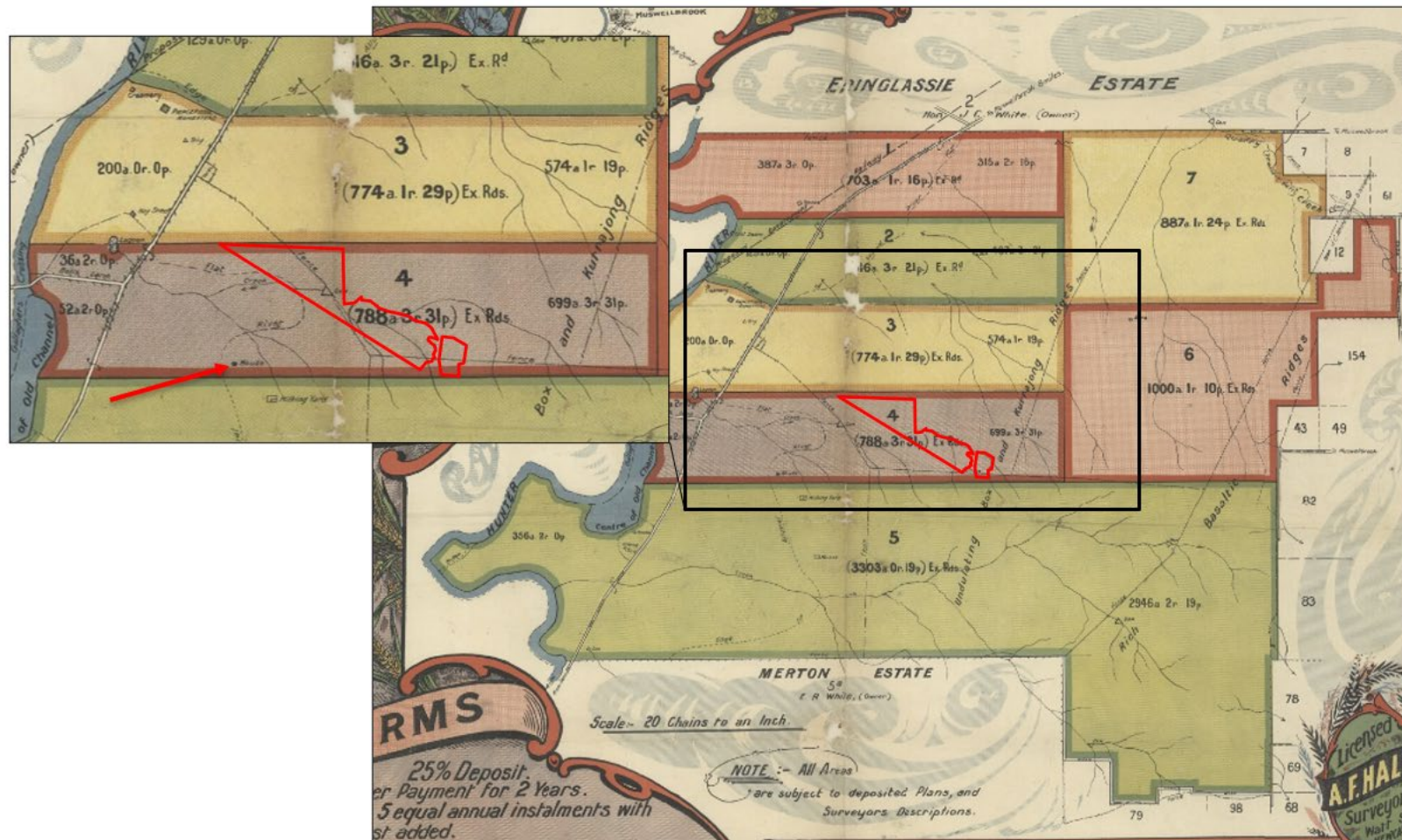
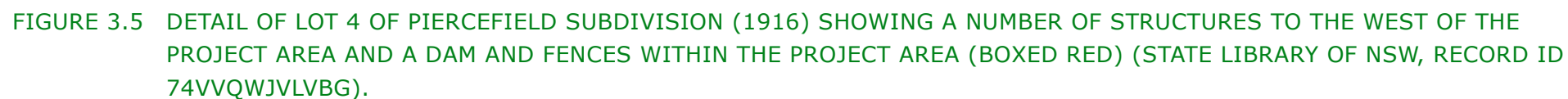


FIGURE 3.4 DETAIL OF PIERCEFIELD ESTATE SUBDIVISION PLAN (1909) SHOWING APPROXIMATE LOCATION OF THE PROJECT AREA WITHIN LOT 4 (BOXED RED). THE HOUSE TO THE WEST OF THE PROJECT AREA IS ARROWED RED (STATE LIBRARY OF NSW, RECORD ID: 74VVQWJVLVBG).





PHOTOGRAPH 3.1 1957 AERIAL SHOWING THE PROJECT AREA (BOXED) AS AGRICULTURAL LAND (WITH CLUSTER OF STRUCTURES ARROWED) (NSW HISTORICAL IMAGERY).

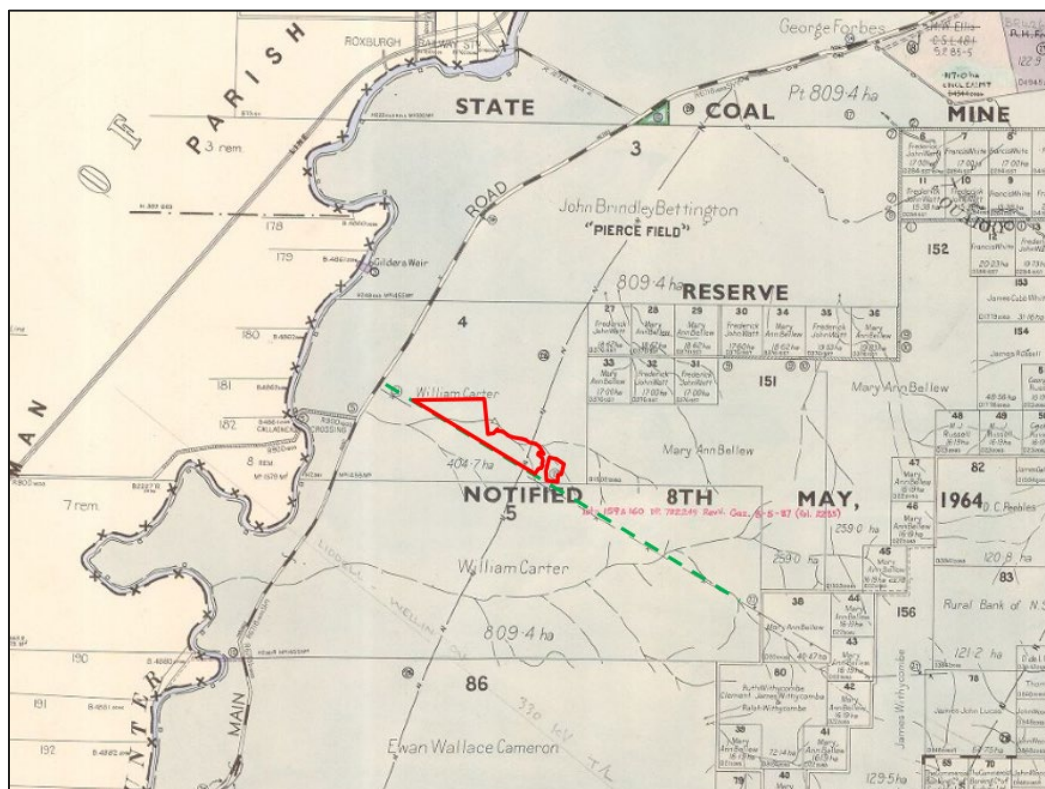
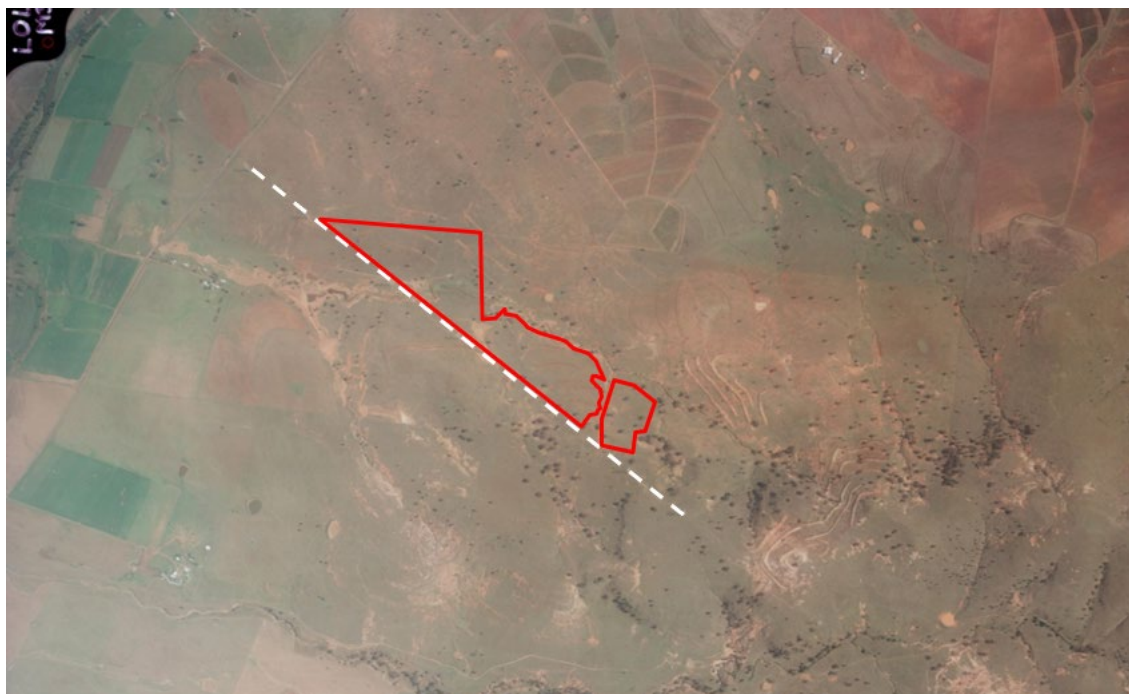


FIGURE 3.6 DETAIL OF VAUX PARISH STATUS BRANCH CHARTING MAP (1972) STATE COAL MINE RESERVE AS WELL AS TRANSMISSION LINE (DASHED GREEN) RUNNING THROUGH PROJECT AREA (BOXED) (NSW HISTORICAL LAND RECORDS VIEWER, [HTTPS://HLRV.NSWLRS.COM.AU/](https://HLRV.NSWLRS.COM.AU/)).



PHOTOGRAPH 3.2 1988 AERIAL OF THE PROJECT AREA SHOWING NEWLY CONSTRUCTED ELECTRICAL TRANSMISSION LINE (DASHED WHITE) (NSW HISTORICAL IMAGERY).

3.4 SUMMARY OF PHASES OF HISTORIC LAND USE

Phase	Land Use within Project Area
Phase 1 1825 - 1909	The Project Area is encompassed within portions of land granted to William Carter (1828); this portion of land was utilised for agricultural pursuits. Later, this portion of land became part of Piercefield Estate. The Project Area continued to be utilised for agricultural purposes throughout the nineteenth and early twentieth century.
Phase 2 1909 - Present	Piercefield Estate was subdivided in 1909; the Project Area was within Lot 4 and continued to be utilised for agricultural pursuits. Several structures were constructed on the property by 1916 including houses, hayshed, sty and other outbuildings. These structures were located to the west of the Project Area. A dam and a series of fences were present within the Project Area. The mid twentieth century saw the development of the coal mining industry and electricity generation in the region. The Bayswater to Mount Piper electrical transmission line was constructed along the western boundary of the Project Area in c.1988. The Project Area remains largely unchanged since that time; it continues to function as an agricultural property.

4. HISTORIC HERITAGE CONTEXT

4.1 HISTORICAL ENVIRONMENT

4.1.1 HERITAGE REGISTER AND DATABASE SEARCH RESULTS

A search of the relevant statutory heritage register searches was conducted on 30 September 2024 as part of the desktop Heritage Assessment.

- Australian Heritage Database, which includes:
 - World Heritage List (WHL);
 - Commonwealth Heritage List (CHL);
 - Register of the National Estate (RNE); and
 - National Heritage List (NHL).
- NSW SHR; and
- Muswellbrook LEP 2009.

The search area encompassed the Project Area with a 2 km buffer surrounding. A summary of the search results is provided in **Table 4.1** below.

TABLE 4.1 STATUTORY HERITAGE REGISTER SEARCH SUMMARY

Register Name	Description	Findings
WHL	The United Nations Educational, Scientific and Cultural Organisation (UNESCO) World Heritage List includes properties in Australia that are matters of national environmental significance and are protected and managed under the EPBC Act.	There are no WH listed places within, or in close proximity to, the Project Area.
CHL	The Commonwealth Heritage List includes natural, Indigenous and historical heritage places owned or controlled by the Australian Government. Items on the list have satisfied the minister as having one or more Commonwealth Heritage (CH) values.	There are no CH listed places within or in close proximity to the Project Area.
NHL	The NHL contains natural, historic, and Indigenous places deemed to be of outstanding heritage significance to Australia. Before a site is placed on the list a nominated place is assessed against nine criteria by the Australia Heritage Council.	There are no NHL listed places within or in close proximity to the Project Area.
SHR	The SHR is a list of places and objects of particular importance to the people of NSW. The register lists a diverse range of over 1,650 items, in both private and public ownership. To be listed, an item must be significant for the whole of NSW.	There are no SHR listed items within the Project Area.
S170 Heritage Registers	S170 of the Heritage Act requires all NSW state agencies to identify, conserve and manage the heritage assets owned, managed and occupied by that agency. In order to facilitate this, S170 heritage registers were established for all NSW government agencies. These registers are held and maintained by each state agency and updated as assets are acquired, altered, or decommissioned.	As the project boundary does not coincide with any NSW government property, S170 register searches were not required for this assessment.

Register Name	Description	Findings
Muswellbrook LEP 2009	LEPs contain a register of environmental heritage items important to the locality. These registers are included as Schedule 5 of all NSW LEPs, and include built items, archaeological sites and conservation areas.	There are no locally listed heritage sites within the Project Area.

4.2 PREVIOUS REPORTING

The Project Area and sites in the vicinity have been previously assessed for historic heritage values by ERM (2023) and Umwelt (2006 and 2007). Summaries of these reports are provided below.

4.2.1 HISTORICAL HERITAGE ASSESSMENT, ANVIL HILL PROJECT (UMWELT, 2006)

The purpose of the report was to identify the historic heritage values and assess impacts of the open cut coal mining operation (referred to as the Anvil Hill Project) in the Wybong area, located approximately 17 km west of Muswellbrook and 1.7 km north-west of the current Project Area.

No previously listed heritage items were located within the study area. The assessment identified eleven historical heritage sites within the proposed disturbance area (and an additional six sites outside the proposed disturbance area), related to the late nineteenth to early twentieth century land uses of grazing and dairying. The sites within the proposed disturbance area included the ruins of a collapsed cottage with associated dam, pig pen, well, sheds and a hut; a rock spillway; a test shaft for exploratory coal mining; the ruins of a slab house and nearby dairy; the ruins of a weatherboard two room cottage and dairy, shed and stockyards; two intact Victorian cottages; two former quarries; and one windmill and associated dam. Anvil Rock and the Book formation were also identified as natural heritage sites.

Two of the identified heritage sites (the Ham House 1 and associated Creamery and Ham House 2 and associated structures) were assessed as being of high local heritage significance. The remaining heritage items were rated of moderate or low local heritage significance.

Various recommendations were made for the identified heritage items within the area of proposed direct impact including archival recording, the compilation of a community based oral history study, the surface collection and salvage of Ham House 1 and Ham House 2, and the conservation of natural heritage items Book and Anvil Rock formations. Monitoring and archival recording was also recommended for heritage items within the potential area of indirect impact for proposed blasting.

4.2.2 HISTORICAL HERITAGE ASSESSMENT, MT ARTHUR UNDERGROUND PROJECT (UMWELT, 2007)

The assessment was undertaken to assess the potential historical heritage impacts of the Mt Arthur Underground Project, south of Muswellbrook NSW. The historic heritage assessment area was designed to encompass all parts of the subsidence affectation area and areas to be impacted by surface infrastructure, as well as those areas surveyed for the Bayswater No.3 EIS that were not disturbed by mining activities. The assessment area overlapped the far eastern portion of the current Site Boundary.

There were no listed historic heritage sites within the study area. However, there were eight non-statutory heritage sites noted within the study area, associated with the pastoral history of the area from the late nineteenth century to twenty-first century; the sites were assessed as being of local heritage significance (**Figure 4.1**). The sites comprised two homestead complexes, various farmhouse and cottage buildings, a relocated hospital building and the remains of pastoral infrastructure. None of the identified sites were located within the current Site Boundary. It was stated that all other structures within the study associated with historical agricultural land uses were considered to have no heritage significance; additionally, no other sites/locations were identified that contained archaeological potential for historical heritage within the study area.

The impact assessment stated that the identified historic heritage sites would be subject to varying degrees of subsidence as a result of the Underground Project. To mitigate impacts to the heritage items it was recommended that the hospital building be relocated and a management plan should be prepared to identify a new location and suitable reuse. Additionally, it was recommended that archival recording and monitoring be undertaken for all sites of high, moderate, and low significance that would be impacted by the Project.

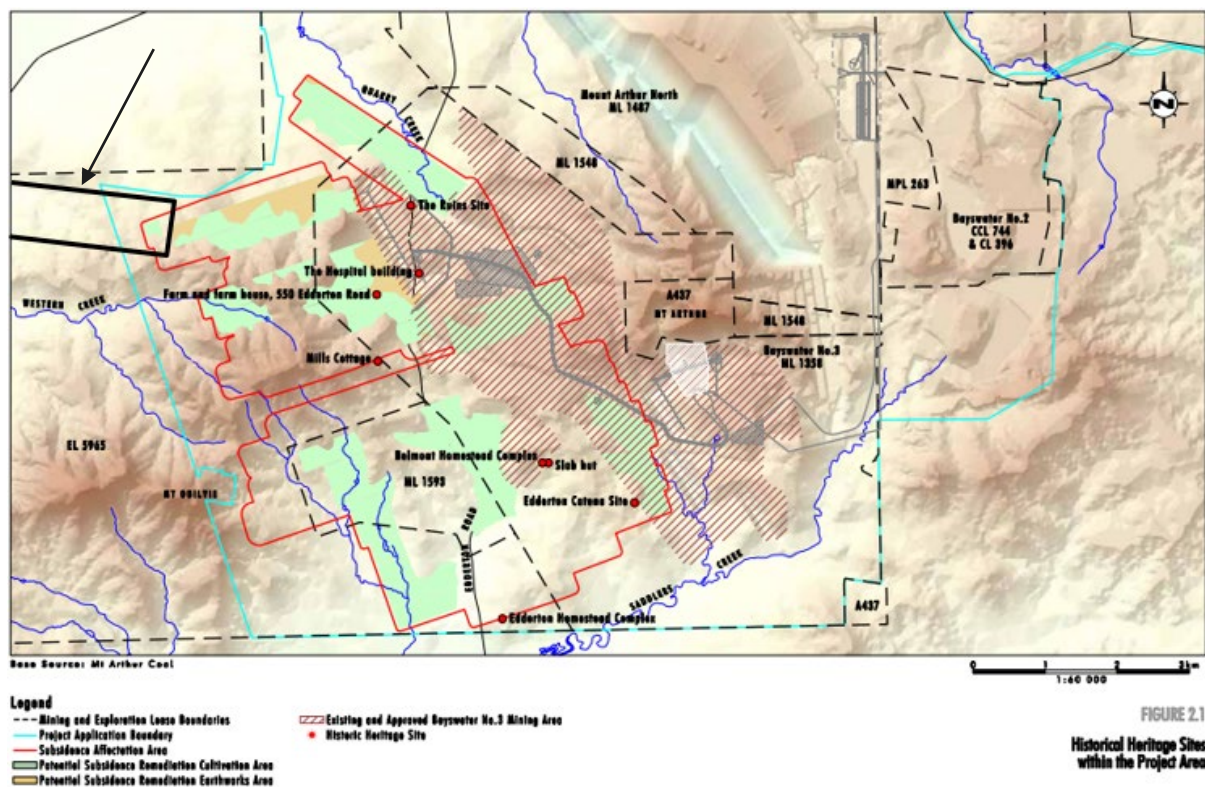


FIGURE 4.1 HISTORICAL HERITAGE SITES WITHIN THE UMWELT STUDY AREA; THE APPROXIMATE LOCATION OF THE CURRENT SITE BOUNDARY IS BOXED AND ARROWED IN BLACK (UMWELT, 2007: 2.2; ERM 2023).

5. PHYSICAL ANALYSIS

5.1 SURVEY AIMS AND PERSONNEL

A field survey of the Project Area was undertaken on 11 September 2024 by ERM Managing Consultant Victoria Gleeson, and Registered Aboriginal Party (RAP) representatives². A subsequent survey was undertaken on 4 December 2024 by ERM Managing Consultant Victoria Gleeson and RAP representatives to address changes to the Project layout.

The methodology of the site visits included pedestrian survey of the Project Area and visual inspection of potential view lines to potential surrounding heritage items. The aims of the historical heritage survey were to:

- Cover a representative sample of the Project Area that will potentially be impacted by the proposed works. Areas identified through desktop research as having historic development were targeted during survey;
- Identify any previously unidentified built heritage items or areas of historic archaeological potential that may be impacted by the Project; and
- Gather sufficient information to provide an assessment of the historic heritage significance of the Project Area.

5.2 SURVEY RESULTS AND DESCRIPTION OF PROJECT AREA

The Project Area is accessed via an unsealed road off Denman Road, and a series of access tracks. The Project Area comprises undulating and gentle slopes in the far northern and southern areas, with occasional steep ridges and eroded drainage channels in the central portion (**Photograph 5.1** to **Photograph 5.3**).

The Project Area is moderately disturbed from agricultural activities and one dam is present (**Photograph 5.4**). The Bayswater to Mount Piper electrical transmission line runs north-west to south-east along the western boundary of the Project Area.

Three main residences, and numerous agricultural structures including worker's cottages, sheds, silos, garages, tanks, cattle yards and agricultural equipment are located approximately 500 m south-west of the Project Area, off Denman Road.

² RAPs were in attendance as the surveys for Aboriginal Cultural Heritage Assessment Report (ACHAR) were undertaken in concurrence with historic heritage survey.



PHOTOGRAPH 5.1 VIEW SOUTH-EAST
ACROSS NORTHERN PORTION
OF THE PROJECT AREA (ERM
2024)



PHOTOGRAPH 5.2 VIEW SOUTH OF THE
SOUTH PORTION OF THE
PROJECT AREA (ERM 2024)



PHOTOGRAPH 5.3 VIEW NORTH OF THE
DEEP GULLY WITHIN CENTRAL
PORTION OF THE PROJECT
AREA (ERM 2024)



PHOTOGRAPH 5.4 DAM IN CENTRAL
PORTION OF THE PROJECT
AREA (ERM 2024)

6. ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

Review of the potential for historical archaeological resources to be present within the Project Area is based on a consideration of current ground conditions and analysis of historic development.

Grading of archaeological potential utilised for this assessment is detailed in **Table 6.1**.

TABLE 6.1 GRADING OF ARCHAEOLOGICAL POTENTIAL

Grading	Justification
Nil	No evidence of historical development or use, or where previous impacts would have removed all archaeological potential.
Low	Research indicates little or low intensity historical development, or substantial previous impacts. Expected that deep subsurface archaeological features may survive.
Moderate	Known historical development with some evidence of previous impact. Likely that archaeological remains survive with some localised truncation and disturbance.
High	Evidence of multiple phases of historical development and structures with minimal or localised twentieth century development impacts. Archaeological remains likely to be largely intact.

Table 6.2 summarises the archaeological potential of each land use phase across the Project Area.

TABLE 6.2 SUMMARY OF ARCHAEOLOGICAL POTENTIAL ASSOCIATED WITH LAND USE PHASES

Phase	Land use and potential remains	Archaeological Potential
Phase 1 1825 - 1909	The Project Area is encompassed within portions of land granted to William Carter (1828); this portion later became part of Piercefield Estate. The Project Area continued to be utilised for agricultural purposes throughout the nineteenth and early twentieth century. The main homestead of Piercefield Estate was to the north of the Project Area, and by c.1909 one 'house' had been constructed to the west of the Project Area. The exact construction date of the house is not known. It is possible that if it was constructed in the late nineteenth century, prior to the connection of water and sewerage systems, a cesspit and well would likely be in the locality. These features are unlikely to be present within the Project Area. It is possible that other discrete or ephemeral features could be located within the Project Area. These may include rubbish pits, associated with early rubbish disposal prior to the introduction of Council rubbish removal, as well as postholes associated with light structures or demarcating former fence lines. However, evidence of the evolving agricultural landscape (insubstantial remains such as post holes) are unlikely to be present with good integrity.	Low

Phase	Land use and potential remains	Archaeological Potential
Phase 2 1909-- Present	Piercefield Estate was subdivided in 1909; the Project Area was within Lot 4 and continued to be utilised for agricultural pursuits. Several structures were constructed on the property by 1916 (to the west of the Project Area), including houses, hayshed, sty and other outbuildings, as well as an engine pump. By this time, a dam and series of fences were present within the Project Area. Some of these structures remained extant on the property into the mid-twentieth century (as illustrated in Photograph 3.1). The mid twentieth century saw the development of the coal mining and electricity generation industries in the region. The Bayswater to Mount Piper electrical transmission line was constructed along the western boundary of the Project Area in c.1988 which would have substantially impacted or removed the archaeological resource in this area.	Low

6.1.1 SUMMARY OF HISTORIC ARCHAEOLOGICAL POTENTIAL

The historic research undertaken for this assessment identified that the Project Area was characterised by agricultural pursuits since the early nineteenth century. By c.1909 one house had been constructed to the west of the Project Area (its exact construction date is not known). It is possible that if it was constructed in the late nineteenth century, prior to the connection of water and sewerage systems, a cesspit and well would likely be in the locality. These features are unlikely to be present within the Project Area.

It is possible that other discrete or ephemeral features could be located within the Project Area. These may include rubbish pits, associated with early rubbish disposal prior to the introduction of Council rubbish removal, as well as postholes associated with light structures or demarcating former fence lines.

The mid twentieth century saw the development of the coal mining and electricity generation industries in the region. The Bayswater to Mount Piper electrical transmission line was constructed along the western boundary of the Project Area in c.1988 which would have substantially impacted or removed the archaeological resource in this area. However, most of the Project Area has remained largely undisturbed from substantial impacts.

As such, there is Low potential for historical archaeological resources to be present within the Project Area.

7. SIGNIFICANCE ASSESSMENT

7.1 HISTORIC HERITAGE SIGNIFICANCE ASSESSMENT FRAMEWORK

The NSW Heritage Management System sets out a detailed process for conducting assessments of heritage significance. The guideline *Assessing Heritage Significance* (NSW Heritage Office, 2001), part of the Heritage Manual, provides a set of specific criteria for assessing the significance of an item, including guidelines for inclusion and exclusion (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.

An item will be considered to be of state or local heritage significance if, in the opinion of the Heritage Council, it meets one or more of the following criteria outlined in **Table 7.1**.

TABLE 7.1 NSW HERITAGE ASSESSMENT CRITERIA

Criteria	Description
<i>Criterion (a) – Historical significance</i>	<i>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);</i> Note: 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.
<i>Criterion (b) – Associative significance</i>	<i>an item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area);</i> Note: 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.
<i>Criterion (c) – Aesthetic significance</i>	<i>an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area);</i> Note: 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.
<i>Criterion (d) – Social significance</i>	<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> Note: This criterion does not cover importance for reasons of amenity or retention in preference to proposed alternative.
<i>Criterion (e) – Research potential</i>	<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> Note: Under the guideline, an item can be excluded if the information would be irrelevant or only contains information available in other sources.
<i>Criterion (f) - Rarity</i>	<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> Note: 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.

Criteria	Description
<i>Criterion (g) - Representative</i>	<i>an item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places, or cultural or natural</i> Note: An item is excluded under this criterion if it is a poor example or has lost the range of characteristics of a type.

The Heritage Council require 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. The following assessment has been prepared in accordance with these guidelines.

7.1.1 ASSESSMENT OF HISTORIC HERITAGE SIGNIFICANCE

No listed or potential built heritage items are located within the Project Area. Consequently, no assessment of significance associated with built heritage items has been completed for this assessment.

The potential for historic archaeological remains to be present within the Project Area has been assessed as Low. An assessment of the significance of a potential archaeological resource in accordance with the guiding document *Assessing Significance for Historical Archaeological Sites and 'Relics'* (Heritage Council of NSW, 2009) has been completed below.

Can the site contribute knowledge that no other resource can?

The potential archaeological resource within the Project Area would most likely comprise discrete or insubstantial agricultural features. These may include rubbish pits, associated with early rubbish disposal prior to the introduction of Council rubbish removal, as well as postholes associated with light structures or demarcating former fence lines.

The nature of the potential archaeological resource within the Project Area is not rare or unique. As such, the archaeological resource has limited potential to provide a new understanding of the history of the local area that is not available from other sources.

Can the site contribute knowledge that no other site can?

The nature of the potential archaeological resource within the Project Area is not rare or unique; the surrounding area was also largely focused on agricultural pursuits throughout the nineteenth and early twentieth century. As such, the archaeological resource within the Project Area is unlikely to provide information that is not already available from other sites.

Is this knowledge relevant to general questions about human history or other substantive questions relating to Australian history, or does it contribute to other major research questions?

As detailed above, the potential archaeological resource within the Project Area is unlikely to contribute knowledge that is not already available from other sites. As such, this criterion is not applicable.

7.1.1.1 SUMMARY STATEMENT OF SIGNIFICANCE

No listed or potential built heritage items are located within the Project Area. If archaeological resources are present within the Project Area, they would most likely comprise discrete or insubstantial agricultural features.

These may include rubbish pits, associated with early rubbish disposal prior to the introduction of Council rubbish removal, as well as postholes associated with light structures or demarcating former fence lines. These resources are unlikely to provide a new understanding of the history of the local area that is not available from other sources.

Therefore, any extant archaeological resources in the Project Area would have low archaeological research potential and as such, have little to no archaeological heritage significance.

8. IMPACT ASSESSMENT

8.1 PROPOSED WORKS

Section 1.3 provides a detailed description of the proposed Project. Activities with the potential to impact archaeological resources would include earthworks, electrical service excavation and foundation construction. A summary of potential impacts to historic heritage values is provided below.

8.2 IMPACT ASSESSMENT

The current assessment has identified that there are no known or potential historic heritage sites within the Project Area or within its immediate vicinity.

The Project Area has remained largely undisturbed from substantial impacts and has been characterised by agricultural pursuits since the early nineteenth century. However, it is likely that the construction of the Bayswater to Mount Piper electrical transmission line in c.1988 would have substantially impacted or removed the archaeological resource in this area. The archaeological potential of the Project Area has been assessed as Low. However, this report has concluded that should any archaeological remains be present; these would be unlikely to provide substantive contribution to research questions relevant to the early history of the site or local area, that is not available from other sources. As such, the proposed works will result in little to no archaeological impact.

9. CONCLUSIONS

The historical assessment has determined that there are no known or potential built heritage items within the Project Area.

It has been determined that there is Low potential for archaeological resources to be present within the Project Area. However, this report has concluded that should any archaeological remains be present; these would be unlikely to provide substantive contribution to research questions relevant to the early history of the site or local area, that is not available from other sources. As such, the Project Area has low archaeological research potential and as such, little to no archaeological heritage significance.

There are no historical built or archaeological constraints for the proposed Project. Therefore, works may proceed with no further historic heritage assessments.

9.1 RECOMMENDATIONS

The following are key recommendations that aims to mitigate the impact of the proposed works on the identified heritage values of the Project Area:

9.1.1 RECOMMENDATION 1 – HERITAGE INDUCTION

Prior to the commencement of works, all staff and contractors should be briefed on the requirements of the *Heritage Act 1977* and the Unexpected Finds Protocol (outlined in **Section 9.1.2.1**).

9.1.2 RECOMMENDATION 2 - UNEXPECTED FINDS PROTOCOL

In the event that relics are unexpectedly exposed, works should cease immediately. The management of relics should be in accordance with NSW Heritage guidelines and policies, as outlined in the Unexpected Finds Protocol (**Section 9.1.2.1**).

9.1.2.1 UNEXPECTED FINDS PROTOCOL

This HHDD has identified that the archaeological potential of the Project Area is Low. However, in the event that relics are unexpectedly recovered during the proposed works, all works should cease immediately and the Unexpected Finds Protocol should be followed. The following steps are provided below in the event that unexpected heritage items are identified during the proposed works:

- where a potential historic heritage item is found during works, all works within the vicinity of the item, or with the potential to impact the item should cease and a temporary exclusion zone established;
- an appropriately qualified heritage consultant should examine the item to assess its significance and further archaeological potential;
- where a relic is found, the NSW Heritage Council should be notified (in accordance with Section 146 of the *Heritage Act 1977*) and approval will likely be required prior to the continuation of works. Other archaeological deposits should be recorded and assessed for significance and potential salvage by an appropriately qualified heritage consultant; and
- Depending on the nature of the discovery, additional assessment and approval under the *Heritage Act 1977* may be required prior to the recommencement of excavation in the affected area.

10. REFERENCES

- Australia ICOMOS (2013). The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance 2013. Australia ICOMOS Incorporated. Burwood, Victoria.
- Dangar, H (1828) Index and directory to map the country bordering upon the River Hunter: the lands of the Australian Agricultural Company, Published by Joseph Cross, London
Available from: <<https://nla.gov.au/nla.obj-52843909/view?partId=nla.obj-99994619#page/n0/mode/1up>> Accessed 22/05/2023.
- ERM (2023) Upper Hunter SF Pty Ltd – Upper Hunter South Solar Farm, Scoping Report. Prepared for Upper Hunter SF Pty Ltd.
- Heritage Council of NSW (2013) Hunter Estates, A Comparative Heritage Study of pre-1850s Homestead Complexes in the Hunter Region. Volume 1. Office of Environment and Heritage: Sydney South.
- Heritage Council of NSW (2009) Assessing Significance for Historical Archaeological Sites and Relics.
- NSW Heritage Office (2001) Assessing Heritage Significance.
- Umwelt (2006) Historical Heritage Assessment, Anvil Hill Project. Prepared for Centennial Hunter Pty Ltd.
- Umwelt (2007) Historical Heritage Assessment, Mt Arthur Underground Project. Prepared for Mt Arthur Coal Pty Ltd.

STATEMENT OF LIMITATIONS

This report is based solely on the scope of work described in Section 1 (Scope of Work) and performed by Environmental Resources Management Australia Pty Ltd (ERM) as commissioned by Denman BESS Pty Ltd as a Trustee for the Denman BESS Trust (the Client). The Scope of Work was governed by a contract between ERM and the Client (Contract).

No limitation, qualification or caveat set out below is intended to derogate from the rights and obligations of ERM and the Client under the Contract.

The findings of this report are solely based on, and the information provided in this report is strictly limited to that required by the Scope of Work. Except to the extent stated otherwise, in preparing this report ERM has not considered any question, nor provides any information, beyond that required by the Scope of Work.

This report was prepared in October 2024 and is based on conditions encountered and information reviewed at the time of preparation. The report does not, and cannot, take into account changes in law, factual circumstances, applicable regulatory instruments or any other future matter. ERM does not, and will not, provide any on-going advice on the impact of any future matters unless it has agreed with the Client to amend the Scope of Work or has entered into a new engagement to provide a further report.

Unless this report expressly states to the contrary, ERM's Scope of Work was limited strictly to identifying typical environmental conditions associated with the subject site(s) and does not evaluate the condition of any structure on the subject site nor any other issues. Although normal standards of professional practice have been applied, the absence of any identified hazardous or toxic materials or any identified impacted soil or groundwater on the site(s) should not be interpreted as a guarantee that such materials or impacts do not exist.

This report is based on information provided by the Client or third parties (including regulatory agencies). All conclusions and recommendations made in the report are the professional opinions of the ERM personnel involved. Whilst normal checking of data accuracy was undertaken, except to the extent expressly set out in this report, ERM:

- Did not, nor was able to, make further enquiries to assess the reliability of the information or independently verify information provided by; and
- Assumes no responsibility or liability for errors in data obtained from the Client, any third parties or external sources (including regulatory agencies).

Although the data that has been used in compiling this report is generally based on actual circumstances, if the report refers to hypothetical examples those examples may, or may not, represent actual existing circumstances.

Only the environmental conditions and or potential contaminants specifically referred to in this report have been considered. To the extent permitted by law and except as is specifically stated in this report, ERM makes no warranty or representation about:

- The suitability of the site(s) for any purpose or the permissibility of any use;
- The presence, absence or otherwise of any environmental conditions or contaminants at the site(s) or elsewhere; or
- The presence, absence or otherwise of asbestos, asbestos containing materials or any hazardous materials on the site(s);

- Use of the site for any purpose may require planning and other approvals and, in some cases, environmental regulator and accredited site auditor approvals. ERM offers no opinion as to the likelihood of obtaining any such approvals, or the conditions and obligations which such approvals may impose, which may include the requirement for additional environment works.

The ongoing use of the site or use of the site for a different purpose may require the management of or remediation of site conditions, such as contamination and other conditions, including but not limited to conditions referred to in this report.

This report should be read in full and no excerpts are to be taken as representative of the whole report. No responsibility or liability is accepted by ERM for use of any part of this report in any other context.

Except to the extent that ERM has agreed otherwise with the Client in the Scope of Work or the Contract, this report:

- Has been prepared and is intended only for the exclusive use of the Client;
- Must not to be relied upon or used by any other party;
- Has not been prepared nor is intended for the purpose of advertising, sales, promoting or endorsing any Client interests including raising investment capital, recommending investment decisions, or other publicity purposes;
- Does not purport to recommend or induce a decision to make (or not make) any purchase, disposal, investment, divestment, financial commitment or otherwise in or in relation to the site(s); and
- Does not purport to provide, nor should be construed as, legal advice.



ERM HAS OVER 160 OFFICES ACROSS THE FOLLOWING
COUNTRIES AND TERRITORIES WORLDWIDE

Argentina	The Netherlands
Australia	New Zealand
Belgium	Peru
Brazil	Poland
Canada	Portugal
China	Romania
Colombia	Senegal
France	Singapore
Germany	South Africa
Ghana	South Korea
Guyana	Spain
Hong Kong	Switzerland
India	Taiwan
Indonesia	Tanzania
Ireland	Thailand
Italy	UAE
Japan	UK
Kazakhstan	US
Kenya	Vietnam
Malaysia	
Mexico	
Mozambique	

ERM's Sydney Office

Level 14, 207 Kent Street
Sydney, NSW 2000

T: 02 8584 8888

www.erm.com