

Final Report

# Willatook Wind Farm, Willatook, Victoria: Historical Heritage Impact Assessment

Willatook Wind Farm Pty Ltd

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**Cover Photo:** General view of Project Area facing north

(Photo by Ecology and Heritage Partners Pty Ltd)

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## ABBREVIATIONS

Acronym	Description
Act, the	<i>Heritage Act 2017</i>
AV	Aboriginal Victoria
CHL	Commonwealth Heritage List
CHMP	Cultural Heritage Management Plan
CMA	Catchment Management Authority
DAWE	Department of Agriculture, Water and the Environment
DELWP	Department of Environment, Land, Water and Planning (Victoria)
DPC	Department of the Premier and Cabinet (Victoria)
EES	Environment Effects Statement
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EVC	Ecological Vegetation Class
HA	Heritage Advisor
HHA	Historical Heritage Assessment
HO	Heritage Overlay
HV	Heritage Victoria
MCC	Moyne City Council
NES	National Environmental Significance
NHL	National Heritage List
NTR	National Trust Register (Victoria)
PMST	Protected Matters Search Tool
RNE	Register of the National Estate
SLV	State Library of Victoria
VGf	Victorian Geomorphological Framework
VHI	Victorian Heritage Inventory
VHR	Victorian Heritage Register
VWHI	Victorian War Heritage Inventory
WHL	World Heritage List



## EXECUTIVE SUMMARY

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### Introduction

Ecology and Heritage Partners Pty Ltd was commissioned by Willatook Wind Farm Pty Ltd to prepare this Historical Heritage Impact Assessment (HHIA) for the proposed Willatook Wind Farm, located approximately 30 km to the west and southwest of Hawkesdale West in southwestern Victoria.

### The Project Area and Project

The Sponsor proposes to install up to 59 wind turbines and a battery storage facility within the Project Area. Each wind turbine will comprise a tower, nacelle and blades. The turbines will have a maximum blade tip height of 250 m. The towers will be mounted onto a concrete pad footing and there will be an adjacent hardstand area of up to approximately 50 m x 60 m. It is proposed that the internal electrical network between the wind turbines and the substation would be an underground transmission network (i.e., buried cables). It is estimated that this would entail 62 kilometres of trenches (1 m deep) with insulated electrical cables installed. The cable trenches would have a width of up to one metre within a work area of about 7 metres for the excavator to operate and for stockpiling of soil. Turbines will be positioned with a high regard for existing land use, ecological conservation and cultural heritage values and in accordance with relevant legislation. Access tracks would have a final width of six metres and a minimum 30 metre turning radius. The construction footprint of access tracks would be 12 metres wide. The Project would also consist of ancillary structures and equipment, which would be positioned in accordance with site constraints.

The Project Area is located west of Willatook, southwest of Hawkesdale, east of Orford and Broadwater and southeast of Macarthur in southwest Victoria (Moyne Shire Council) (see Map 1). The Project Area is approximately 4153.5 ha in size and is located south of Woolsthorpe-Heywood Road (see Map 2). The Project Area is currently used for residential, agricultural, pastoral and utility purposes.

### Assessment & Results

The assessments undertaken as part of this HHIA were a background review (desktop assessment), and a field survey (standard assessment). The assessments resulted in the identification of four historical heritage places listed on the Victorian Heritage Inventory: Victorian Heritage Inventory (VHI) D7321-0040 (Landers Road Dry Stone Wall); VHI H7321-0103 (Dunmore Turkish Bath House and Homestead Kitchen) VHI H7321-0104 (Woolsthorpe-Heywood Road Hut 1) and VHI H7321-0105 (Woolsthorpe-Heywood Road Ruin). However, due to the changing footprint of the Project, only VHI H7321-0105 (Woolsthorpe-Heywood Road Ruin) is within the Project Area; it will not be affected by the Project.

### Impact Assessment and Risk Assessment Conclusion

An impact assessment was undertaken and concluded that there is one historical archaeological heritage place within the Project Area which will not be affected by the project: VHI H7321-0105 (Woolsthorpe-Heywood Road Ruin) will not be impacted by the proposed development. A second historical heritage place (Landers

Lane Dry Stone Wall; VHI D7321-0040), will be impacted by the Project. This site was delisted from the Victorian Heritage Inventory and no longer has statutory protection under the *Heritage Act 2017*. While Consent approval is not required from Heritage Victoria, notification must be given to Heritage Victoria where works may impact delisted places. The dry stone wall does have significance under the local council planning scheme and a Dry Stone Wall Management Plan has been prepared in consultation with Moyne Shire Council. If the Project will impact this site, the Shire of Moyne must be consulted, and permits must be obtained.

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# 1 INTRODUCTION

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## 1.1 Background

Ecology and Heritage Partners was commissioned by Willatook Wind Farm Pty Ltd to prepare a Historical Heritage Impact Assessment (HHIA) for the Willatook Wind Farm (Map 1).

## 1.2 Project Description

Willatook Wind Farm Pty Ltd (the proponent) is developing the proposed Willatook Wind Farm (the project) in Moyne Shire, Victoria. The project will harness strong and reliable winds to generate renewable energy through the construction and operation of up to 59 wind turbines generators and would operate for a period of at least 25 years following a two-year construction period. The wind farm would generate more than 1,300 gigawatt hours (GWh) of renewable electricity to the National Electricity Market (NEM) each year.

The project is located approximately 22 km to the north of Port Fairy, 32 km to the northwest of Warrnambool and to the south of the Woolsthorpe–Heywood Road. The project is located within an area of private and public land that is largely used for agriculture, predominantly sheep and cattle grazing.

Approximately 60.4 km of access tracks (both new and existing) would be required to provide access from the public road network to each wind turbine and supporting infrastructure. These access tracks provide access for project construction and maintenance vehicles and can be used by emergency vehicles and by landowners for their farming operations.

Electricity produced by the project will be fed through underground cables to the on-site substation, from where it will be exported to the NEM via the Tarrone Terminal Station and the existing Moorabool to Heywood 500 kilovolt (kV) transmission line.

Other project infrastructure would include:

- an on-site quarry for basalt rock that will be used to provide aggregate for access tracks and hardstand areas
- a battery energy storage system (BESS) located immediately to the west of the substation
- an operations and maintenance (O&M) facility consisting of site offices and amenities.

### Operational Activities

Key operational activities will focus on the effective operation of the wind farm. This will include monitoring (on-site or remotely), maintenance and repairs. This would include routine inspections, servicing and repair of wind turbines, maintenance of access tracks and of the electrical system and buildings and plant, including control systems. The project area is currently used as rural farmland, and this would continue after construction. The proposed development footprint consists of 222.3 ha, which is 5.4% of the study area. The operational footprint is estimated to be 99.5 ha, which represents 2.4% of the project site. Construction of the wind farm is expected to take approximately two years to complete, followed by an operational phase of at least 25 years.

## Decommissioning

Within 12 months of wind turbines permanently ceasing to generate electricity, the wind farm would be decommissioned. This would include removing all above ground equipment; restoration of all areas associated with the wind farm, unless otherwise useful to the ongoing management of the land; and post decommissioning revegetation.

## 1.3 Reasons for Preparing this Historical Cultural Heritage Impact Assessment

This HHIA has been prepared in accordance with the Planning Minister's decision to refer the Willatook Wind Farm Project to the EES process.

This HHIA contains detailed information regarding non-Aboriginal historical heritage issues relating to the Project Area.

## 1.4 Scoping Requirements

The Minister's EES scoping requirements set out the specific environmental matters to be investigated and documented in the project's EES, which informs the scope of the EES technical studies. The following are relevant to this cultural and historic impact assessment:

### Draft evaluation objective

- To avoid or minimise adverse effects on Aboriginal and historic cultural heritage and associated values.

### Key issues

- Destruction or disturbance of sites or places of Aboriginal or historical cultural heritage significance.

### Existing environment

- Identify and document known and previously unidentified places and sites of historic cultural heritage significance potentially impacted by the project, including any areas of significant archaeological interest, in accordance with the Guidelines for Conducting Archaeological Surveys (Heritage Victoria, 2013).

### Likely effects

- Assess potential effects of the project on:
  - sites and places of historic cultural heritage significance, having regard to the *Guidelines for Investigating Historical Archaeological Artefacts and Sites*.

### Design and mitigation

- Describe and evaluate proposed design or other measures that could avoid or mitigate potential adverse effects on known or potential Aboriginal or historical cultural heritage values.

### Performance objectives

- Outline any proposed commitments to mitigate and manage residual effects on sites and places of historical heritage significance, including site investigation and recording procedures.

### Environmental management framework

Management measures proposed in the EES to address specific issues, including commitments to mitigate adverse effects and enhance environmental outcomes should be clearly described in the Environmental Management Framework (EMF). The EMF should describe proposed objectives, indicators and monitoring requirements, including for (but not limited to) managing or addressing:

- Historic cultural heritage values

A separate report has been prepared to address matters of Aboriginal heritage (Nicolson et al. 2019).

## 1.5 Project Area

The Project Area is located west of Willatook, southwest of Hawkesdale, east of Broadwater and north of Orford and Tarrone in southwest Victoria (Moyne Shire Council) (see Map 1). The Project Area is approximately 4,154 ha in size and is situated to the south of Woolsthorpe-Heywood Road, between Penshurst-Warrnambool Road and Hamilton-Port Fairy Road (see Map 2). The Project Area is currently used for residential, agricultural, pastoral and utility purposes.

The salient features within the Project Area include stony rises, undulating plains, ephemeral wetlands and a number of waterways ranging in size from minor ephemeral drainage lines to rivers such as the Moyne River and the Shaw River.

## 2 LEGISLATION AND POLICY

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### 2.1 Commonwealth Government

#### ***Environment Protection and Biodiversity Conservation Act 1999***

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a national framework for the protection of heritage, environment and the conservation of biodiversity. The EPBC Act is administered by the Australian Government Department of Agriculture, Water and the Environment (DAWE). The EPBC Act is responsible for the establishment of the National Heritage List, which includes natural, Indigenous and historic places that are of outstanding heritage value to the nation. The EPBC Act also establishes the Commonwealth Heritage List, which comprises natural, Indigenous and historic places on Commonwealth lands and waters or under Australian Government control and identified by the Minister for the Environment (the Minister) as having Commonwealth Heritage values (Department of Agriculture, Water and the Environment 2020).

At current there are no historic places listed within the Project Area on the National Heritage List or the Commonwealth Heritage List.

### 2.2 State Government

#### ***Planning and Environment Act 1987***

All municipalities in Victoria are covered by land use planning controls which are prepared and administered by State and local government authorities. The legislation governing such controls is the *Planning and Environment Act 1987*. Places of significance to a locality can be listed on a local planning scheme and protected by a Heritage Overlay (or another overlay where appropriate). Places of Aboriginal cultural heritage significance can often not be included on local government planning schemes.

The purpose of the Heritage Overlay is:

- To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies;
- To conserve and enhance heritage places of natural or cultural significance;
- To conserve and enhance those elements which contribute to the significance of heritage places;
- To ensure that development does not adversely affect the significance of heritage places; and
- To conserve specifically identified heritage places by allowing a use that would otherwise be prohibited if this will demonstrably assist with the conservation of the significance of the heritage place.

The Project Area is located within, and is governed by, the Moyne Planning Scheme, and is part of the Shire of Moyne. There are no places listed on the Heritage Overlay in the Project Area; however, the Moyne Dry Stone Wall Policy applies to the Project Area. There is one dry stone wall within the Project Area.

### ***Heritage Act 2017***

Section 12 of the *Heritage Act 2017* is Assessment criteria regarding cultural heritage significance.

This section of the Act states that in determining assessment criteria for includes of places and objects in the Heritage Register under S.11(1)(k), the Heritage Council must have regard to the following matters:

- Criterion A: historical importance, association with or relationship to the State's history;
- Criterion B: Good design or aesthetic characteristics;
- Criterion C: Scientific or technical innovations or achievements;
- Criterion D: Social or cultural associations;
- Criterion E: Potential to educate, illustrate or provide further scientific investigation in relation to the State's cultural heritage;
- Criterion F: Importance in exhibiting a richness, diversity or unusual integration of features;
- Criterion G: Rarity or uniqueness of a place or object; and
- Criterion H: The representative nature of a place or object as part of a class or type of places or objects.

The Heritage Council must also have regard to the methods of establishing the extent to which land or object nominated for inclusion in the Heritage Register in association with a registered place or a place nominated for inclusion are integral to the State-level cultural heritage significance of the place and any other matter which is relevant to the determination of State-level cultural heritage significance.

In addition, it is appropriate when assessing the significance of a site in Victoria to consider whether it is of Local, Regional or State (or potentially National) significance.

The Victorian Heritage Register (VHR) provides the highest level of statutory protection for historical places in Victoria. Places included in the VHR are subject to the provisions of the *Heritage Act 2017*.

This Act protects all heritage places deemed to be of State significance by registration in the Victorian Heritage Register (VHR). Proposed impacts to any site registered in the VHR will require a Permit from Heritage Victoria (HV). This Act also protects all non-Aboriginal archaeological sites older than 75 years. If non-Aboriginal archaeological sites of State Significance are listed in the VHR a Permit is required to impact the site from Heritage Victoria. If a non-Aboriginal archaeological site is not of State significance and has archaeological value it is usually listed in the Victorian Heritage Inventory (VHI) and a Consent from Heritage Victoria would be required to impact the site.

There are two historical heritage places included in the VHI within the Project Area which were identified during a field survey: VHI H7321-0104 (Woolsthorpe-Heywood Road Hut 1) and VHI 7321-0105 (Woolsthorpe-Heywood Road Ruin). In addition, there is one dry stone wall which has been



delisted from the Victorian Heritage Inventory (D7321-0040 Landers Lane Dry Stone Wall)) and therefore has no statutory protection under state legislation. Whilst dry stone walls no longer meet the thresholds for inclusion in the VHI under the Heritage Act 2017, these sites may contain potential for other reasons and all archaeological remains are protected by the blanket provisions of the *Heritage Act 2017*.

### ***The Environment Effects Act 1978***

The *Environment Effects Act 1978* provides for assessment of proposed projects that can have a significant effect on the environment. One or a combination of several criteria may trigger a requirement for a Referral to the Victorian Minister for Planning, who will determine if an Environmental Effects Statement (EES) is required according to the Ministerial Guidelines for Assessment of Environmental Effects under the *Environment Effects Act 1978* (DSE 2006). An EES describes a project and its potential environmental effects, enabling stakeholders and decision-makers to understand how the project is proposed to be implemented and the likely environmental effects of doing so.

The proposed WWF was Referred to the Victorian Minister for Planning on 05 October 2018. On the 27 December 2018, the Minister for Planning decided that an Environment Effects Statement (EES) was required for WWF. The procedures and requirements for the EES assessment process are set out in the Minister's Statement of Decision, the Ministerial Guidelines and are further detailed in the scoping requirements.

This report addresses Section 4.6 (Cultural heritage) of the EES scoping requirements (see Section 1.4).

## 3 EXISTING CONDITIONS

### 3.1 Stakeholder Consultation

#### 3.1.1 Name of Owners and Occupiers of the Project Area

The Project Area primarily consists of agricultural land comprised of stony rises, gentle undulating slopes and low-lying areas subject to flooding. The Project Area is crossed by a number of public roads; these are excluded from the proposed works. A full list of properties within the Project Area is shown in Table 1.

**Table 1:** Cadastral Details of the Project Area

PARCEL_SPI	PARCEL_SPI	PARCEL_SPI	PARCEL_SPI	PARCEL_SPI	PARCEL_SPI
2043\PP2237	6\TP403368	2B~21\PP2835	1A~16\PP2835	1\TP843774	2\PS513764
2044\PP2237	7\TP403368	3~A\PP2835	2~16\PP2835	4\TP843774	1\PS519322
2041\PP2237	4\TP403368	1\TP119974	3B~16\PP2835	5\TP843774	2\PS519322
2040\PP2237	5\TP403368	8~A\PP2835	3A~16\PP2835	4B~8\PP2835	2B~4\PP2835
2039\PP2237	1A1~8\PP2835	5\TP242579	4A~16\PP2835	2\TP396974	1B~4\PP2835
2038\PP2237	1~8\PP2835	1\TP843794	1~15\PP2835	1\TP396974	3\TP843794
2009\PP2835	2~8\PP2835	2\LP98389	1\TP123936	4~10\PP2835	2A~4\PP2835
2049\PP2237	2A~8\PP2835	36A\PP2237	2\TP529477	1\TP242579	1A~4\PP2835
2050\PP2237	3A~8\PP2835	36B\PP2237	3A~15\PP2835	3A~5\PP2835	5A~4\PP2835
2051\PP2237	3B~8\PP2835	35A\PP2237	1\TP529477	3B~5\PP2835	2\TP242579
2015\PP2835	4A~8\PP2835	35B\PP2237	2B~20\PP2835	4B~5\PP2835	3\TP242579
2048\PP2237	9\TP403368	15D\PP2237	1A~21\PP2835	5A~5\PP2835	4B~16\PP2835
2026\PP2835	2\TP826990	15E\PP2237	1B~21\PP2835	5B~5\PP2835	1B~16\PP2835
2025\PP2835	1\LP218923	15A\PP2237	1B1~21\PP2835	3A~4\PP2835	2\PS601753
2\TP843794	2\LP218923	1\TP403368	1B2~21\PP2835	3B~4\PP2835	
4B1~4\PP2835	2045\PP2237	3\TP403368	1B3~21\PP2835	2\TP843774	
4B2~4\PP2835	2010\PP2835	2\TP403368	2C~21\PP2835	3\TP843774	
1~11\PP2835	2043\PP2237	8\TP403368	2A~21\PP2835	4\TP242579	

#### 3.1.2 Consultation with Heritage Victoria

Heritage Victoria has been consulted by Willatook Wind Farm Pty Ltd. Michael Galimany (Senior Heritage Officer, Major Transport Unit, Heritage Victoria) is a member of the Technical Reference Group (TRG) and indicated the presence of the Turkish Bath House, listed on the Register of the National Estate, during an initial TRG panel site visit. The Turkish Bath House is no longer included within the Project Area.

A Notice of Intention to Survey was submitted to Heritage Victoria on 30 November 2009. Heritage Victoria responded and assigned Heritage Victoria Project Number 3725 to the project. The Project Area was surveyed in 2010, and an additional survey was undertaken between 11-14 November 2020. The results of these surveys are documented in a Historical Heritage Assessment report which has been lodged with HV (HV Project Number 3725, de Leiuen et al. 2020).

## 4 METHODOLOGY

### 4.1 Desktop Assessment

A search of relevant heritage databases and the Moyne Planning Scheme was undertaken using a 5 km buffer around the extent of the Project Area. Using a search area of this size ensures that relevant data is captured and can be used to inform a historical heritage site prediction statement. In addition to the database searches, topographic and parish maps were examined in order to identify areas where historical structures or archaeological deposits may remain.

**Table 2: Summary of Previously Identified Historical Heritage Sites within 5 km of the Study Area**

Register & Place Number	Place Name	Place Type	Within Study Area?
VHI D7321-0040	Landers Lane Dry Stone Wall	Dry Stone Wall	Yes
VHI H7321-0022	Moyne River Stone Foundations	Foundation of hut/domestic site	No
VHI D7321-0039	Harton Hills Dry Stone Wall Complex	Dry Stone Wall	No
VHI D7321-0025	Officer Dry Stone Wall 1	Dry Stone Wall	No
B3007 RNE 3785	Dunmore Turkish Bath/Turkish Bath House, Woolsthorpe Heywood Rd	Pastoral – the bath house was used for sheep dipping	Yes

### 4.2 Historical Heritage Standard Assessment (Ground Surface Survey)

The Project Area was surveyed from 14 to 18 December 2009 and from 18 to 19 January 2010 by Oona Nicolson and Jen Burch (Archaeologists/Heritage Advisors). An additional survey was undertaken from 11-14 February 2020 by Cherrie de Leuien, Ashton Sinamai and Andrew Wilkinson (Archaeologists/Heritage Advisors).

These surveys took the form of a targeted systematic pedestrian and vehicle survey. A targeted method was employed whereby every proposed turbine location (being 150 locations at the commencement of the assessment (commenced for the preparation of a CHMP) but since reduced to 59) was accessed by foot or by vehicle and then the entire impact area at each proposed turbine location was subject to pedestrian survey within a 50 m radius of the centre of each proposed turbine location. Although the number of participants in the survey varied, the methodology of the survey remained the same: four to five participants walked 2 m apart across each turbine impact area. Therefore, the entire impact area at each proposed turbine location was subject to systematic surface survey. As nearly all of the Project Area is marked as potential infrastructure areas, the remainder of the Project Area was surveyed slowly from a vehicle and assessed for the presence of potential historical heritage places. The surveyors alighted from the vehicle if there were any exposed areas of ground surface and inspect them. This allowed for the entire 4,154 ha Project Area to be assessed for areas of historical cultural heritage archaeological sensitivity or likelihood. Site cards were submitted to Heritage Victoria for all places identified. Of the five places for which site cards were submitted, three were added to the Victorian

Heritage Inventory; however, only two now remain within the Project Area. These places are detailed in a separate report (De Leuien et al. 2020) and below in Section 5.

The results of the desktop assessment and field survey are presented in Section 5. The HHA report is attached at Appendix 3.

## 5 RESULTS

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### 5.1 Desktop Assessment Results

#### 5.1.1 Geology, Geomorphology and Vegetation in the Project Area

The defined geographic region for the proposed Willatook Windfarm is an arbitrary 5 km radius of the activity area. This area forms part of the greater Victorian Volcanic Plain as well as a portion of the Warrnambool Plain, and falls under the jurisdiction of the Glenelg Hopkins Catchment Authority (DELWP 2017a). The activity area forms a part of the Moyne Shire Council municipal area. This geographic region is relevant to any Aboriginal cultural heritage that may be present within the activity area. The desktop assessment has been undertaken in relation to the activity area being approximately five kilometres surrounding the activity area.

The Victorian Volcanic Plain is dominated by Cainozoic basalt deposits, formed by continuous volcanic activity over the last 6 million years. The region is typified by extensive flats and undulating basaltic plains, stony rises and old lava flows, with volcanic cones and old eruption points dotted across the landscape. Salt and freshwater lakes are also common within the landscape. Soils within the Victorian Volcanic Plain are variable and include fertile reddish-brown to black loams and clays, red friable earths, acidic contrast soils and scoraceous material and support a wide variety of flora. Wetlands within the region include inland salt marshes, subterranean karst wetlands, freshwater and saline/brackish lakes and freshwater ponds and marshes, supported by a relatively evenly distributed annual rainfall of 450–840 mm (Map 4).

The geographic region further allows for an understanding of the specific vegetation history and resource availability around the Project Area and exhibits environmental characteristics that likely influenced Aboriginal occupation. The geographic region addresses the environmental context of Holocene resources available from the Project Area, as well as natural features that would have influenced the movement of groups across the landscape. The geographic region thus relates to the tangible and intangible values of the landscape and is highly relevant to any Aboriginal cultural heritage that may be present within the Project Area.

##### 5.1.1.1 Geology

The geology of Project Area comprises four geological units (Map 4):

- Qa1: Unnamed alluvium, Fluvial: alluvium, gravel, sand, silt (Quaternary (Holocene) to Quaternary (Holocene) in age);
- Qm1: Unnamed swamp and lake deposits, Paludal: lagoon and swamp deposits: silt, clay (Quaternary (Holocene) to Quaternary (Holocene) in age);
- Qno2: Unnamed stony rises, Extrusive: stony rises (Neogene (Miocene) to Quaternary (Pleistocene) in age); and



- Qn: Newer Volcanic Group, Extrusive: tholeiitic to alkaline basalts (Neogene (Miocene) to Quaternary (Pleistocene) in age).

The geology of the northern part of the Project Area (north of Woolsthorpe-Heywood Road) generally consists of extrusive igneous rocks of the New Volcanic Province. This geology was laid down between the Miocene and Pleistocene periods and comprises tholeiitic to alkaline basalt, minor scoria and ash (Geological Society of Victoria 1997). The geology of the majority of the southern portion of the Project Area (south of Woolsthorpe-Heywood Road) comprises unnamed stony rises of the Newer Volcanic Province laid down between the Miocene and Pleistocene periods (Geological Society of Victoria 1997). This geology is associated with Holocene unnamed alluvial deposits incorporating fluvial alluvium, gravel, sand, and silt and small areas of Holocene unnamed paludal swamp and lake deposits (Qm1) (Geological Society of Victoria 1997). Soils within the Project Area generally consist of ferric brown and yellow chromosols (DPI 2010a) (Map 4).

#### **5.1.1.2 Soils**

This geology is associated with Holocene unnamed alluvial deposits incorporating fluvial alluvium, gravel, sand, and silt and small areas of Holocene unnamed paludal swamp and lake deposits (Geological Society of Victoria 1997). Soils within the activity area generally consist of ferric brown and yellow chromosols (DPI 2010a).

#### **5.1.1.3 Late Holocene Vegetation**

According to the Department of Environment, Land, Water and Planning's (DELWP 2017b) Ecological Vegetation Classes (EVCs), the soils of the bioregion within the Project Area would have historically supported vegetation classified as

- EVC 714 Stony Knoll Shrubland/Plains Grassy Woodland/Damp Heathland/Damp Heathy Woodland Mosaic;
- EVC 742 Basalt Shrubby Woodland/Herb-Rich Foothill Forest Mosaic;
- EVC 642 Basalt Shrubby Woodland;
- EVC 744 Stony Knoll Shrubland/Basalt Shrubby Woodland Mosaic;
- EVC 647 Plains Sedgy Wetland;
- EVC 53 Swamp Scrub;
- EVC 83 Swampy Riparian Woodland;
- EVC 125 Plains Grassy Wetland,
- EVC 68 Creekline Grassy Woodland; and
- EVC 732 Damp sands Herb-Rich Woodland/Plains Swampy Woodland/Aquatic Herbland Mosaic.

Full descriptions of these EVCs are contained in the flora and fauna report prepared for the project (Nature Advisory 2021).

### 5.1.2 Database Searches

A review of the various relevant databases was conducted and, as a result, a total of four registered historical places were identified within the Project Area. The database review is discussed below in relation to the study area and surrounding region. For the purposes of the database searches, a 5 km buffer from the edge of the Project Area was used to gain an insight into the location and nature of previously recorded historical heritage places in the region; this can then be used to inform a historical heritage site prediction model.

#### 5.1.2.1 Victorian Heritage Register

The Victorian Heritage Register (VHR), established by s.23 of the *Heritage Act 2017*, provides the highest level of statutory protection for historical places and objects in Victoria. Only the State's most significant historical places and objects are listed in the VHR.

A search of the VHR was conducted for a 5 km radius around the Project Area. The search did not identify any registered historical heritage places or objects in the search area (Map 6).

#### 5.1.2.2 Victorian Heritage Inventory

The Victorian Heritage Inventory (VHI), established by s.117 of the *Heritage Act 2017*, provides statutory protection for all historical archaeological sites, areas or relics, and private collections of relics, in Victoria. Places listed in the VHI are not of State significance but are usually of regional or local significance.

A search of the VHI was conducted for a 5 km radius around the Project Area. The search identified a total of four historical heritage places in the search area (Map 6). These sites include:

- H7321-0022 (Moyne River Stone Foundation);
- D7321-0040 (Landers Lane Dry Stone Wall);
- D7321-0025 (Officer DSW1); and
- D7321-0039 (Harton Hills Dry Stone Wall Complex).

Of these four places, only one may be impacted by the Project. D7321-0040 (Landers Lane Dry Stone Wall) is located within the Project Area. It is described on the Heritage Victoria site card as being in poor condition. Note that this site has been assessed to have no archaeological potential and has been delisted from the Victorian Heritage Inventory; it therefore has no statutory protection under the *Heritage Act 2017*.

Two places within the search area, D7321-0025 and D7321-0039, are deemed by HV to have no archaeological potential and have been delisted from the Victorian Heritage Inventory; these dry stone walls are located beyond the footprint of the wind farm and will not be impacted by the Project.

H7321-0022 (Moyne River Stone Foundation) is the only place within the search area to have statutory protection through being included on the Victorian Heritage Inventory. It is outside of the Project Area and will not be impacted by the Project.

### **5.1.2.3 Victorian War Heritage Inventory**

The Victorian War Heritage Inventory (VWHI) was established in 2011 as a means to catalogue Victoria's war history such as war memorials, avenues of honour, memorial buildings, former defence sites and places of commemoration. Places listed on the VWHI do not currently have discrete statutory protection; however, many are concurrently listed on the VHR, VHI, or local planning schemes.

A search of the VWHI was conducted for a 5 km radius around the Project Area. The search identified one registered historical heritage place in the search area, the Willatook Soldier Settlement Memorial Plaque. It is not located in the Project area and will not be impacted by the Project.

### **5.1.2.4 Local Council**

The Project Area is located within the Shire of Moyne and is governed by the Moyne Planning Scheme. Planning schemes set out policies and provisions for the use, development and protection of land.

The Heritage Overlay (HO) of the Moyne Planning Scheme was examined for a 5 km radius around the Project Area (DELWP 2019). The search did not identify any registered historical heritage places in the search area (Map 6).

However, the dry stone wall recorded as VHI D7321-0040 (Landers Lane Dry Stone Wall) was constructed mid-19<sup>th</sup> century and is therefore protected by the Moyne Dry Stone Wall Policy, Clause 52.33 of the Moyne Planning Scheme.

### **5.1.2.5 National Trust Register**

The National Trust of Australia (Victoria) is an independent, not-for-profit organisation that classifies a number of heritage places. Listing on the National Trust Register (NTR) does not impose any statutory protection; however, often National Trust listings are supported by the local council Planning Scheme.

A search of the NTR was conducted for a 5 km radius around the Project Area. The search identified a total of one registered historical heritage places in the search area (Map 6).

- B3007 ('Dunmore' Turkish Bath). This bath house was constructed by Charles Hamilton Macknight, the original owner of the Dunmore pastoral run. It is constructed of coursed bluestone and has a steep roof with a Gothic portal highlight window. It was heated with a steam boiler and lined with timber (Victorian Heritage Database 2020).

This site is not located within the Project area.

### **5.1.2.6 Commonwealth and International Heritage Lists**

The Commonwealth Department of Agriculture, Water and the Environment (DAWE) maintains the National Heritage List (NHL), a register of exceptional natural, Aboriginal and historical heritage places which contribute to Australia's national identity. The DAWE also maintains the Commonwealth Heritage List (CHL), a register of natural, Aboriginal or historical heritage places located on Commonwealth land which have Commonwealth heritage values.

A place can be listed on one or both lists, and placement on either list gives the place statutory protection under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The World Heritage List (WHL) lists cultural and natural heritage places which are considered by the World Heritage Council to have outstanding universal value.

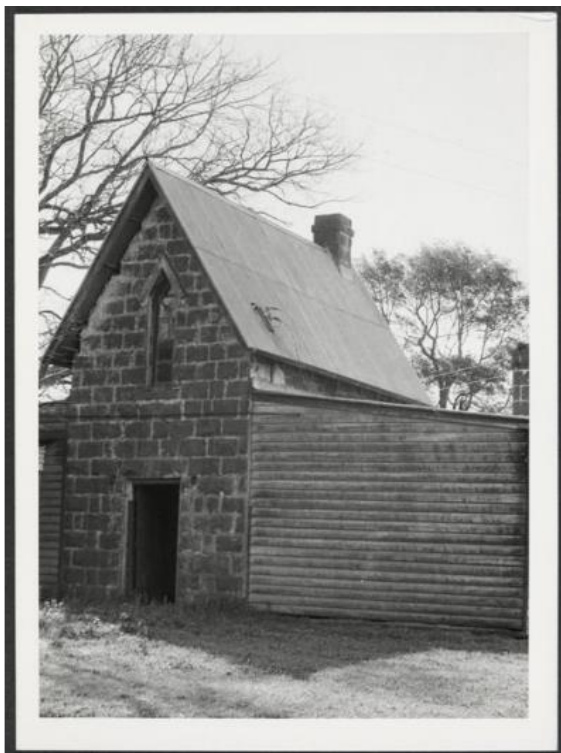
The DAWE also maintains the Register of the National Estate (RNE) which is a list of natural, Indigenous and historic heritage places throughout Australia. Following amendments to the *Australian Heritage Council Act 2003*, the RNE was frozen on 19 February 2007, and no new places have been added or removed since then. The RNE ceased as a statutory register in February 2012, although items listed on the RNE may continue to be considered during approvals processes. Many items on the RNE have been listed on the NHL or CHL. They may also be registered on State or local heritage registers. In these cases, those items are protected under the relevant Commonwealth or State heritage legislation. However, items that are only listed on the RNE no longer have statutory heritage protection.

Listings on the NHL, CHL, WHL and RNE are accessed via the Protected Matters Search Tool (PMST) and Australian Heritage Database (AHD), managed by DAWE.

A search of the AHD (DAWE 2020) was conducted for a 5 km radius area centred on the Project Area. The search identified one historical heritage place listed on the Register of the National Estate in the search area (Map 6):

- RNE 3785 (Turkish Bath House)

This place is not located within the Project area and is shown in Plate 1, below. As mentioned above, this place is also listed on the National Trust Register.



**Plate 1:** View of the Turkish Bath House at Dunmore Estate, RNE 3785/ NTR B3007 (Source: SLV)

### 5.1.2.7 Summary

A summary of the relevant historical heritage sites appears in Table 3.

**Table 3:** Summary of Previously Identified Historical Heritage Sites within 5 km of the Project Area

Register & Place Number	Place Name	Place Type	Within Project Area?
VHI D7321-0040	Landers Lane Dry Stone Wall	Farming	Yes
RNE 3785/ NTR B3007	Turkish Bath House/ 'Dunmore' Turkish Bath	Residential Buildings (Private)	No
VHI D7321-0025	Officer DSW 1	Farming	No
VHI D7321-0039	Harton Hills Dry Stone Wall Complex	Farming	No
VWHI	Willatook Soldier Settlement Memorial Plaque	Memorials	No

## 5.1.3 Reports and Published Works

### Previous relevant studies within the geographical region of the Project Area

Regional and localised archaeological investigations have established the general character of historical sites located within the same geographic region as the Project Area. This information can be used to form the basis for a site prediction model.

#### 5.1.3.1 Regional Heritage Studies

Doyle (2006) undertook a regional heritage study for the Moyne Shire Council. She noted that the Shire was a relatively recent creation having been created in 1995 following the amalgamation of the Borough of Port Fairy, the Shires of Belfast, Minhamite and Mortlake and parts of the former Shires of Warrnambool, Mount Rouse, Dundas and Hampden.

French explorers visited the coast in 1802; these were followed by whalers and sealers and the settlement at Port Fairy was established in 1810. Others were drawn by the reports of lightly wooded countryside (which was easily cleared) and abundant fresh water (Doyle 2006: 8). Following European settlement in the region, the land within what is now Moyne Shire became renowned for its rich pasture land and agricultural productivity (Doyle 2006: 1). By the mid-1830s squatters had taken up pastoral runs; in 1836, the governor of New South Wales, Richard Bourke, imposed a licence fee of £10 a year for pastoral leases on unsettled areas.

At first, homesteads were modest but as the certainty of land tenure improved, homes became more substantial and associated outbuildings such as dairies, stables, underground tanks, school houses, servants and domestic quarters were constructed, often of the locally available stone (Doyle 2006: 16-17). From the 1870s on, swampy areas were drained to enable them to be used for agricultural production (Doyle 2006: 19).

A series of acts were passed in 1898 and 1904 in which large pastoral holdings were compulsorily acquired and subdivided to allow for closer settlement. Soldiers returning from first World War 1 and then World War 2 were able to acquire parcels of land under the Soldier Settlement Scheme (Doyle 2006: 34). Crops grown throughout the region include wheat, hops and tobacco, while the rich pasture supported the dairy industry. Other regional industries included timber milling, lime burning and quarrying.

Within the Project Area itself, pastoralism is the main industry.

### 5.1.3.2 Relevant Historical Archaeological Reports

Murphy et al. (2010) prepared a historical heritage assessment for the Macarthur Wind Farm. The desktop assessment identified no historical heritage sites in the activity area; however, the ground surface survey resulted in the identification of nine historic sites, eight of which were dry stone walls and the remaining site being a shepherd's hut which were added to the Victorian Heritage Inventory. Additional places with historical archaeological significance were identified during the survey but were not considered worthy of listing on any heritage instrument; however, these were later reassessed and given further consideration. As a result, VHI D7321-0040 (Landers Lane Dry Stone Wall) was added to the VHI; it was, however, assessed as being of low cultural heritage significance as historic fabric associated with mid-19<sup>th</sup> century pastoral activities in the area (Murphy et al. 2010: v). Murphy et al. (2010: v) noted the presence of the Turkish Bath House at Woolsthorpe was listed on the Register of the National Estate.

A summary of archaeological reports relevant to the geographical region of the Project Area appears in Table 3.

**Table 4:** Archaeological Reports Pertaining to the Project Area

Author	Date	Location and Description	Results
du Cros and Associates	1993	An archaeological survey of the proposed Hamilton gas pipeline, commencing southwest of Orford and terminating in Hamilton. The route runs southwest and west of the current Project Area. The pipeline is located immediately adjacent to, but outside, the far eastern boundary of the current Project Area.	No historical sites were identified.
I. McNiven and L. Russell	1994a	A desktop study of a proposed optical fibre cable route between Broadwater and Macarthur and Macarthur and Ripponhurst was undertaken. This section of the cable route is located north and west of the current Project Area. A second cable route option, between Condah, Wallacedale and Breakaway Creek, more than	It was noted that homesteads and a dairy factory were located close to the road reserves.



		30 km northwest of the current Project Area, was also investigated.	
I. McNiven and L. Russell	1994b	An archaeological sample survey of a proposed optical fibre cable route between Broadwater and Macarthur and Macarthur and Ripponhurst was undertaken. This section of the cable route is located north and west of the current Project Area. A second cable route option, between Condah, Wallacedale and Breakaway Creek, more than 30 km northwest of the current Project Area, was also investigated.	The four historical archaeological sites, including two house sites, a dairy site and a piggery site identified in McNiven and Russell (1994a) desktop study were inspected. None of the sites were listed on the Victorian Heritage Inventory.
I. McNiven and L. Russell	1995	A desktop study of six different proposed optical fibre cable routes in southwest Victoria was undertaken. One of these proposed routes runs between Yambuk, Orford, Willatook and Warrong and bisects the current Project Area, running along road reserves which are located within the current Project Area.	It was predicted that historical sites would probably not occur within the study area examined as the optical fibre cable route travels along road reserves.
I. McNiven and L. Russell	1998	An archaeological survey of a proposed optical fibre cable route between Broadwater and Bessiebelle, west of the current activity area. One section of the cable route is located immediately north of the easternmost section of the current Project Area, along Woolsthorpe-Heywood Road and Dysons Road.	No historical archaeological sites were identified.
V. Wood	2001	An archaeological survey of a proposed gas pipeline route between Iona in Victoria and Adelaide in South Australia was undertaken. The route included land extending northeast of Willatook, bisecting the current Project Area.	No historical archaeological sites were identified.
D. Rhodes	2006	An archaeological survey of a proposed timber plantation near Broadwater, west of the current Project Area, was undertaken.	No historical archaeological sites were identified.
T. Meara and B. Slavin	2009	An archaeological survey of a proposed gas-fired power station and gas pipeline was undertaken. This is located within the current Project Area, running south from Riodans Road to just north of	No historical archaeological sites of high enough significance to be listed on the Victorian Heritage Inventory were identified; however, a dry stone wall in very poor condition within the current

		Kangertong Road, and running southwest from Riordans Road west of Tarrone North Road to just north of Poyntons Road.	Project Area was identified. It was not considered significant enough to warrant listing.
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## 5.1.4 Historical Context

### Land Use History

The Project Area and the surrounding land was first occupied by European settlers, particularly people of Irish origin, in the mid-1830s and early 1840s. The area has been used for pastoral and agricultural purposes since that time, especially the running of sheep and dairy cattle, and the growing of potatoes, onions, oats and hay (LCC 1996: 41). The pastoral runs and farms were often delineated by kilometres of dry stone walls which can be seen in the region today.

The Project Area lies within the extent of four prior pastoral runs: Dunmore, Tarrone, Kangeratong and Woodlands.

Tarrone Station was owned by Dr Kilgour (Clark 1990: 53) and Dunmore Station was owned by William Campbell on the Shaw River (Clark 1990: 69).

More recently, utilities installations including overhead powerlines and underground optical fibre cable routes, gas and water pipelines have been installed within the Project Area.

## 5.1.5 Historical Archaeological Site Prediction Statement

The following site prediction model has been formulated on the review of the findings of these previous assessments. The model presented is based on a site type approach. The most likely types of historical sites to be present within the Project Area include the following:

### 5.1.5.1 Domestic Sites

Evidence of domestic occupation may include structural remains or ruins of homesteads and/or outbuildings, domestic rubbish dumps or bottle dumps, wells or underground storage tanks.

It is likely that this site type will occur within the Project Area. One known such site is associated with the Turkish Bath House on the Dunmore pastoral run.

### 5.1.5.2 Dry Stone Walls

Dry stone walls may line internal property divisions or external property boundaries.

It is likely that this site type will occur within the Project Area. A dry stone wall has previously been recorded in the Project Area, VHI D7321-0040 (Landers Lane Dry Stone Wall)

### 5.1.5.3 Tree Plantings

Historical tree plantings may be evidenced by large introduced trees planted along original driveways, paddock boundaries or close to homestead sites.

It is likely that this site type will occur within the Project Area.

### 5.1.5.4 Farming Sites

Evidence of farming may include fence lines, dams, water channels, plantings or terracing.

It is likely that this site type will occur within the Project Area.

#### **5.1.5.5 Pastoral Sites**

Breeding of livestock and dairying may be evidenced by the remains of stockyards, stables, barns and holding pens.

It is likely that this site type will occur within the Project Area.

### **5.1.6 Summary of the Desktop Assessment Results**

Previous heritage studies and the land use history demonstrates the region's rich history of pastoralism. Historical heritage archaeological sites that have been identified include homestead and house sites and sites associated with dairying and other animal husbandry in the form of a piggery.

There are two known historical heritage places located within the Project Area: VHI D7321-0040 (Landers Lane Dry Stone Wall) and RNE 3785/ NTR B3007 (Turkish Bath House). Although the dry stone wall has been delisted from the VHI, it is nevertheless protected under the provisions of the Moyne Planning Scheme.

## **5.2 Results of the Survey**

### **5.2.1 Previously Recorded Places**

A total of two previously recorded historical heritage places were identified during the survey; however, the Project Area has since changed and one of these, the Dunmore Turkish Bath House, is no longer included in the Project Area and will not be impacted. In addition, as a result of the survey, the Dunmore Turkish Bath House was added to the Victorian Heritage Inventory as VHI H7321-0103 (Dunmore Turkish Bath House).

#### **5.2.1.1 Site 1: Dunmore Turkish Bath House (VHI H7321-0103, B3007 & RNE 3785) Woolsthorpe Heywood Rd, Broadwater**

**Location:** 'Dunmore' Turkish Bath House and its associated structure is located within the current occupied property of 'Dunmore' on Woolsthorpe-Heywood Road and was accessed with permission of current landowners. The ruin of the 'kitchen' site is approximately 25 m east of the bath house (and the site of the old Dunmore homestead, standing at the west and east ends of the old homestead site respectively). The site is no longer located within the Project area; it is therefore not under threat from any of the associated or proposed development by Willatook Wind Farm.

A photograph of the bath house and Dunmore homestead was taken by Soden in 1866 (Plate 2).



**Plate 2:** View of Dunmore homestead with the Turkish Bath House in 1866 shortly after its construction  
(Source: SLV)



**Plate 3:** Dunmore Turkish Bath House, front, showing portal and highlight window and timber skillion extension built on western side, view facing north  
Photo: C. De Leuven

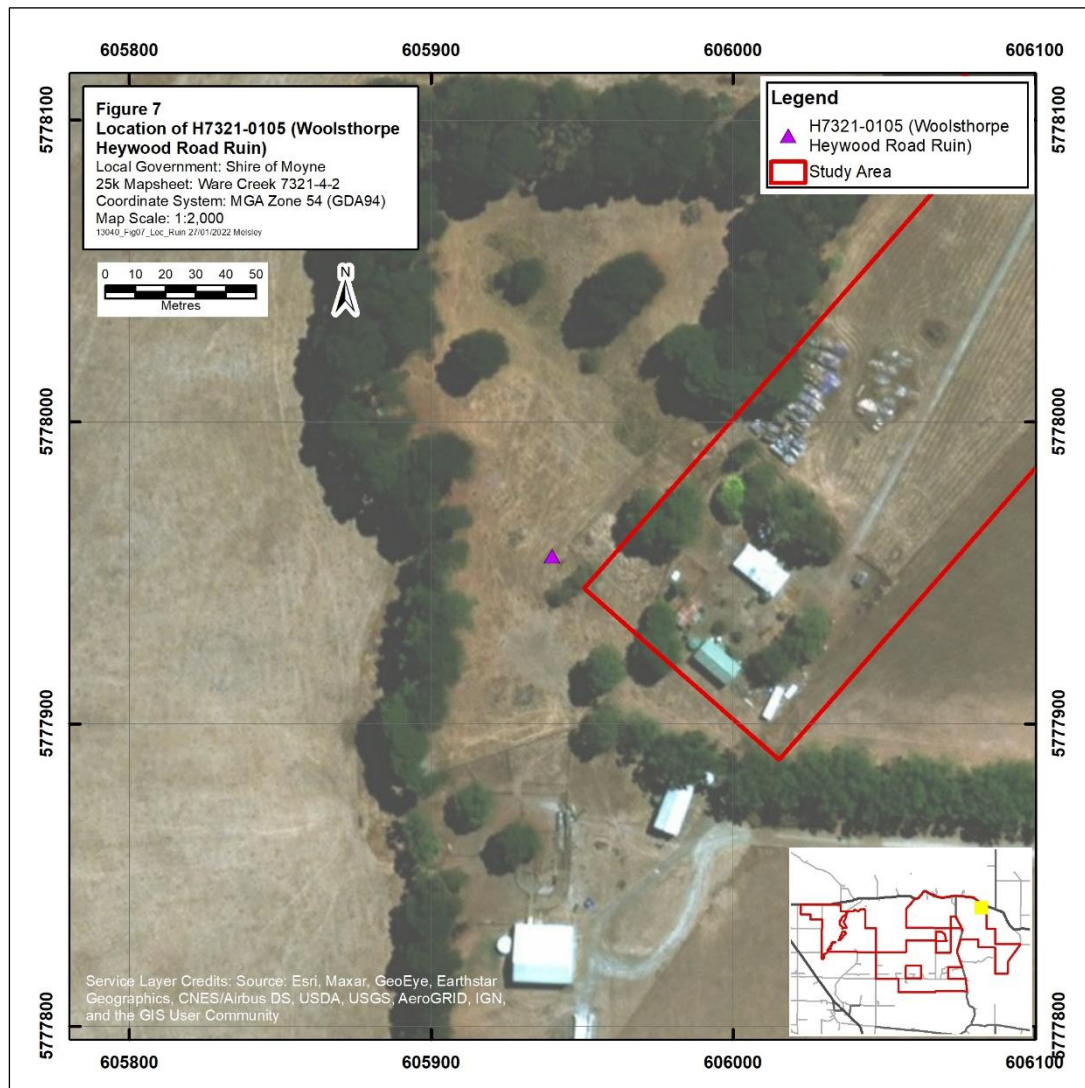
**Interpretation:** The Turkish bath house at Dunmore was erected in 1866 for Scottish immigrant and pastoralist Charles Hamilton Macknight. The chimney was built by stonemason John Perry, from Cornwall (Context 2013). The bluestone was probably quarried locally. The bath house was most likely



added after the homestead had been built in the 1850s. Macknight was the son of Dr Thomas Macknight, a minister of the High Church, St Giles, Edinburgh, and was a temperance advocate.

The bath house was essentially a steam bath, with steam being made by the hearth (right hand side of the structure) rising up through the floorboards. The internal lining of this building was timber so would have been full of moisture.

In his diary on 7 October 1867, Macknight recorded the successful use of the Turkish bath for the treatment of fluke in his sheep, noting that the tics were successfully 'killed at 180°' (approximately 82°C) (Victorian Turkish Bath 2020).



**Figure 1:** Location of Dunmore Turkish Bath House site

The Dunmore homestead was destroyed in a fire in 1939; the kitchen building and the bathhouse were the only section of the original homestead to survive the fire.

The Turkish bath house is of historical significance as a rare example (if not the only example) of a bath house built for a mid-19<sup>th</sup> century pastoral homestead. The bath house is also significant for

demonstrating new interest in personal hygiene which was achieved through bathing. It also has local historical significance for its association with prominent Western District Scottish squatter Charles Hamilton Macknight (1819-1873).

**Condition:** The Turkish bath house and kitchen ruin at the former Dunmore homestead site were built in the 1860s. The bath house is thought to have been constructed in part by Port Fairy stonemason John Perry, for the Scottish-born Charles Hamilton Macknight in 1866. It is a Picturesque Gothic styled bluestone structure comprising two chambers, with a portal, highlight window and a steeply pitched roof. The Turkish Bath house is constructed of squared, coursed bluestone. There is visible stepped cracking above a portal and triangular pseudo-arch highlight window (no glass remaining in situ), as well as above the main doorway (see Plate 1). The design is Gothic, and there are two chambers likely serving as a changing room and bathing room.

The lintel stone above the doorway remains and is inscribed 1866 (Plate 5). Wooden door on eastern wall has been repaired and/or replaced at some stage but no longer functional.

The gabled roof is steeply pitched and clad in corrugated iron. This is in a fair condition, with some corrosion and movement of sheeting visible.

A stone chimney is set into the roof line of the right of the main doorway. This is in a more serious state of disrepair with some coursing in a state of collapse above the heath brickwork. The woodwork/ timber skillion adjoining the chimney to the bath house proper is badly deteriorated with wood collapsing into the structure and blocking entry.

The later 20<sup>th</sup> century additions of a weatherboard skillion on the left side and to the rear (north) section remain but are collapsing and hazardous (these are first shown on a 1968 image by J Collins SLV see Plate 2).

The adjacent bluestone kitchen building is in a ruinous state. It includes a bread oven and evidence of two rooms, indicating a past residential use. Plate 4, a photo taken in 1968 and Plate 5 shows the deterioration of the property since that time.



**Plate 4:** Hawkesdale "Dunmore" by John T Collins, 1968. Source SLV



**Plate 5:** Hawkesdale. "Dunmore" Kitchen by John T Collins, 1968. Source SLV

There are remains, and layout of the rooms of the original stone structure are visible but in a state of neglect (Plate 4, Plate 5).

Overall, the bath house is currently in a very poor condition and is not being maintained. It is not known whether any internal structures or fittings have survived as the internal rooms were not able to be accessed safely. There are several trees located around the bath house the roots of which may be

escalating the cracking and general failure of the northern wall. The timber additions to the structure are collapsed and hazardous. Trees growing around the structure are likely causing additional damage and are a threat. the Turkish Bath House is not in use but used for storage of general household hard rubbish. It is in a neglected state.





**Plate 6:** Kitchen site at Dunmore associated with original 1850s estate of Macknight. View South. Photo. A. Wilkinson



**Plate 7:** Kitchen and 2 roomed structure, view south west. Photo C. De Leijen



**Plate 8:** Turkish Bath House, entrance side, showing lintel stone dated 1866 and inside used for storage, view north. Photo A. Wilkinson



**Plate 9:** Turkish Bath House. eastern wall showing hearth used for heating, collapsed door and timber structure, view north. Photo C. De Leiven





**Plate 10:** Bath House view west showing newer door added and vegetation growing through structure. Photo A. Wilkinson



**Plate 11:** View North NW of Bath House Photo A. Wilkinson



**Plate 12:** Internal wall showing original layout of two rooms, wooden door frame.  
Photo A. Wilkinson



**Plate 13:** Detail of highlight window and stepped cracking on front of Bath House.  
View North. Photo A. Wilkinson



#### 5.2.1.2 Site 2: VHI D7321-0040 (Landers Lane Dry Stone Wall)

This site is subject to a separate report and management plan attached at Appendix 4 (Sinamai 2021).

The study area has several walls that are, in reality, a single wall running along Landers Lane. This was recorded but delisted from the VHD. In this survey the wall was divided into five walls with division being based on breaks like gates or where the wall has disappeared or been dissected by a road. The total length of the wall is approximately 5km. Three of the walls are all stone free standing walls while the other two are composite walls with fences. DSW1 -3 are refined and largely in good condition with cope stones still in place. DSW 4 and 5 are composite, one course walls supporting the bases of fences. Examples are shown in Plates 11 -13. All walls are in fairly good condition and display expert craftsmanship and all walls appear to be pre-1840. They are associated with the Dunmore station and likely constructed by Macknight, Irvine and Campbell on acquiring the property. Map 5 shows the extent of the D registration in the Victorian Heritage Inventory; DSW 5 is to the south of this extent and does not form part of this registration (Map 6).



**Plate 14:** DSW 1 General aerial view DSW-1 showing the two walls, facing south Photo A. Wilkinson



**Plate 15:** DSW 1 West wall showing refined technique of walling facing east Photo A. Wilkinson



**Plate 16:** DSW 2 Southern end of DSW-2 showing well-constructed section of wall. Photo A. Wilkinson

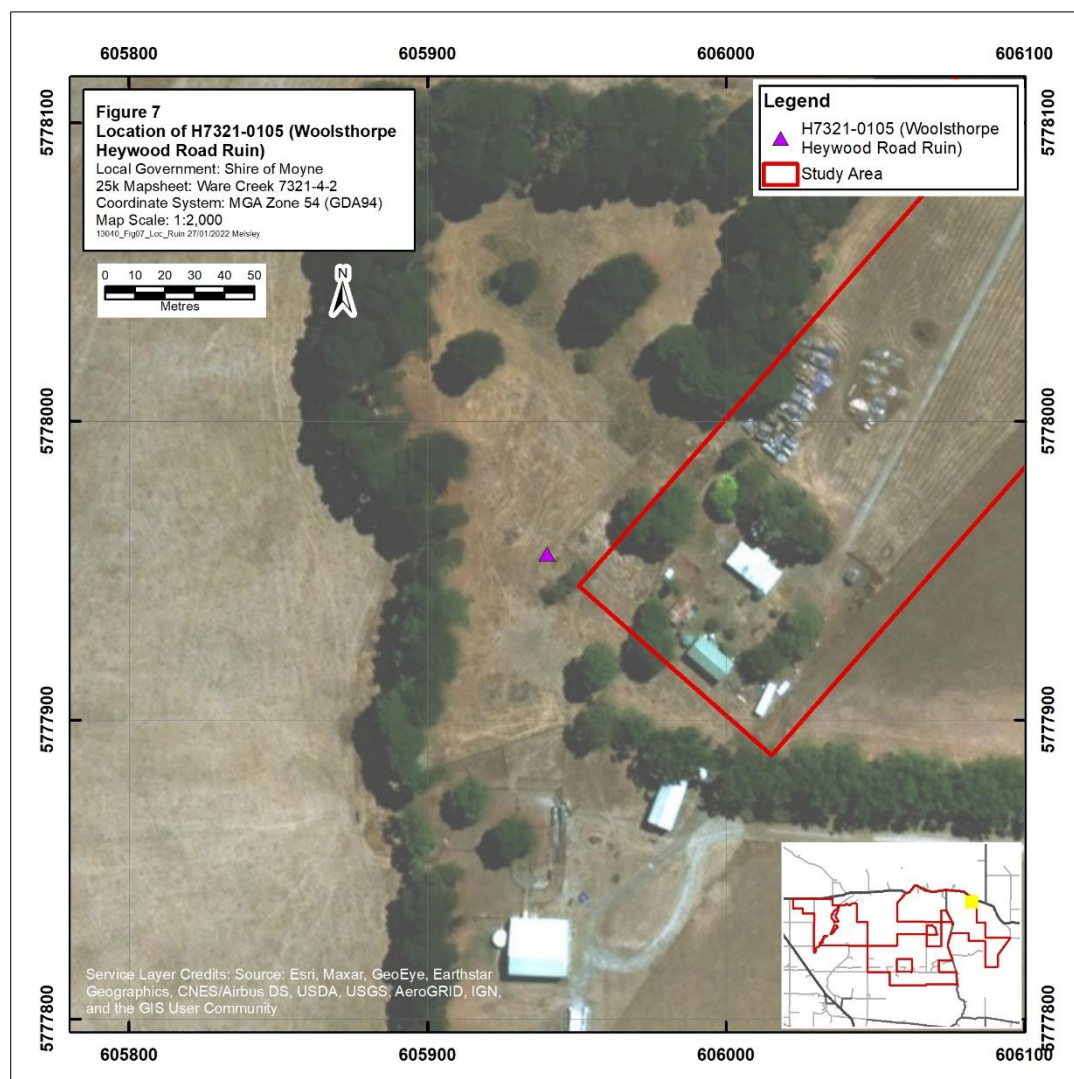


## 5.2.2 Previously Unrecorded Places

A total of two previously unrecorded places were located during the survey and were subsequently included in the Victorian Heritage Inventory.

### 5.2.2.1 Site 3: VHI H7321-0105 (Woolsthorpe-Heywood Road Ruin)

**Location:** Adjacent to 2169 Woolsthorpe- Heywood Road (Figure 2).



**Figure 2:** Location of VHI H7321-0105 (Woolsthorpe-Heywood Road Ruin)

**Interpretation:** Some of the large bluestone rubble present has been dressed and combined with a number of machine-made bricks indicates that a hearth or chimney structure was built in this location and possibly a small structure build with bluestone walls or footings. This may be the location of a previous homestead or a shepherd's hut associated with property management on large estates in the

Moyne region, circa 1900-1920. The bricks present are not manufactured in the 19<sup>th</sup> century, but rather are machine made and regular; they may be related to the 'hut' site approximately 1km west of this site.

**Condition:** A bluestone and brick structure has been demolished and stone pushed into two main piles, one approximately 10 m x 5 m with brick and dressed bluestone on the surface; the second is approximately 5 x 5 m and is comprised of bluestone rubble. A 1942 ordinance topographic map marks the site as 'Ruin' so it must have been demolished some years prior. The mounds are on otherwise flat or levelled sections of the property and the mound containing the bricks is likely to be the location of original structure. One metal machinery part was also located on top of the rubble pile, likely from farming machinery.



Plate 17: VHI H7321-0105 (Willatook Ruin), view NE. Photo C. De Leiu





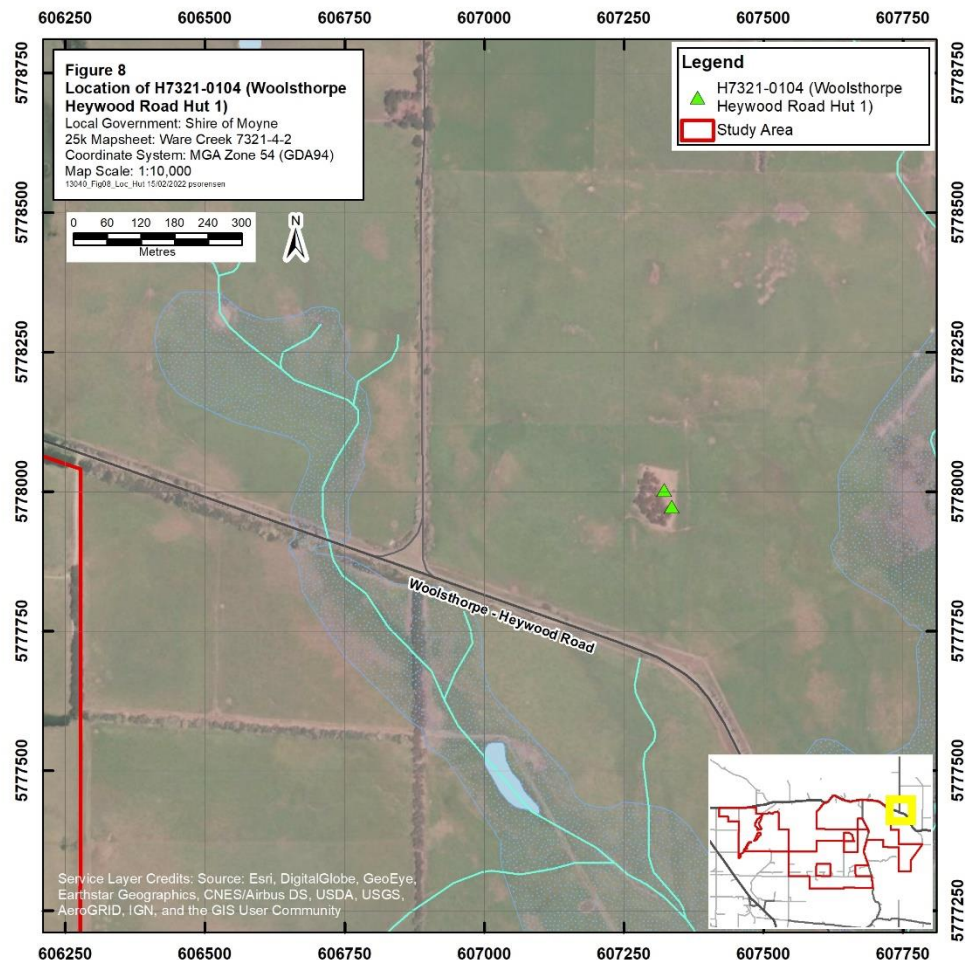
**Plate 18:** Ruin site, detail of in situ bricks.  
Photo C. De Leijen

#### **5.2.2.2 Site 5: VHI H7321-0104 (Woolsthorpe-Heywood Road Hut 1)**

**Location:** Located off the main Woolsthorpe-Heyward Road, approximately 1km west of the Poyntons Road intersection, approximately 350 m north of the main road in a fenced area surrounded by eucalypts (Figure 3). Due to the alteration of the Project Area, this archaeological place is no longer within the Project Area and will therefore not be impacted by the project.

#### **Interpretation:**

No evidence of footings for the surrounding building were located, and no other stone (natural or cultural) which could have indicated a substantive residence or outbuilding was present. It is the remains of possible shepherd's hut, with one chimney left in situ where a surrounding structure made of timber has been removed or reclaimed. The presence of bricks indicates a 20<sup>th</sup> century construction, likely an example of property management on large stations in the local region. It is possible that corrugated iron also used in construction and removed (as is remaining on an adjacent shed) or was in fact repurposed to build the shed.



**Figure 3:** Location of VHI H7321-0104 (Woolsthorpe-Heywood Road Hut 1) site

**Condition:** The area is not used; it is fenced and has stored farming machinery. Only a bluestone, sandstone and brick fireplace and chimney remain. There are two courses of cut bluestone at the base of the fireplace or hearth which remain in situ, as well as large piece at top of hearth area. Above the fireplace there are ten courses of dressed sandstone blocks on top of which sits a red brick chimney.

Some bricks inside hearth area show evidence of burning. These could have been added later to replace sandstone blocks that may have been robbed out or have been damaged or fallen out and have been mortared in between bluestone and sandstone courses. The chimney is mostly complete and in fair to good condition.

Brick chimney has approximately 20 courses, with some bricks missing from the very top. Stepped cracking and movement where mortar has eroded in between sandstone blocks is evident, with some rubble in front of hearth, indicating that the structure is unstable.

At a distance of 25 m to the north west is a corrugated iron shed constructed with timber beams. This structure is in very poor condition, and is collapsing, with half of the roof coming away from the beams and leaning towards the ground. Some corrosion is also present. The shed contains farming machinery

that is also in a poor condition. Approximately 5 m west of this shed is farming machinery (uncovered) with the makers mark 'Made in Australia' visible. The farm machinery is highly corroded, but in an overall fair condition.



**Plate 19:** VHI H7321-0104 (Woolsthorpe-Heywood Road Hut 1) chimney view NE. Photo C. De Leuen



**Plate 20:** VHI H7321-0104 (Woolsthorpe-Heywood Road Hut 1) view of chimney showing courses. View NW. Photo C. De Leuen





**Plate 21:** VHI H7321-0104 (Woolsthorpe-Heywood Road Hut 1) site showing location of chimney shed and farming machinery. View S. Photo A. Wilkinson



**Plate 22:** VHI H7321-0104 (Woolsthorpe-Heywood Road Hut 1). Detail of bricks inside chimney structure indicating replacement and/or reuse. Photo A. Wilkinson



**Plate 23:** Farming machinery at VHI H7321-0104 (Woolsthorpe-Heywood Road Hut 1), view SE. Photo A. Wilkinson



**Plate 24:** Detail of farming machinery showing trademark. Photo C. De Leiven

### 5.2.2.3 *Additional locations surveyed*

#### 5.2.2.3.1 **Sandy Camp Hut**

**Location:** Corner of Riordans Road and Tarrone North Road within current Project Area boundary. The land is currently used for pastoral purposes.

**Condition:** Demolished; unable to be located. The area has been cleared of trees and rock and rubble. Any natural rock and possibly the remains of the hut have been pushed into a pile in the corner of



property. There was no other evidence of a building footprint in the area, however, access was limited due to the presence of electric fencing. Drone photography did not locate any other building footprint in the wider area (plate 26).



**Plate 25:** Likely location of Sandy Camp Hut. Rubble pile may contain some remains from a camp hut.  
View W. Photo A. Wilkinson

## 5.3 Summary and Conclusions

The desktop assessment indicated that at the time of the commencement of the project there were two historical heritage places recorded on the VHD within the study area, VHI D7321-0040 (Landers Lane DSW) and RNE 3785 (Turkish Bath House) (Map 6). These were inspected and recorded and the dry stone wall is subject to a separate report (Sinamai 2021). ‘Dunmore’ Turkish Bath House is listed on the Register of the National Estate (RNE) ID 3785 and the Register of the National Trust ID B3007 (both non-statutory archives) and was within the study area at the time of the desktop assessment and survey; however, with the changing of the Project Area, this place is now outside of the Project Area boundary.

Following the survey of the Project Area, two additional historical heritage Places were identified within the Project Area and included in the Victorian Heritage Inventory for their potential to contain archaeological deposits: VHI H7321-0104 (Woolsthorpe-Heywood Road Hut 1) and VHI H7321-0105 (Woolsthorpe-Heywood Road Ruin). However, due to the changing footprint of the Project Area, VHI H7321-0104 (Woolsthorpe Heywood Road Hut 1) is no longer within the extent of the Project Area and therefore will not be impacted by the Project.

## 6 RISK ASSESSMENT

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### 6.1 Background

The preliminary Environmental Risk Assessment (ERA) has guided the environmental studies for the Willatook Wind Farm. The objectives of the ERA are to:

- identify key environmental risks that relate to the development of the Project;
- guide the level and extent of data gathering necessary for accurately characterising the existing environment;
- help identify construction, operation and maintenance mitigation measures to avoid/minimise environmental risks; and
- inform assessment of likely residual effects that are expected to be experienced after all reasonable mitigation measures have been implemented.

The risk assessment process for the EES incorporates key risk management requirements and includes:

- an approach to environmental management which is aligned with ISO 31000 Risk Management – Principles and Guidelines Systems;
- systems used to manage environmental risk and protect the environment, and how these are implemented at different stages of road construction, operation and maintenance; and
- tools and reporting requirements which provide guidance in managing environmental issues throughout the Project.

The ERA identifies impact events for each of these elements of the environment, details the potential risks and has informed the level and range of technical reporting required to address these impacts.

The ERA utilises a risk matrix approach where likelihood and consequence of an event occurring are considered (Table 4 and Table 5). The consequence criteria will be revisited throughout the EES process to confirm currency prior to exhibition (Table 6).

**Table 5: Risk Significance Matrix**

Likelihood	Consequence				
	Negligible	Minor	Moderate	Major	Severe
Almost certain	Low	Medium	High	Very High	Very High
Likely	Low	Medium	Medium	High	Very High
Possible	Low	Low	Medium	High	High
Unlikely	Negligible	Low	Low	Medium	High
Rare	Negligible	Negligible	Low	Medium	Medium

**Table 6: Likelihood Categories**

Descriptor	Explanation
Almost Certain	The event is expected to occur in most circumstances
Likely	The event will probably occur in most circumstances
Possible	The event could occur
Unlikely	The event could occur but is not expected
Rare	The event may occur only in exceptional circumstances



**Table 7: Consequence Definitions**

Consequence category	Description of consequence
Very Low	No impact on historical cultural heritage.
Low	Disturbance or destruction of a known or unknown historical cultural heritage place assessed as being of low archaeological/scientific significance because of: <ul style="list-style-type: none"> <li>i) the common nature of the site type;</li> <li>ii) the low number of artefacts (&lt;10) or limited range of cultural materials contained in the site;</li> <li>iii) a previously recorded site of greater significance that has been previously disturbed or destroyed by taphonomic processes</li> </ul>
Medium	Disturbance or destruction of a known or unknown historical archaeological site assessed as being of moderate archaeological significance because of: <ul style="list-style-type: none"> <li>i) the less common nature of the site type;</li> <li>ii) a larger number of artefacts (&gt;10) or slightly wider range of cultural materials contained in the site;</li> <li>iii) a previously recorded site that has been previously disturbed or destroyed by taphonomic processes. Some stratigraphy may be in tact</li> </ul>
High	Disturbance or destruction of a known or unknown historical archaeological site that has been assigned an archaeological or scientific significance assessment of moderate to high because <ul style="list-style-type: none"> <li>i) the place type occurs less frequently;</li> <li>ii) the place contains a high number of artefacts or a wide range of cultural materials or largely intact stratigraphy;</li> <li>iii) spatial patterning between the site components may be discernible.</li> </ul>
Very High	Complete destruction of numerous known or unknown historical archaeological sites, artefacts or places across the Project Area.

## 6.2 Risk Assessment Methodology

An initial environmental risk assessment (ERA) has been prepared for the Willatook Wind Farm. The aim was to assess the residual risk levels and to determine whether the calculated risk levels were supported by the technical information and determine if additional studies are required.

The process assesses the primary environmental risk if all standard management and mitigation measures (both regulatory guidelines and industry standards) are in place and operating as intended. Where the risk rating is classified as medium or higher additional controls would be identified and a residual risk rating defined.

## 6.3 Key Findings

The primary environmental risks identified for Aboriginal cultural heritage and Historical Heritage are provided in Appendix 3.

Impacts to Historical Heritage can be summarised into two categories:

- Impacts during construction; and

- Impacts during operations/maintenance phases of the Project.

The initial risk ratings presented below for the Project consider standard inherent controls in accordance with the relevant standards and guidelines. The additional controls listed in the tables below are those recommended to further mitigate and minimise the primary environmental risks which were risk rated as medium or above. Primary environmental risks which were scored as low did not require additional controls to be applied.

### 6.3.1 Summary of Risks and Mitigation

#### Construction

VHI H7321-0105 (Woolsthorpe-Heywood Road Ruin) is not at risk of being impacted by the earthworks phase of construction of the Project.

D7321-0040 (Landers Lane Dry Stone Wall) will be impacted by the development in that a number of access roads and cable trenches will be required to pass through existing gates or require the wall to be breached so that new openings can be created. Impacts may be direct (such as the new openings) or indirect, for example, through vibration during the construction phase. The wall has no statutory protection under the *Heritage Act 2017*; however, it is protected under the *Planning and Environment Act 1987* and is included in the provisions of the Moyne Planning Scheme. A Dry Stone Wall Management Plan (see Appendix 3) will assist in the management of accidental and indirect impacts to the wall and subsequent requirements to make good if required.

If new historical heritage Places are identified during the construction phase of the works, Heritage Victoria must be advised and a Heritage Advisor must be engaged to assess the find.

#### Operation

Once operational, it is unlikely that there will be any impacts to VHI H7321-0105 (Woolsthorpe-Heywood Road Ruin), and any impacts to D7321-0040 (Landers Lane Dry Stone Wall) are likely to be indirect and can be managed through the provisions of the Dry Stone Wall Management Plan.

#### Decommissioning

There are no perceived direct impacts to VHI H7321-0105 (Woolsthorpe-Heywood Road Ruin) or D7321-0040 (Landers Lane Dry Stone Wall) during the decommissioning phase of the Project. At the conclusion of decommissioning, the Dry Stone Wall Management Plan must be consulted for requirements to 'make good' sections of the wall which may need to be restored. Any such work must be undertaken by a suitably experienced dry stone waller.

### 6.3.2 Unexpected Finds Protocol

In the event of any unexpected historical archaeological heritage being uncovered during the course of the Project the following Unexpected Finds Protocol must followed.

- The person in charge of the works must be notified of the find;
- Works must cease within 20 m of the area of concern;

- The person in charge of the works must consult a suitably qualified Heritage Advisor and inform them of the find;
- The Heritage Advisor must document the find, inform Heritage Victoria of the find and submit a site card to Heritage Victoria within 30 days of the discovery if the find may meet the threshold for inclusion in the Victorian Heritage Inventory or other statutory heritage instrument.

## 7 IMPACT ASSESSMENT

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### 7.1 Avoidance, Minimisation and Management of Harm and Contingency Planning

#### 7.1.1 D7321-0040 (Landers Lane Dry Stone Wall)

##### Avoidance of harm

The location of turbines and associated infrastructure may be sited so as to avoid this historic heritage place.

##### Minimisation of harm

A Dry Stone Wall Management Plan will be prepared to minimise any potential impacts to the dry stone wall.

##### Management Conditions

All dry stone walls within the Shire of Moyne constructed prior to 1940 are protected by Clause 52.33 of the Moyne Planning Scheme. The Shire of Moyne must be consulted in relation to any impacts that may occur to this historical heritage place as a result of the Project. No Consents are required from HV for this heritage place; however, Heritage Victoria must be advised in writing of any impacts to the wall.

#### 7.1.2 H7321-0105 (Woolsthorpe-Heywood Road Ruin)

##### Avoidance of harm

The location of turbines and associated infrastructure may be sited so as to avoid this historic heritage place.

##### Minimisation of harm

Harm to the site can be minimised by establishing a no-go zone if necessary.

##### Management Conditions

Management Conditions will be developed in consultation with Heritage Victoria. These may include the requirement for further archaeological investigation and the obtaining of Consent from Heritage Victoria.

## 8 CONCLUSION

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There are two known places with historical heritage value located within the Project Area. Place VHI D7321-0040 (Landers Lane Dry Stone Wall) is a dry stone wall recorded as being in generally poor condition; however, some sections display highly-skilled workmanship. This place is delisted from the Victorian Heritage Inventory and therefore has no statutory protection under State legislation. However, it was constructed prior to 1940 and therefore is protected at a local government level by the Moyne Planning Scheme.

According to the current Project development footprint, the dry stone wall recorded as VHI D7321-0040 will be affected by the works as access tracks are currently earmarked for construction in this portion of the Project Area; however, efforts can be made so that access points align with existing breaks in the wall and a dry stone wall management plan will be prepared for the Project. Willatook Wind Farm Pty Ltd must consult with the Shire of Moyne in relation to the dry stone wall and any proposed impacts. Despite being removed from the Victorian Heritage Inventory, blanket provisions are made in the *Heritage Act 2017* for the protection of all archaeological remains. Heritage Victoria must be advised in writing of any impacts to the D7321-0040.

There is one historical archaeological heritage place that has been listed on the Victorian Heritage Inventory: VHI H7321-0105 (Woolsthorpe-Heywood Road Ruin). Efforts will be made to avoid impacting this place and Heritage Victoria will be consulted in relation to the ongoing management of this archaeological site. If it is found that impacts to this place are unavoidable, an application must be made to Heritage Victoria to obtain the appropriate Consent (i.e., Consent to Uncover, Consent to Excavate Consent to Damage or Consent – Other). The appropriate type of Consent must be established through consultation with Heritage Victoria.

## MAPS

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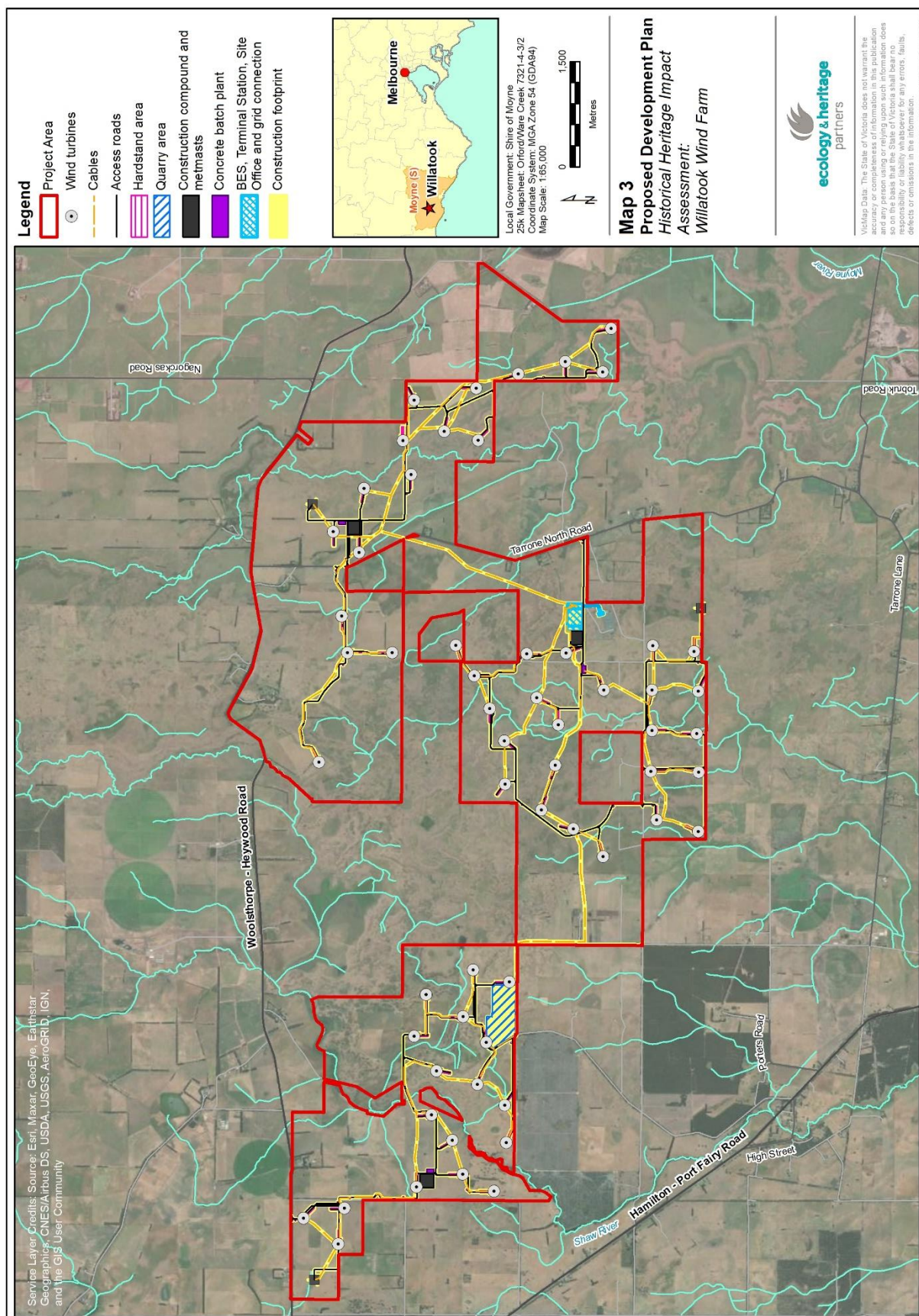




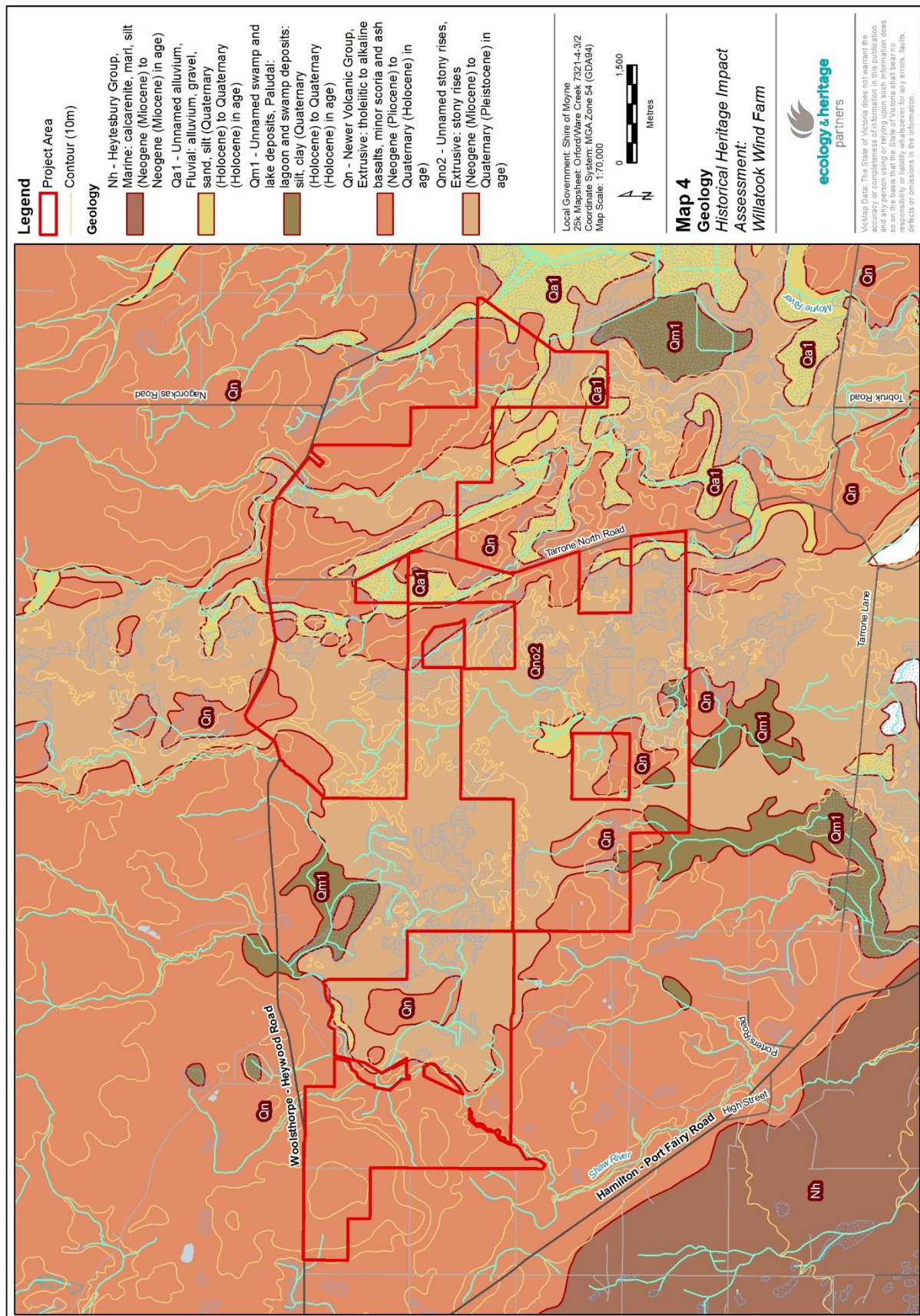




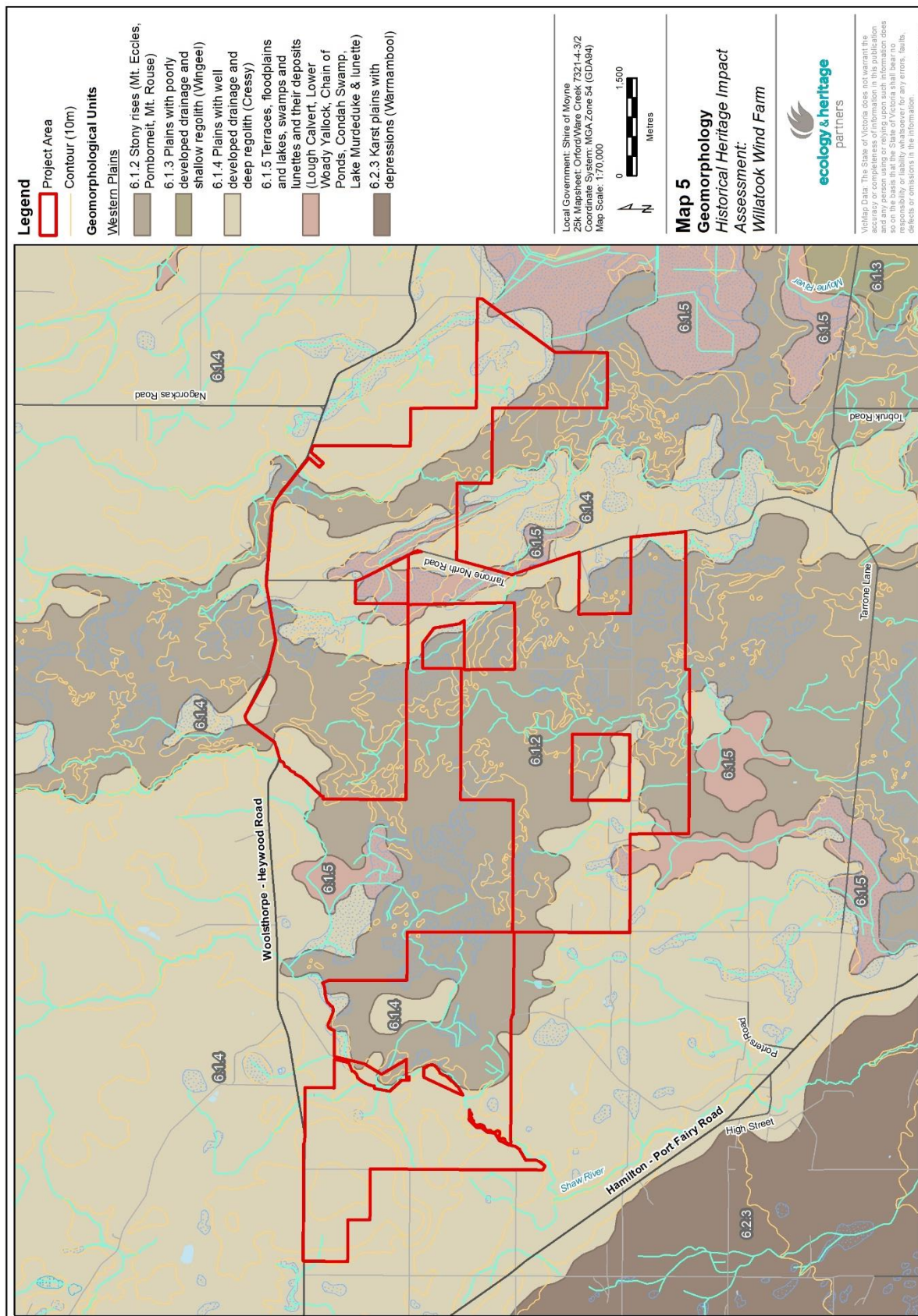




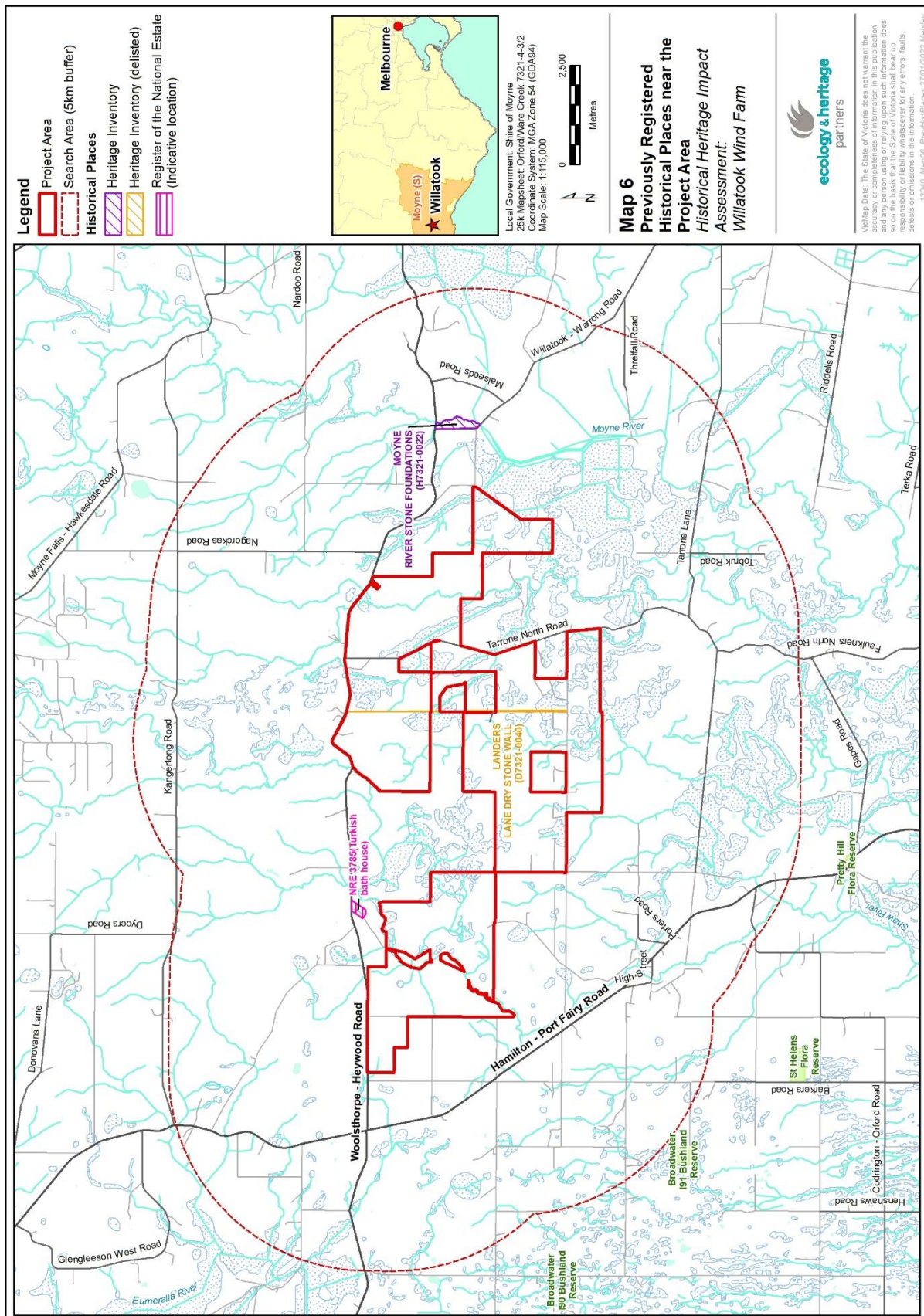




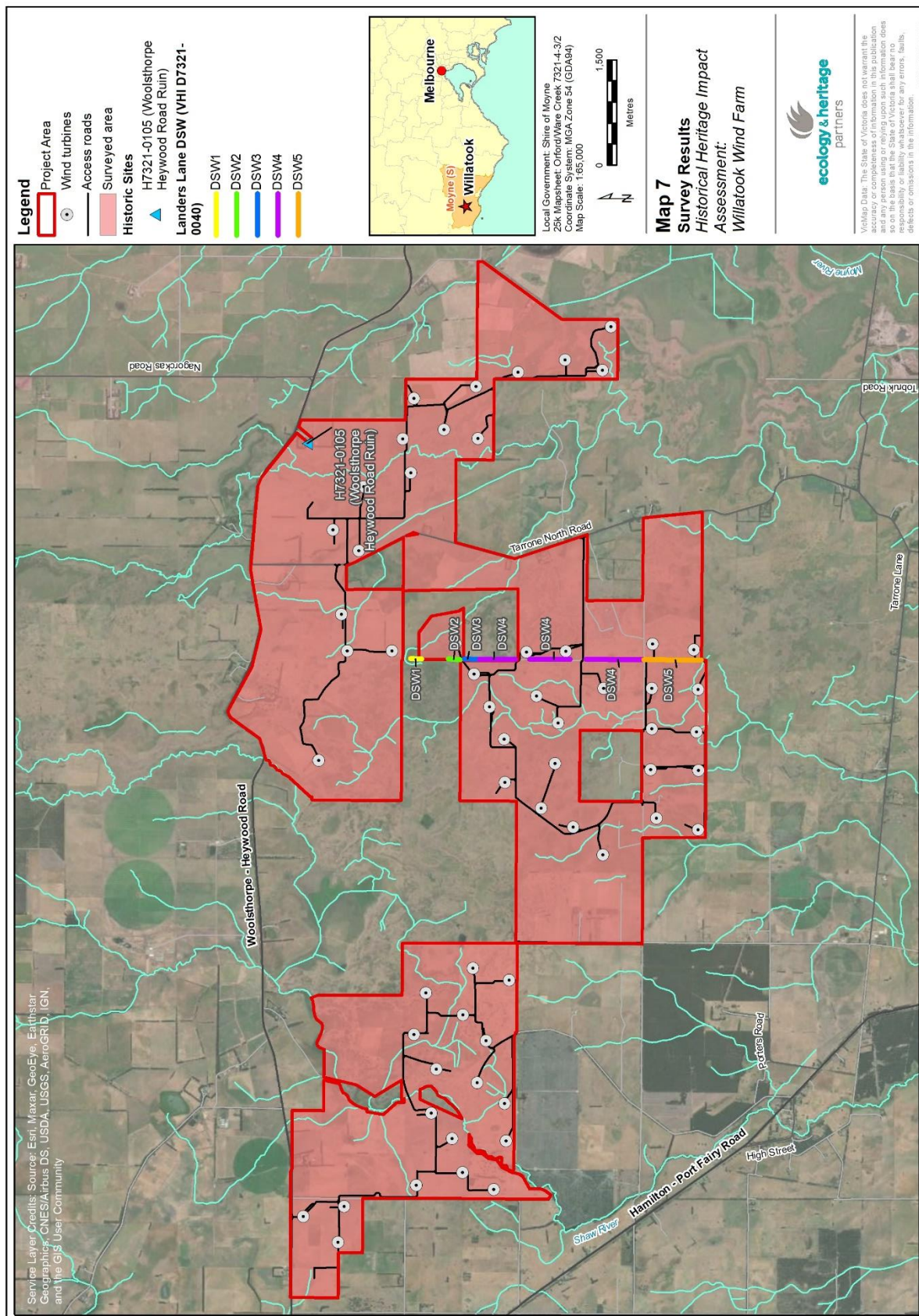












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## APPENDICES

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## Appendix 1: Clause 52.33 of the Moyne Planning Scheme (DELWP 2019)

### MOYNE PLANNING SCHEME

#### 52.33

31/07/2018  
VC148

#### POST BOXES AND DRY STONE WALLS

##### Purpose

To conserve historic post boxes and dry stone walls.

##### Permit requirement

A permit is required to demolish or remove a post box constructed before 1930.

A permit is required to demolish, remove or alter a dry stone wall constructed before 1940 on land specified in the schedule to this provision. This does not apply to:

- Dry stone structures other than walls and fences.
- The demolition or removal of a section of a dry stone wall to install a gate.
- The reconstruction of damaged or collapsing walls which are undertaken to the same specifications and using the same materials as the existing walls.

##### Decision guidelines

Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- The significance of the post box or dry stone wall.
- Any applicable heritage study, statement of significance and conservation policy.
- Whether the proposal will adversely affect the significance of the post box or dry stone wall.
- Whether the proposal will adversely affect the significance, character or appearance of the area.

## **Appendix 2: Site Registrations**

# Historical archaeological site card

Regulation 27

## Instructions to complete form

### Who should complete this form?

A person who discovers a site that should be recorded on the Heritage Inventory. This form must be completed in accordance with Heritage Victoria's *Guidelines for Conducting Historical Archaeological Surveys* available at [www.heritage.vic.gov.au](http://www.heritage.vic.gov.au).

### Enquiries and more information

Web: [www.heritage.vic.gov.au](http://www.heritage.vic.gov.au)

Telephone: (03) 7022 6390

Email: [archaeology.admin@delwp.vic.gov.au](mailto:archaeology.admin@delwp.vic.gov.au)

### Please lodge your form in one of the following ways:

By email to: [archaeology.admin@delwp.vic.gov.au](mailto:archaeology.admin@delwp.vic.gov.au) (Word is the preferred document format) OR

By post to: The Executive Director, Heritage Victoria, PO Box 500, MELBOURNE VIC 8002

Please note: all sections must be completed. Incomplete forms will be returned to the applicant which may result in delays.

### Recommended site extent:

You are required to lodge a recommended site extent with your site card. It is our preference to receive .shp files with associated plan. **See section 5 of Heritage Victoria's Archaeology Survey Guidelines.**

#### Office use only

*Heritage Inventory number and name*

*Date received*

*Date accepted*

*Hermes Number*

# Historical archaeological site card

## 1. Place details

Place name: Ruin Woolsthorpe- Heyward Road

Heritage Inventory Number (if any):

Other or former names: N/A

Municipal Council: **Moyne Shire**

Address: 2169 Woolsthorpe - Heyward Road  
Willatook 3287

Geographical coordinates (GDA94 or WGS84)      E605937.88 N5777970.80  
expressed in degrees and decimals of a degree:

Mapsheets name and number (1:100,000 only): **Ware Creek 7321-4-2**

## 2. Cadastral location

County: Villiers

Parish: Willatook

Township: Willatook

Section:

Allotment: Lot 1 PS601753

Standard Parcel Identifier (SPI):  
1\PS601753

## 3. Details of site owner or land manager (where known)

Title:

First Name:

Surname:

Business or organisation name:

Position title:

Address:

Email address:

# Historical archaeological site card

Telephone:

## 4. Details of site occupier (where known)

Title:

First Name:

Surname:

Business or organisation name:

Position title:

Address:

Email address:

Telephone:

## 5. Aboriginal cultural values

Site has known Aboriginal values

\*Yes

\*No

Site is recorded on the Victorian  
Aboriginal Heritage Register

\*Yes

\*No

## 6. Current description of site

Please provide description:

**This may be the sub-surface remains or footings of a previous homestead or a shepherd's hut associated with property management on large estates in the Moyne region, circa 1880-1940. Some of the large bluestone rubble present has been dressed and combined with a number of machine-made bricks indicates that a hearth or chimney structure was built in this location. This is noted as a ruin on a 1942 ordnance map of the area.**

Date recorded: 14 February 2020

On Victorian Heritage Register

\*Yes

\*No

(please advise  
VHR number)

On Heritage Overlay

\*Yes

\*No

(please advise  
HO number)



---

Associated sites: N/A

---

## 7. Place history

---

Please provide a brief history of the place (at least 1 to 2 paragraphs):

Located off 2169 Woolsthorpe-Heyward Road, adjacent to an occupied home. Approximately 100 m east of the house in a fenced area surrounded by pine trees. No standing structures located. It is sub-surface remains of a bluestone and brick structure that has been demolished and stone pushed into two main piles, one approx. 10 m x 5 m with brick and cut bluestone on surface, the second approx. 5 x 5 m and is bluestone rubble. Bricks indicate 20th century construction, likely an example of property management on large stations in the local region.

---

## 8. Analysis of site (interpretation)

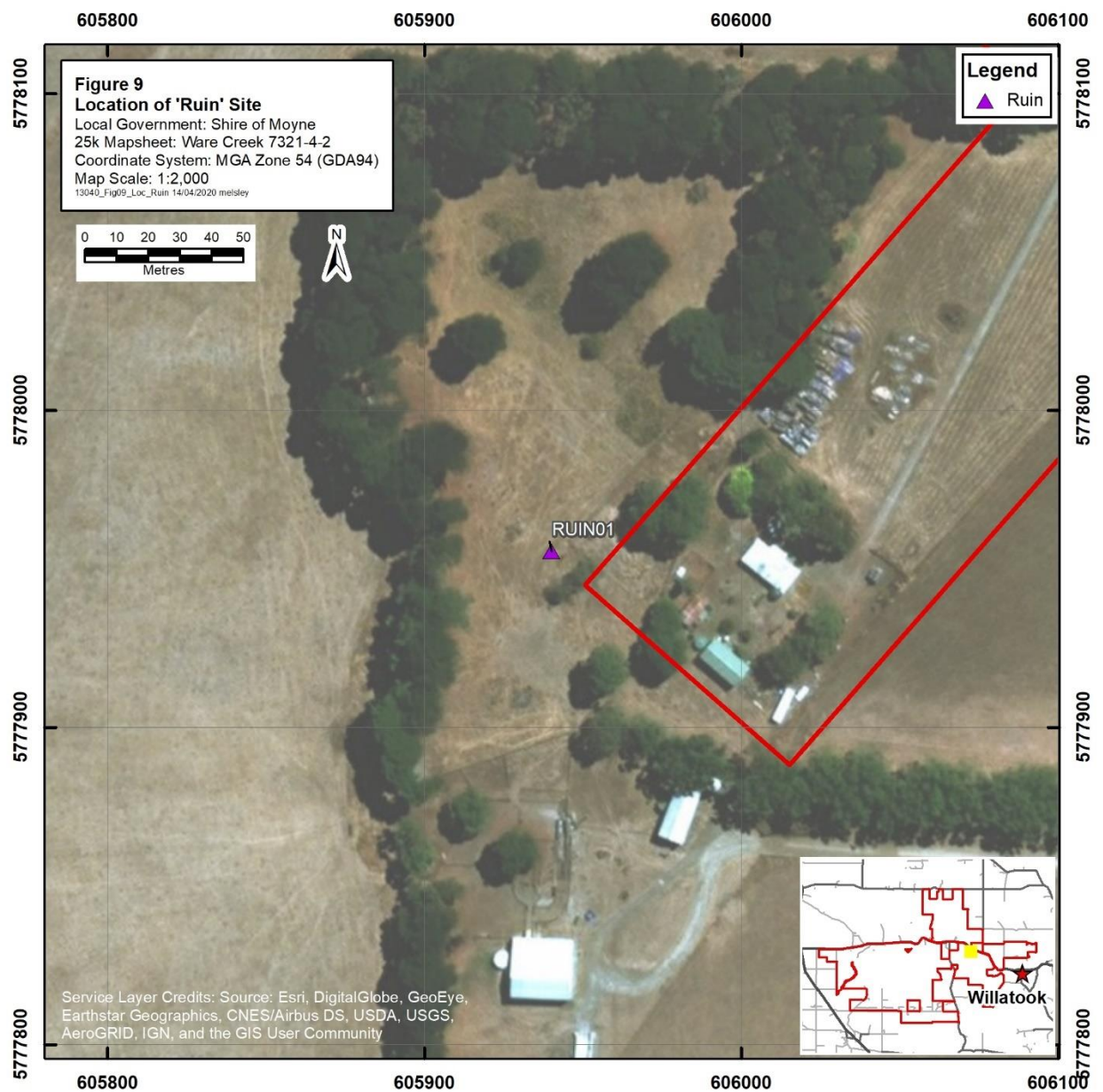
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Include phases in the development of the site, functions and activities represented, as well as current place use:

**It is remains of possible shepherds hut, or small two roomed structure. Bricks indicate 20th century construction, likely an example of property management on large stations in the local region.**

---

# Historical archaeological site card



## 9. Statement of Significance

Please provide a brief description of why the site is significant (at least 1 to 2 paragraphs):

A 1942 map of Hawkesdale produced by the Australian Section, Imperial General Staff (SLV) shows a 'ruin' in this location, and there are clearly sub-surface remains of some type of structure or feature remaining *in situ*. There are also dressed bluestone blocks and brick on the surface. Given the notation on the 1942 map the deposit is more than 75 years old and thus meets the definition of an archaeological site or place. There is also brick and metal visible. As such the Ruin may provide information of past activity in the local area and potentially the State, however, archaeological methods to reveal information about the settlement, development or use of the place as there has been no other documentary information found on the Ruin at this location to date.

---

## 10. Suggested Protection

- X ☐ Heritage Inventory
  - ☐ Victorian Heritage Register
  - ☐ Heritage Overlay
- 

## 11. Threat

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Is the place under any threat? If so, what is the threat?

Site has been demolished/ not in use. A bluestone and brick structure has been demolished and stone pushed into two main piles, one approx. 10 m x 5 m with brick and cut bluestone on surface, the second approx. 5 x 5 m and is bluestone rubble. Mounds are on otherwise flat/levelled section of the property and the mound containing bricks is likely to be in the location of original structure. One metal machinery part also located on top of the rubble pile, likely from farming machinery.

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## 12. References / Informants

Please list books or other sources that may provide historical information about this place.

**No references**

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## 13. Attachments

Please attach the following to this form:

- ☐ A map showing the location of the site. Map must clearly identify recorded area and include any street addresses (eg excerpt from Melway and its reference numbers)
-

# Historical archaeological site card

- ☐ A plan showing all archaeological features, and any built cultural heritage. (The plan must be labelled and scale noted – eg 1:100,000)
- ☐ Photographs of the site (you may include historical photographs, historical plans, and historic maps)
- ☐ Any other documents or notes produced as a result of the survey.

## 14. Recording archaeologist's details

Title: **Dr**

First Name: **Cherrie**

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## 15. Statement

I state that the information I have given on this form is correct to the best of my knowledge.

Name: Cherrie De Leiuen

Signature:



Date: 06/04/2020

# Historical archaeological site card



: Ruin site, view NE. Photo C. De Leijen (C De Leijen 2020)



# Victorian Heritage Database Report

Report generated 28/02/20



## LANDERS LANE DRY STONE WALL

---

### Location

LANDERS LANE WILLATOOK, MOYNE SHIRE

### Municipality

MOYNE SHIRE

### Level of significance

Delisted Heritage Inventory site

### Heritage Inventory (HI) Number

D7321-0040

### Heritage Listing

Victorian Heritage Inventory

---

Hermes Number 117045

Property Number

---

### History

The Landers Lane Dry Stone Wall is within the historic 'Dunmore' Run. Dunmore was 47,228 acres and in 1849, was recorded as holding 1200 cattle and 55 horses. This run was divided into Dunmore and Dunmore West in 1863 which were both cancelled in July, 1876. One of the early co-owners of Dunmore, Charles Hamilton Macknight, was said to have "won repute for just dealing and gained the confidence of the Aboriginals" in the area after previously being "a member of punitive expeditions" in response to the maimed stock and stolen station stores. After Dunmore was divided, Macknight stayed and became a specialist in breeding Shorthorned cattle. He also bred race horses on the property and, later, pure marinos. His many years of sheep breeding established Macknight as "the greatest authority" on the subject. Along with "three substantial slab huts with great chimneys and a pise dairy with a large milking shed", Macknight also constructed dams on the property

(Australian Dictionary of Biography-online.)

*This place/object may be included in the Victorian Heritage Register pursuant to the Heritage Act 2017. Check the Victorian Heritage Database, selecting 'Heritage Victoria' as the place data owner.*

*For further details about Heritage Overlay places, contact the relevant local council or go to Planning Schemes Online <http://planningschemes.dpcd.vic.gov.au/>*

## **Appendix 3: Historical Heritage Assessment Report**

Final Report

# Willatook Wind Farm, Willatook, Victoria: Historical Heritage Assessment

HV Number 3725

Client

Willatook Wind  
Farm Pty Ltd

08 April 2022



Ecology and Heritage Partners Pty Ltd

Authors

Dr Cherrie De Leiven, Meredith Filihia, Jen Burch and Terence MacManus

## ACKNOWLEDGEMENTS

---

We thank the following organisations for their contribution to the project:

- Willatook Wind Farm Propriety Limited
- Heritage Victoria.

**Cover Photo:** Chimney and hearth, Willatook  
(Photo by Ecology and Heritage Partners Pty Ltd)



## DOCUMENT CONTROL

<b>Activity</b>	Willatook Wind Farm
<b>Address</b>	Willatook, South West of Hawkesdale, Victoria
<b>Project number</b>	13040
<b>Project manager</b>	Oona Nicolson
<b>Report author(s)</b>	Cherrie De Leiuen, Meredith Filihia, Jen Burch and Terence MacManus
<b>Report reviewer</b>	Oona Nicolson
<b>Other EHP staff</b>	Ashton Sinamai and Andrew Wilkinson
<b>Mapping</b>	Monique Elsley and Petra Sorenson
<b>File name</b>	13040_HHA_Willatook Wind Farm Willatook_Draft v3_GP_18032022.docx
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<b>Bioregion</b>	Victorian Volcanic Plains
<b>CMA</b>	Glenelg Hopkins
<b>Council</b>	Moyne Shire Council

Report versions	Comments	Comments updated by	Date submitted
Draft v1	Draft for internal QA review	O. Nicolson	13.03.2020
Draft v2	Draft to client for comment	C. De Leiuen	14..4.2020
Draft v3	Draft to HV for comment	Meredith Filihia	5.5.2020
Final	Final report	Meredith Filihia and Genevieve Polic	24.03.2022
Final v2	Final report	Meredith Filihia	08.4.2022

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## ABBREVIATIONS

Acronym	Description
Act, the	<i>Heritage Act 2017</i>
AV	Aboriginal Victoria
CHL	Commonwealth Heritage List
CHMP	Cultural Heritage Management Plan
CMA	Catchment Management Authority
DAWE	Department of Agriculture, Water and Land
DELWP	Department of Environment, Land, Water and Planning (Victoria)
DoEE	Department of the Environment and Energy (Commonwealth)
DPC	Department of the Premier and Cabinet (Victoria)
EES	Environment Effects Statement
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EVC	Ecological Vegetation Class
HA	Heritage Advisor
HHA	Historical Heritage Assessment
HO	Heritage Overlay
HV	Heritage Victoria
MCC	Moyne City Council
NHL	National Heritage List
NTR	National Trust Register (Victoria)
PMST	Protected Matters Search Tool
RNE	Register of the National Estate
SLV	State Library of Victoria
VGf	Victorian Geomorphological Framework
VHI	Victorian Heritage Inventory
VHR	Victorian Heritage Register
VHD	Victorian Heritage Database
VWHI	Victorian War Heritage Inventory
WHL	World Heritage List

## EXECUTIVE SUMMARY

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### Introduction

Ecology and Heritage Partners Pty Ltd was commissioned by Willatook Wind Farm Pty Ltd to prepare this Historical Heritage Assessment (HHA) for the proposed Willatook Wind Farm, located approximately 30 km to the southwest of Hawkesdale in Victoria.

#### The Activity

Willatook Wind Farm Pty Ltd (the proponent) is developing the proposed Willatook Wind Farm (the project) in Moyne Shire, Victoria (Map 2). The project will harness strong and reliable winds to generate renewable energy through the construction and operation of up to 59 wind turbines generators and would operate for a period of at least 25 years following a two-year construction period. The wind farm would generate more than 1,300 gigawatt hours (GWh) of renewable electricity to the National Electricity Market (NEM) each year. Approximately 60 km of access tracks (both new and existing) would be required to provide access from the public road network to each wind turbine and supporting infrastructure. These access tracks provide access for project construction and maintenance vehicles and can be used by emergency vehicles and by landowners for their farming operations.

Electricity produced by the project will be fed through underground cables to the on-site substation, from where it will be exported to the NEM via the Tarrone Terminal Station and the existing Moorabool to Heywood 500 kilovolt (kV) transmission line.

Other project infrastructure would include:

- an on-site quarry for basalt rock that will be used to provide aggregate for access tracks and hardstand areas
- a battery energy storage system (BESS) located immediately to the west of the substation
- an operations and maintenance (O&M) facility consisting of site offices and amenities.

#### The Study Area

The study area is located west of Willatook, southwest of Hawkesdale, east of Broadwater and north of Orford and Tarrone in southwest Victoria (Moyne Shire Council) (see Map 1). The study area is approximately 4,154 ha in size and is situated to the south of Woolsthorpe-Heywood Road, between Penshurst-Warrnambool Road and Hamilton-Port Fairy Road (see Map 1). The study area is currently used for residential, agricultural, pastoral and utility purposes.

### Methods

The assessments undertaken as part of this HHA were a background study and a field survey. The background study consisted of reviews of relevant heritage registers and databases, previous archaeological publications and unpublished reports, and the post-contact history and environmental context of the study area. It includes a predictive statement regarding the likelihood of historical heritage occurring in the study area.

The field survey consisted of a ground surface inspection of targeted locations within the study area by qualified archaeologists to discover any historical cultural heritage visible on the ground surface and to identify

any areas of historical cultural heritage likelihood (areas that are considered likely to contain subsurface historical archaeological deposits).

Subsurface testing did not form part of the scope of works for this assessment.

## Results

### Desktop Assessment

The desktop assessment indicated that there are four historical heritage places recorded on the VHD within a 5 km radius of the study area: VHI H7321-0022 Moyne River Stone Foundations, VHI D7321-0039 Harton Hills Dry Stone Wall Complex, VHI D7321-0025 Officer Dry Stone Wall 1, and VHI D7321-0040 Landers Lane. VHI D7321-0040 Landers Lane is a dry stone wall located within the study area and is delisted from the VHI, however, under Clause 52.33 of the Moyne Planning Scheme developers are required to seek permission before demolishing, removing or altering any dry stone wall constructed before 1940.

One additional historic place, 'Dunmore' Turkish Bath House, Woolsthorpe Heywood Road, Broadwater is listed on the Register of the National Estate (RNE) ID 3785 and the Register of the National Trust ID B3007 (both non-statutory archives) and is within the study area.

Five potential historical places were indicated to be within the study area on a 1942 map of Hawkesdale produced by the Australian Section, Imperial General Staff (SLV) (see Map 5 and Figure 6). These were indicated on the map as being a hut, ruin, Paradise Bridge, Sandy Camp Hut and a Pump House.

The desktop assessment concluded that pastoral sites, dry stone walls, tree plantings, farming and domestic sites were the types of historical heritage sites most likely to occur within the study area.

### Field Survey

The field survey was undertaken from 11th to 14th February 2020 by Dr Cherrie De Leiuen (Archaeologist/Heritage Advisor), Dr Ashton Sinamai and Andrew Wilkinson (Archaeologists).

Three new historical archaeological sites suitable for listing on the Victorian Heritage Inventory or other lists (e.g. Heritage Overlay, Heritage Register or any National Lists) were identified during the survey, the 'Hut' site, 'Ruin' site and Paradise Bridge. The dry-stone wall located on Landers Lane (VHI D7321-0040) is subject to a separate report and management plan (Sinamai 2020). A copy of this report has been provided as Appendix 5.

### Historical Heritage

The field survey recorded five historical heritage sites:

- RNE 3785 & B3007 (Dunmore Turkish Bath House Woolsthorpe Heywood Road, Broadwater);
- VHI D7321-0040 Landers Lane Dry Stone Wall;
- 'Paradise Bridge' (Woolsthorpe-Heywood Road);
- 'Hut' site (Willatook); and
- 'Ruin' (Willatook).

Paradise Bridge' (Woolsthorpe-Heywood Road) falls outside of the study area.

## Summary of Management Recommendations

Landers Lane Dry Stone wall is subject to a separate report and set of recommendations as under Clause 52.33 of the Moyne Planning Scheme developers are required to seek permission before demolishing, removing or altering any dry stone wall constructed before 1940. There are no other known historical heritage issues in regard to the proposed development. If any historical heritage issues are encountered during the course of construction, then works should cease within 10 m of the area of concern and a qualified Heritage Advisor (or Heritage Victoria) should be contacted to investigate.

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# 1 INTRODUCTION

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## 1.1 Background and Scope of Works

Ecology and Heritage Partners Pty Ltd was commissioned by Willatook Wind Farm Pty Ltd to prepare a Historical Heritage Assessment (HHA) for the proposed Willatook Wind Farm.

The project brief agreed upon by Ecology and Heritage Partners Pty Ltd and Willatook Wind Farm Pty Ltd is as follows:

- Up to date review of the relevant heritage databases (e.g. Local Government Heritage Overlays, the Victorian Heritage Register and Inventory at Heritage Victoria (HV), the National Trust Register and Commonwealth heritage databases);
- Review relevant available literature (e.g. previous archaeological reports and Local Government heritage studies);
- A site assessment by two qualified Heritage Advisors to identify any historical heritage within the study area;
- Identify and record any historical heritage sites/places or areas of historical cultural heritage sensitivity;
- Report on methodology and results of field survey;
- Describe the nature, extent and significance of any archaeological sites identified;
- Provide a series of figures showing any heritage or areas of historical cultural heritage sensitivity;
- Provide information in relation to any implications of Commonwealth and State environmental legislation and Government policy associated with the proposed development;
- Discuss any opportunities and constraints associated with the subject site; and
- Provide a report that provides recommendations in regard to management of any historical sites in line with the *Heritage Act 2017*.

## 1.2 Name of Heritage Advisors

This report was prepared by Dr Cherrie De Leuen (Archaeologist/Heritage Advisor). The quality assurance review was undertaken by Oona Nicolson (Director/Principal Heritage Advisor). The field work was undertaken by Cherrie De Leuen, Ashton Sinamai and Andrew Wilkinson (Archaeologists). Mapping was provided by Monique Elsley (GIS Coordinator) and Petra Sorenson.

### 1.3 Aboriginal Heritage

Separate reports detailing the Aboriginal heritage has been prepared for this project (Nicolson, Hobbs, Burch Johnston, Green and Filihia 2019), is an Aboriginal Cultural Heritage Management Plan (CHMP) and Filihia (2020) a Cultural Heritage Impact Assessment. The AV reference number for this project is 11090.

### 1.4 Location of Study Area

The study area is located west of Willatook, southwest of Hawkesdale, east of Broadwater and north of Orford and Tarrone in southwest Victoria (Moyne Shire Council) (see Map 1). The study area is approximately 4,154 ha in size and is situated to the south of Woolsthorpe-Heywood Road, between Penshurst-Warrnambool Road and Hamilton-Port Fairy Road (see Map 1). The study area is currently used for residential, agricultural, pastoral and utility purposes.

The salient features within the study area include stony rises, undulating plains, ephemeral wetlands and a number of waterways ranging in size from minor ephemeral drainage lines to rivers such as the Moyne River and the Shaw River.

The cadastral details of the study area are as shown in Table 1.

**Table 1: Cadastral details of land within the study area**

Parcel_SPI	Parcel_SPI	Parcel_SPI	Parcel_SPI	Parcel_SPI	Parcel_SPI
4\TP412805	2\LP218923	3A~5\PP2835	2052\PP2237	2\TP744497	2\TP242579
11B\PP2237	2\LP201219	1\TP173506	1B~17\PP2835	3\TP412805	1\TP242141
4\TP404957	15A\PP2237	2020\PP2835	1B1~21\PP2835	2014\PP2835	2046\PP2237
4B~8\PP2835	1A1~8\PP2835	3~A\PP2835	1\TP403368	4~10\PP2835	14A\PP2237
3A~15\PP2835	2A~17\PP2835	1A~10\PP2835	4B1~4\PP2835	3A~17\PP2835	3\TP242579
1~7\PP2835	1A~16\PP2835	3~9\PP2835	8\TP403368	2\TP843794	2\TP396974
6\TP403368	2044\PP2237	1\TP578014	4B~16\PP2835	5A~5\PP2835	1\TP396974
1A~17\PP2835	2045\PP2237	3B~4\PP2835	4A~16\PP2835	2013\PP2835	3B~8\PP2835
36A\PP2237	2012\PP2835	2\TP826990	1\TP129514	2018\PP2835	5A~4\PP2835
2A~21\PP2835	2015\PP2835	7~24\PP2390	2020\PP3824	1\TP242579	4B~5\PP2835
8~A\PP2835	2021\PP3824	2019\PP3824	4~9\PP2835	2\PS333856	1\TP412805
11\PP2237	2051\PP2237	2041\PP2237	3\TP403368	2010\PP2835	1\TP843794
2\TP817981	15E\PP2237	2B~21\PP2835	1\TP817981	3A~8\PP2835	2B~4\PP2835
5\TP404957	2\PS519322	2008\PP2390	4\TP843774	2\PS513764	2049\PP2237
2\TP843774	2047\PP2237	1\TP825113	2019\PP2835	1~8\PP2835	2050\PP2237
2\PS601753	2C~21\PP2835	2B~22\PP2390	9~24\PP2390	8\TP404957	8A~B\PP3824
1B~16\PP2835	1\PS513764	2A~22\PP2390	7\TP412805	3\TP843774	2~16\PP2835
3\TP843794	3\TP826990	1B~11\PP2835	15D\PP2237	1\LP122231	2\LP200484

2048\PP2237	5\TP242579	2\TP403368	5\TP412805	35B\PP2237	2B~20\PP2835
1B~4\PP2835	2017\PP2835	5~B\PP3824	2\TP529477	1A~11\PP2835	3\TP404957
36B\PP2237	3A~4\PP2835	7\TP404957	1\LP201219	1B2~21\PP2835	1A~4\PP2835
7\TP403368	6\TP412805	2\LP98389	3B~5\PP2835	15C\PP2237	2~B\PP3824
6\TP404957	1B3~21\PP2835	1\TP529477	2~8\PP2835	4\PS601753	1\TP123936
1~15\PP2835	5\TP843774	11A\PP2237	2B~10\PP2835	2A~23\PP2390	2\TP404957
4\TP403368	2043\PP2237	4B~18\PP2835	2A~10\PP2835	2B~23\PP2390	1~11\PP2835
4A~8\PP2835	6~24\PP2390	2\TP412805	2021\PP2835	2025\PP2835	5B~5\PP2835
4\TP242579	3B~17\PP2835	2026\PP2835	4A~1\PP2835	1\TP843774	3\PS601753
1\TP404957	2\TP578014	2042\PP2237	4B~1\PP2835	2\TP173506	1\TP826990
2009\PP2390	5\TP403368	1A~21\PP2835	35A\PP2237	9\TP403368	2039\PP2237
2B~17\PP2835	1B~21\PP2835	3B~16\PP2835	1B~10\PP2835	2016\PP2835	2009\PP2835
1\PS519322	36C\PP2237	3A~16\PP2835	1\PS333856	9\TP404957	2011\PP2835

## 1.5 Proposed Activity

Willatook Wind Farm Pty Ltd (the proponent) is developing the proposed Willatook Wind Farm (the project) in Moyne Shire, Victoria. The project will harness strong and reliable winds to generate renewable energy through the construction and operation of up to 59 wind turbines generators and would operate for a period of at least 25 years following a two-year construction period. The wind farm would generate more than 1,300 gigawatt hours (GWh) of renewable electricity to the National Electricity Market (NEM) each year.

The project is located approximately 22 km to the north of Port Fairy, 32 km to the northwest of Warrnambool and to the south of the Woolsthorpe–Heywood Road. The project is located within an area of private and public land that is largely used for agriculture, predominantly sheep and cattle grazing.

Approximately 60 km of access tracks (both new and existing) would be required to provide access from the public road network to each wind turbine and supporting infrastructure. These access tracks provide access for project construction and maintenance vehicles and can be used by emergency vehicles and by landowners for their farming operations.

Electricity produced by the project will be fed through underground cables to the on-site substation, from where it will be exported to the NEM via the Tarrone Terminal Station and the existing Moorabool to Heywood 500 kilovolt (kV) transmission line.

Other project infrastructure would include:

- an on-site quarry for basalt rock that will be used to provide aggregate for access tracks and hardstand areas
- a battery energy storage system (BESS) located immediately to the west of the substation
- an operations and maintenance (O&M) facility consisting of site offices and amenities.

### Operational Activities

Key operational activities will focus on the effective operation of the wind farm. This will include monitoring (on-site or remotely), maintenance and repairs. This would include routine inspections, servicing and repair of wind turbines, maintenance of access tracks and of the electrical system and buildings and plant, including control systems. The project area is currently used as rural farmland, and this would continue after construction. The proposed development footprint consists of 222.3 ha, which is 5.4% of the study area. The operational footprint is estimated to be 99.5 ha, which represents 2.4% of the project site. Construction of the wind farm is expected to take approximately two years to complete, followed by an operational phase of at least 25 years.

### Decommissioning

Within 12 months of wind turbines permanently ceasing to generate electricity, the wind farm would be decommissioned. This would include removing all above ground equipment; restoration of all areas associated with the wind farm, unless otherwise useful to the ongoing management of the land; and post decommissioning revegetation.

## 1.6 Name of Client

This report has been commissioned by Willatook Wind Farm Pty Ltd (ABN: 27 150 810 978).

## 1.7 Report Review and Distribution

Copies of this HHA will be lodged with the following organisations:

- Willatook Wind Farm Pty Ltd; and
- Heritage Victoria.

## 1.8 Heritage Legislation

An overview of the Victorian *Heritage Act 2017*, the Victorian *Planning and Environment Act 1987*, the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the Victorian *Aboriginal Heritage Act 2006*, and the Commonwealth *Native Title Act 1993* is included in Appendix 1. This legislation is subordinate to the Victorian *Coroners Act 2008* in relation to the discovery of human remains.

## 1.9 Consultation

Consultation has been undertaken with Heritage Victoria regarding the registration of all potential historical archaeological places identified during the field survey. Site registration cards were submitted for consideration by Heritage Victoria regarding the inclusion such identified places in the Victorian Heritage Register or Victorian Heritage Inventory as appropriate.

## 2 BACKGROUND REVIEW

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The background review includes research into information relating to historical cultural heritage in or associated with the study area.

### 2.1 Environmental Context

Environmental factors influence how land may have been used in the past. This section reviews the environmental context of the study area to gain an understanding of environmental factors relevant to historic cultural heritage.

#### 2.1.1 Geology, Geomorphology and Soils

The defined geographic region for the proposed Willatook Wind farm is an arbitrary 5 km radius around the study area. This area forms part of the greater Victorian Volcanic Plain as well as a portion of the Warrnambool Plain, and falls under the jurisdiction of the Glenelg Hopkins Catchment Authority (DELWP 2020a).

The Victorian Volcanic Plain is dominated by Cainozoic basalt deposits, formed by continuous volcanic activity over the last six million years. The region is typified by extensive flats and undulating basaltic plains, stony rises and old lava flows, with volcanic cones and old eruption points dotted across the landscape. Salt and freshwater lakes are also common within the landscape. Soils within the Victorian Volcanic Plain are variable and include fertile reddish-brown to black loams and clays, red friable earths, acidic contrast soils and scoraceous material and support a wide variety of flora. Wetlands within the region include inland salt marshes, subterranean karst wetlands, freshwater and saline/brackish lakes and freshwater ponds and marshes, supported by a relatively evenly distributed annual rainfall of 450–840 mm.

#### Geology

The geology of the far western part of the study area comprises marine sedimentary rock of the Heytesbury Group. This geology was laid down in the Miocene period and marine calcarenite, marl, and silt. The geology of the northern section of the study area (north of Woolsthorpe-Heywood Road) generally consists of extrusive igneous rocks of the New Volcanic Group (Geological Society of Victoria 1997). This geology was laid down between the Miocene and Pleistocene periods and comprises tholeiitic to alkaline basalt, minor scoria and ash (Geological Society of Victoria 1997). The geology of the majority of the southern portion of the study area (south of Woolsthorpe-Heywood Road) comprises unnamed stony rises of the Newer Volcanic Group laid down between the Miocene and Pleistocene periods (Geological Society of Victoria 1997).

#### Geomorphology

The study area lies on three Geomorphological Units (GMUs). Broadly speaking the central portion of the study area is characterised by GMU 6.1.2 'Stony Rises (Mt. Eccles, Pomboineit, Mt. Rouse)', with GMU 6.1.4 'Plains with well-developed drainage and deep regolith (Cressy) characterising the underlying geology of the eastern and western extents. Throughout pockets of GMU 6.1.5 'Terraces, floodplains and lakes, swamps and lunettes and their deposits (Lough Calvert, Lower Woody Yallock, Chain of Ponds, Condah Swamp, Lake Murdeduke and lunette) can be found.



In the wider region, there are over 400 volcanic eruption points, including Mt Shadwell, Mt Rouse, Mt Napier, Mt Eccles, and Tower Hill.

## Soils

The geology is associated with Holocene unnamed alluvial deposits incorporating fluvial alluvium, gravel, sand, and silt and small areas of Holocene unnamed paludal swamp and lake deposits (Geological Society of Victoria 1997). Soils within the study area generally consist of ferric brown and yellow chromosols (DPI 2010a).

### 2.1.2 Vegetation

The vegetation in the study area would have been highly variable prior to European settlement and little remains today due to clearances for farming and stock pastures and weed infestation. Much of the basalt plain and stony rises that characterise the study would have been lightly covered in grassy woodland. Kangaroo Grass (*Themeda triandra*), Tussock-grass (*Poa labillardieri*), wallaby grass, spear grass and other native grasses grew in profusion. Early stockmen working in the region claimed it sometimes grew as 'high as their saddles' (Bride 1983, cited in Doyle 2006). Common tree varieties included Blackwood (*Acacia melanoxylon*), Manna Gum (*Eucalyptus viminalis*), Sheoak (probably Drooping Sheoak, *Allocasuarina verticillata*), and Messmate Stringybark (*E. obliqua*).

The Department of Environment, Land, Water and Planning's (DELWP 2020b) Ecological Vegetation Classes (EVCs), classify vegetation in the bioregion as EVC 742; EVC 642; EVC 744; EVC 647; EVC 53; EVC 83; EVC 23; EVC 894; EVC 125, EVC 714, EVC 651, EVC 705 and EVC 733. A description of these vegetation classes is contained in Table 3. EVCs 742, 714, 733 and 744 are Mosaics of other EVCs and can be considered with the relevant combinations of the below descriptions.

**Table 2: Ecological Vegetation Classes (EVCs) in the bioregion**

EVC Number and Name	Description	Commonly occurring species
642, Basalt Shrubby Woodland	This woodland is dominated by Eucalyptus up to approximately 15m tall, with a mixture of shrubs and grasses in the understorey. It is usually found on well drained and seasonally damp fertile soils in areas of the volcanic plain that have high rainfall.	<i>Eucalyptus ovata</i> Swamp Gum <i>Eucalyptus viminalis</i> Manna Gum <i>Acacia mearnsii</i> Black Wattle <i>Leptospermum continentale</i> Prickly Tea-tree <i>Astroloma humifusum</i> Cranberry Heath <i>Pteridium esculentum</i> Austral Bracken <i>Lomandra filiformis ssp. filiformis</i> Wattle Mat-rush <i>Austrodanthonia pilosa</i> Velvet Wallaby-grass

EVC Number and Name	Description	Commonly occurring species
647, Plains Sedgy Wetland	This wetland occurs in seasonally wet depressions of the volcanic and sedimentary plains. It is associated with fertile, silty, peaty or heavy clay soils. Primary vegetation includes sedges and herbaceous plants, with occasional eucalyptus or tea trees and paperbarks in areas that have high rainfall. Aquatic herbs can also be found here.	<i>Eucalyptus ovata</i> Swamp Gum <i>Eucalyptus viminalis</i> Manna Gum <i>Potamogeton tricaratus</i> s.l. Floating Pondweed <i>Myriophyllum simulans</i> Amphibious Water-milfoil <i>Stellaria angustifolia</i> Swamp Starwort <i>Lachnagrostis filiformis</i> Common Blown-grass <i>Glyceria australis</i> Australian Sweet-grass <i>Lobelia pratioides</i> Poison Lobelia
53, Swamp Scrub	This closed scrub grows up to 8 m tall at low elevations on alluvial deposits along streams or on poorly drained sites with high nutrient and water availability. The soils vary from organic loams to fine silts and peats which are inundated during the wetter months of the year. The EVC is dominated by Woolly Tea-tree which often forms a dense impenetrable thicket, outcompeting other species. Where light penetrates to ground level, a moss/lichen/liverwort herbaceous ground cover is often present.	<i>Leptospermum lanigerum</i> Woolly Tea-tree <i>Melaleuca squarrosa</i> Scented Paperbark <i>Hydrocotyle pterocarpa</i> Wing Pennywort <i>Juncus procerus</i> Tall Rush <i>Gahnia clarkei</i> Tall Saw-sedge <i>Deyeuxia quadriseta</i> Reed Bent-grass <i>Amphibromus recurvatus</i> Dark Swamp Wallaby-grass <i>Schoenus maschalinus</i> Leafy Bog-sedge <i>Juncus planifolius</i> Broad-leaf Rush
83, Swampy Riparian Woodland	This woodland grows to 15 m tall and generally occupies areas around low energy streams of the foothills and plains. Undergrowth may be dominated by a range of large and medium shrub species on the stream levees in combination with large tussock grasses and sedges at ground level.	<i>Eucalyptus ovata</i> Swamp Gum <i>Juncus planifolius</i> Broad-leaf Rush <i>Juncus pauciflorus</i> Loose-flower Rush <i>Triglochin procerum</i> s.l. Water Ribbons <i>Juncus procerus</i> Tall Rush <i>Cyperus lucidus</i> Leafy Flat-sedge <i>Poa labillardierei</i> Common Tussock-grass
23, Herb-rich Foothill Forest	This forest occurs on fertile, moderately well-drained soils in an extremely wide range of geological areas that have moderate to high rainfall. The forest occupies easterly and southerly aspects on lower slopes and in gullies. This is a medium to tall open forest or woodland with a small tree layer over a sparse to dense shrub layer. A high level of ground cover and the diversity of herbs and grasses in the ground layer characterise this EVC.	<i>Eucalyptus ovata</i> Swamp Gum <i>Eucalyptus obliqua</i> Messmate Stringybark <i>Eucalyptus viminalis</i> ssp. <i>viminalis</i> Manna Gum <i>Acacia melanoxylon</i> Blackwood <i>Juncus procerus</i> Tall Rush <i>Lepidosperma laterale</i> var. <i>majus</i> Variable Sword-sedge <i>Deyeuxia quadriseta</i> Reed Bent-grass

EVC Number and Name	Description	Commonly occurring species
894, Scoria Cone Woodland	This EVC can be either a eucalypt woodland up to 15 m tall or a non-eucalypt (sheoak) woodland up to 10 m tall. In either case the trees form a canopy over a grassy to bracken-dominated understorey with a range of herbs. This EVC occurs on the slopes of scoria cones and spatter areas of the volcanoes of western Victoria. The soils it grows in are fertile but often skeletal.	<i>Eucalyptus viminalis</i> Manna Gum <i>Allocasuarina verticillata</i> Drooping Sheoak <i>Acacia melanoxylon</i> Blackwood <i>Bursaria spinosa</i> Sweet Bursaria <i>Lomandra filiformis</i> Wattle Mat-rush <i>Dianella revoluta</i> s.l. Black-anther Flax-lily <i>Austrodanthonia pilosa</i> Velvet Wallaby-grass <i>Pteridium esculentum</i> Austral Bracken
125, Plains Grassy Wetland	This EVC is usually treeless, but in some instances can include sparse River Red Gum or Swamp Gum. A sparse shrub component may also be present. The characteristic ground cover of this EVC is dominated by grasses and small sedges and herbs. The vegetation is typically species-rich on the outer verges but is usually species-poor in the wetter central areas.	<i>Juncus flavidus</i> Gold Rush <i>Deyeuxia quadriseta</i> Reed Bent-grass <i>Amphibromus nervosus</i> Common Swamp Wallaby-grass <i>Poa labillardierei</i> Common Tussock-grass <i>Glyceria australis</i> Australian Sweet-grass <i>Juncus holoschoenus</i> Joint-leaf Rush <i>Austrodanthonia duttoniana</i> Brown-back Wallaby-grass
651, Plains Swampy Woodland	This eucalypt woodland grows up to 15 m tall with a ground layer dominated by tussock grasses, sedges and herbs. Shrubs are often scattered throughout the area. It occurs on poorly drained, seasonally waterlogged heavy soils.	<i>Eucalyptus ovata</i> Swamp Gum <i>Asperula conferta</i> Common Woodruff <i>Centella cordifolia</i> Centella <i>Lobelia anceps</i> Angled Lobelia <i>Acaena novae-zelandiae</i> Bidgee-widgee <i>Gahnia trifida</i> Coast Saw-sedge <i>Carex appressa</i> Tall Sedge <i>Poa labillardierei</i> var. <i>labillardierei</i> Common Tussock-grass
705, Basalt Creekline Shrubby Woodland	This shrub-dominated low eucalypt woodland grows up to 10 m tall, with a range of grasses, sedges and herbs in the understorey. It occurs on heavy soils along low-gradient boggy drainage lines in relatively high rainfall areas of the volcanic plains.	<i>Eucalyptus ovata</i> Swamp Gum <i>Juncus flavidus</i> Gold Rush <i>Amphibromus nervosus</i> Common Swamp Wallaby-grass <i>Poa labillardierei</i> Common Tussock-grass <i>Glyceria australis</i> Australian Sweet-grass <i>Juncus holoschoenus</i> Joint-leaf Rush <i>Austrodanthonia duttoniana</i> Brown-back Wallaby-grass <i>Eleocharis acuta</i> Common Spike-sedge <i>Eleocharis pusilla</i> Small Spike-sedge

### **2.1.3 Climate**

The climate of the study area is temperate, with cool wet conditions in winter and spring and warm dry conditions in summer and autumn. Historical data for Hawkesdale (approximately 8 kilometres east of the study area), shows August is historically the wettest month with the highest rainfall mean measurements at 82.5mm, and February is the driest with a mean of 32.9 mm (BOM 2020). Data from Warrnambool airport (approx. 21 km away) indicates that February is the warmest month, with a mean maximum temperature of 24.8 degrees Celsius (BOM 2020). July is the coolest month, with a mean maximum temperature of 13.5 degrees Celsius (BOM 2020).

## 2.2 Historical Context

The section reviews the post-contact historical context of the study area and includes an examination of historical sources, previously recorded historical archaeological site types, previous Council heritage studies and previous archaeological studies undertaken in the area. Together, these sources of information can be used to formulate a predictive site statement concerning what types of sites are most likely to occur in the study area, and where these are most likely to occur.

### 2.2.1 Regional History

Whalers and sealers were the first non-Aboriginal people in the area now known as the west coast of Victoria. As early as the 1790s, semi-permanent or seasonal camps were established beside whaling and sealing stations. Officially, however, the first mention of the region is by Lieutenant James Grant in December 1800, when he sailed by Portland Bay in the *Lady Nelson*. Captain Nicholas Baudin in the *Géographe* next charted the coast between Port Fairy and Warrnambool in 1802, describing Tower Hill as 'a peak of conic form' and naming it *Il peak de reconnaissance*. Captain Matthew Flinders surveyed the south-west coast three weeks after Baudin, passing Lady Julia Percy Island and recorded a 'round hill', which was most likely Mt Eccles (Davidson et al. 1998:257).

The Mills brothers, both sealers, are noted to be the first of the British to permanently reside in the Port Fairy area from 1826 (Powling 1980: 8-10). Captain James Wishart, also a sealer, gave the name of his cutter *Fairy*, to the locality in 1828. There were approximately 100 whalers at Portland Bay and Lady Julia Percy Island by 1834, and at least seven whaling stations along the Portland coast by 1838 (Wiltshire 1981: 22, in Maera and Slavin 2009: 29). The brothers Edward and Francis Henty illegally squatted in the Portland area in 1834, after establishing the whaling station there, they then commenced efforts to establish pastoral ventures inland, and led to the formation of the Port Phillip Association.

The interior of western Victoria was explored by individuals such as Major Mitchell on behalf of the New South Wales Government. During the year of Mitchell's survey (1836) squatting was legalised (DPI 2003:7). His reports of the land he dubbed 'Australia Felix' likely inspired more settlers to move into the area and take advantage of the wide grassed plains and trees available for timber (Powell 1996: 79, in Maera and Slavin 2009: 30). Hence by the late 1830s the squatters with sheep runs took most of the land between the west of the Port Phillip colony to the edge of the mallee scrub (Wood 2001: 56), with the area now within the Moyne Shire coming under pastoral leasehold through the 1840s. Many of the first squatters were from Scotland, their occupation of the land was legitimized in 1836 by Governor Bourke, aware of the importance of the wool industry to Australia, made squatting legal on the payment of a license fee. Eleven years later, the legislation was amended to grant the squatters leasehold, with the option to purchase the land from the Crown after 14 years. Though the occupation licence did not permit the erection of any buildings, most squatters did build temporary buildings for use on the run and to protect their land from other squatters. Until separation in 1851, Victoria came under the administration of New South Wales and was known as the Port Phillip District of New South Wales.



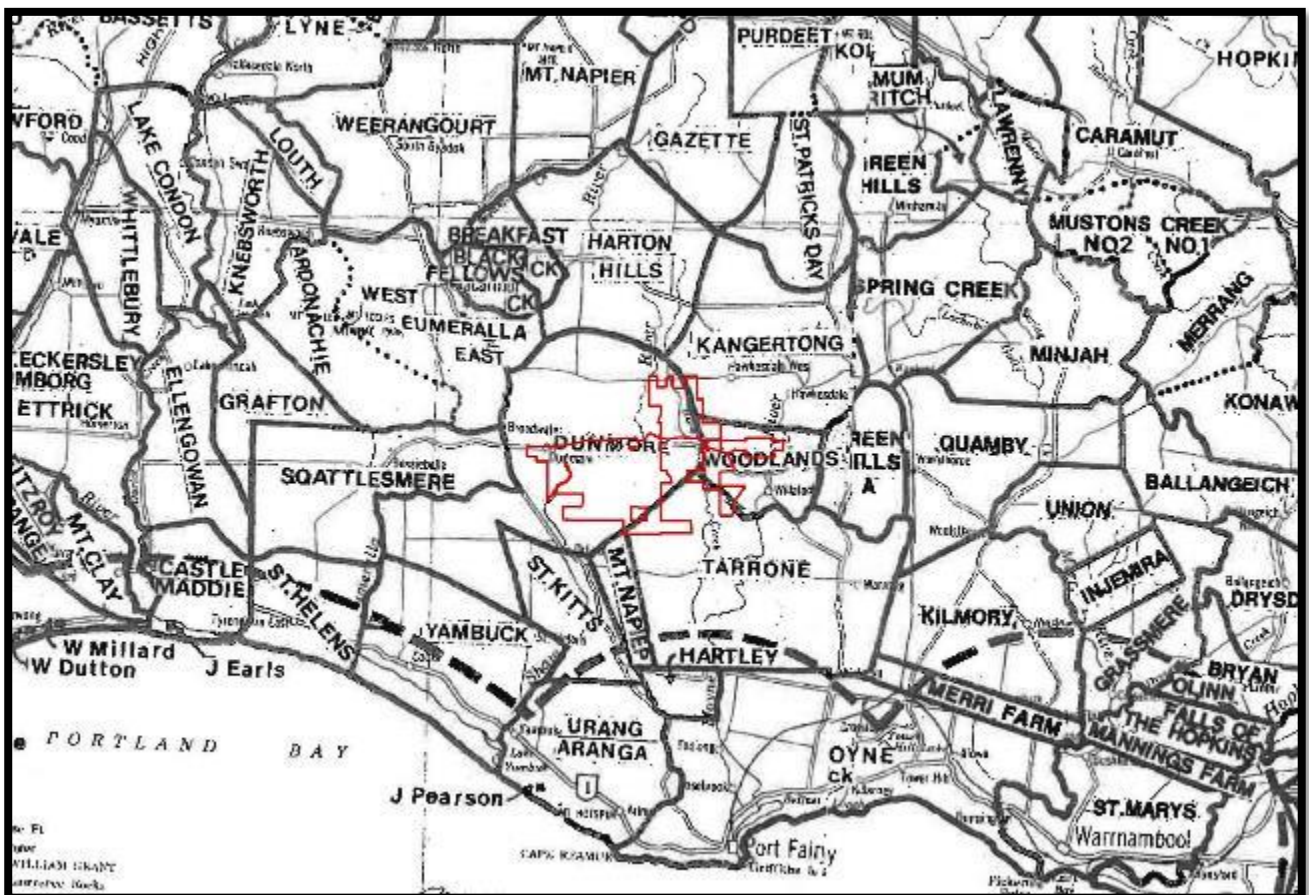
### 2.2.2 Local History

Licences for occupation and grazing in the area now part of the Moyne Shire were issued from the 1840s, and by 1846 there had been 400 licences granted in the region including to the Henty brothers (Bride 1969 in Wood 2001: 57; DPI 2003:12). In 1841, under the 'special survey' regulations, Irish immigrant James Atkinson purchased 5120 acres of land at Port Fairy, which he leased to a large number of Irish tenants. He named the settlement Belfast after his home town. It is reputed that he arranged for Irish settlers to be shipped from Sydney and 'provided them with seeds, etc., and means of maintenance till crops could grow' (Powling 1980 cited in Doyle 2006). William Rutledge also led a syndicate of northern Irish to purchase a second special survey, an area of 5120 acres that stretched from the Merri River to the Killarney Swamp, and bounded by Tower Hill on the north. He named it Farnham, probably after an ancestral house in his home county, Cavan. (Powling 1980 cited in Doyle 2006). Settlement radiated outwards from Belfast (the current Port Fairy area).

With the increase in settlement came an increase in infrastructure such as dry stone walls, utilising the basalt, limestone or bluestone found in the area. Native trees were cut, and areas of swampland were drained to provide pasture, resulting in the destruction of native plants and animals. Huts were erected to protect squatting runs and provide shelter for pastoralists, which moved towards more permanent housing made from brick and stone as land holdings were legalised (Maera and Slavin 2009: 30-31). Early dwellings were typically built of slab, logs, or wattle-and-daub; stone was used if it was available. At Tarrone, T.A. Browne's stockman used 'clean cut black cubes' to construct his first shelter, with a roof thatched with grass, and chimneys built using surface stone (Boldrewood 1969:38). Interiors were sealed with newspaper, and the floor was usually earthen. Shepherds' huts, woolsheds, stables, and other outbuildings also followed vernacular styles. Stone was the preferred material for permanent buildings. Roofing was initially constructed using bark or thatching, and later using hand-split timber shingles, galvanised iron became available after 1850. From this time, the Gold Rush triggered a great demand for fresh meat, vegetables and grain. Farmers prospered with the rapid increase in cultivation and the favourable prices for produce obtained on the goldfields. During this period Aboriginal women were often mistreated by the squatters and used as station hands, and for forced labour. European women first appear in the records of the district in the late 1840s.

Thomas Alexander Browne was 18 when he arrived in the local area near Lower Eumeralla and the station known as Bessiebelle. His records his observations of the landscape under the pen name Rolf Boldrewood; *'All the land I looked upon was deep-swarded, thickly-verdured as an English meadow. Wild duck swam about in the pools and meres of the wide misty fen, with its brakes of tall reeds ... Over-head long strings of wild swan clanged and swayed. There were wild beasts (kangaroo and dingoes), Indians (blacks, whose fires in the Rocks we could see), a pathless waste, and absolute freedom and independence.'* He later squatted on 50,000 acres on what he named Squattlesea Mere. Clashes between Aboriginal people and Europeans reached a peak around 1842–43 (Davidson et al. 1998:415). The Eumeralla Wars were the violent encounters between European settlers and Gunditjmara Aboriginal people, and the conflict is named after stations on the Eumeralla River between Port Fairy and Portland where much of the conflict was located. Browne/Boldrewood's most famous book was *Robbery Under Arms*, but his autobiography, titled *Old Melbourne Memories*, includes a detailed tract on the Eumeralla Wars. Frontier warfare claimed the lives of a large number of Aboriginal people and a small number of settlers, and Clark (2017) has documented many massacre sites located within Moyne Shire.

While shepherds and boundary riders were employed on the larger estates. Much land had been fenced by the 1860s, in response to both the rabbit problem and new land selection legislation, including stricter fencing legislation. This combined with the availability of the necessary skilled labour led to the construction of dry-stone walls in the region including at Willatook, around Mortlake, on the outskirts of Port Fairy, and at Yambuk. At this time a few squatter families made their fortunes from wool and employed shearers, shepherds, labourers and servants on the stations. Wool sales generated greater wealth throughout the 1870s, with many able to erect grander homesteads and commissioned architects to do so. Many pastoral families sought to perpetuate the notion of the 'big house' and the associated social conventions of British landed society. The arrangement of buildings and the use and demarcation of space on pastoral stations reflected this social division, with the homestead and homestead garden kept physically separate from the working areas (Doyle 2006: 18). The large pastoral properties played an important part in the development of townships. Woolthorpe, for example, was established at the meeting point of three large stations: Quamby, The Union, and Kilmory. Likewise, Macarthur was a convenient service point for Eumeralla East, Eumeralla West, and Blackfellow's Creek (later Harton Hills). The study area lies within the extent of four historic pastoral runs: Dunmore, Tarrone, Kangeratong and Woodlands (Figure 1).



**Figure 1:** Location of study area in relation to historical pastoral runs (Source: Spreadborough and Anderson 1983)

Two prominent stations within the study area were Tarrone Station, owned by Dr James Kilgour, located in the south east of the study area and Dunmore Station, owned by William Campbell on the Shaw River (Clark 1990: 69; SLV 2017).

According to Clark (2017:34-35) Dr James Kilgour and Dr William Bernard licenced and erected a home station on Tarrone Station in October 1840, on the Moyne River. Tarrone station was named after the Tarrone gundidj or Yowen gundidj where several families lived adjacent to the waterholes. The area was also used traditionally by Yowen gundidj for eeling where a weir was constructed on the Moyne and 200 people at a time would gather to collect eels during autumn. There was ongoing hostility when a station hand was killed near the home station. The Protector of Aborigines George Robinson visited Tarrone April 1841 and the Yowen gundidj complained of having their land stolen by Kilgour and that he was an enemy (Clark 2017:44). In October 1842 Kilgour was purportedly attacked by 300 Aborigines led by Purtkeun, one of five Yowen gundidj [Koornkopanooot or Bigwurrung speakers] clan heads. According to Ryan et al. (2019) seven men engaged in the stockyard with milking were cut off. Only one of them was armed. Two of them, Robertson and his son, tried to get back to the horses, but were prevented, the son being driven back and the father being brought down by spears. Kilgour rushed out of the house in his night clothes armed with a double-barrelled shotgun, followed by Mrs and Miss Robertson with loaded muskets and ammunition. The Yowen gundidj immediately dispersed and the men in the stockyards were rescued. With the aid of the neighbouring estates, a force of 40 well-armed men led by Kilgour was raised and to retaliate and pursued the Aborigines, one of whom was captured and made to act as a guide. The Yowen gundidj encampment was found and, two or three of them being shot as they fled. The armed gang then stole all of the property of the tribe. According to Kilgour, the result was peace for nearly 12 months and no more organised attacks on the station. G.A. Robinson recorded in his diary in August 1842, that Kilgour lost his licence for reporting false information concerning the Aborigines. In October 1842 Dr John Watton a medical officer of the Mt Rouse station investigated the poisoning of flour sent to the Yowen gundidj by Kilmour at Tarrone Station. Watton suspected arsenic was used as the overseer of the station a Mr Robinson had received a large quantity a few days earlier. Watson found the bodies of three women, three children and three men had died in the incident, and whose bodies were then burnt but no white witnesses to the events came forward (Clark 2017:45). There were further reports of poisoning this time of damper given by Robinson in March 1843, reported by Lt. Robert Chamberlain but charges were unable to be laid. Kilgour however was threatened with not having his licence renewed unless he lived on Tarrone station himself or employed a new overseer.

Harton Hills, borders the northern extent of study area and was first occupied by the Bolden brothers from 1840 until it was then taken up by William Carmichael in 1843. (Brown 1966). This run was 38,400 acres and sustained 1500 cattle and 8000 sheep. Carmichael was the last owner of this run until it was forfeited in January 1867. However, he continued to reside at Harton Hills homestead until his death in 1890. The Bolden brothers bought the best cattle they could get- but 'they were under penalty of three time purchase money should they ever re-import them into England'. Among the animals that they imported was the bull 'Mussulman', which cost them 400 guineas. The Bolden brothers have been described a "knowledgeable, plucky and resourceful, although at times indiscreet and perhaps insensitive". Arguments with neighbours, the Crown Lands Commissioner and 'with the blacks' have been reported. Nevertheless, they were successful cattle breeders winning 5 of 9 awards presented at the Melbourne show in 1842 and had a "profound and persistent" influence on Australian Shorthorn development.

1877 saw the opening of the Geelong – Warrnambool railway, increasing the ease of settlement to the region (DPI 2003: 12, in Nicolson *et al.* 2009: 18). This also resulted in an increase in production; the new means of transporting large volumes of produce to Melbourne and other areas. The timber industry also benefited from

the train line and gold rush, with large amounts of timber being felled to provide shoring in mine shafts and fuel for boilers, and the increasing intensity of the timber industry thus opened up even more land for grazing and dairying (Wood 2001:58).

A series of Acts were passed in 1898 and 1904 in which large pastoral holdings were compulsorily acquired and subdivided to allow for closer settlement. Soldiers returning from first World War I and then World War II were able to acquire parcels of land under the Soldier Settlement Scheme (Doyle 2006:34). Under the Discharged Soldier Act (1917) they were offered land selections on reasonable terms. The War Service Homes Commission was established in 1919 to provide houses for successful 'soldier settler' applicants and their dependents. The simple weatherboard cottages they erected, however, proved far from adequate. Woodlands Estate at Willatook was one of the first soldier settlements in Victoria and a memorial stone now stands at the site of the former school in Willatook (Figure 2). The Victorian Government's Land Survey Department surveyed the land south of Hawkesdale West during the 1940s and opened up new subdivisions for sale and settlement, which included the clearing of 400 square kilometres of the Heytesburn Forest (LCC 1976: 14, in Nicolson *et al.* 2009: 18). Overall, soldier settlement in Victoria had a one-in-four failure rate. In Moyne Shire, however, the success rate varied but many fared badly.



**Figure 2: Memorial to Woodlands Soldier Settlement Scheme, Willatook (Source: VHD).**

Over time, town centres such as Warrnambool and Port Fairy moved towards dairying as a primary pastoral focus, resulting in the building of many factories for the processing of milk and butter, whilst other areas such as Hamilton remained focused on sheep grazing, becoming known as the 'wool capital of the world' (Wood 2001:57, du Cros and Associates 1993: 5; LCC 1979, in Wood 2001:58). Crops grown throughout the region include wheat, hops and tobacco, while the rich pasture supported the dairy industry. Other regional industries included timber milling, lime burning and quarrying.

The study area has been used for pastoral and agricultural purposes since the 1840s, especially the running of sheep and dairy cattle, and the growing of potatoes, onions, oats and hay (LCC 1996: 41). The pastoral runs and farms were often delineated by kilometres of dry stone walls which can be seen today.



To the north east of the study area, the Hawkesdale Inn was opened in 1855 and a school was opened in 1866. Catholic, Presbyterian and Methodist denominations also operated church services in the area by this time. In 1871 parts of Hawkesdale was removed from the Shire of Belfast and renamed Minhamite Shire. With these developments the population grew around the study area and in 1890 a railway was established from Koroit to Hamilton, which also serviced Hawkesdale. A hospital was established in nearby Macarthur in the mid-1900s, and a high school opened in Hawkesdale in 1963. In 1994 the Moyne Shire Council was established and absorbed the Shires of Belfast, Mortlake, and Minhamite, the former Borough of Port Fairy and small sections of other nearby areas (Moyne Shire Council, 2017).

### 2.2.3 Land Use History

A large portion of the historic 'Dunmore' Run is within the study area. Dunmore was 47,228 acres (19,112 ha) and in 1849, was recorded as holding 1200 cattle and 55 horses (Figure 3). This run was divided into Dunmore and Dunmore West in 1863 but were both cancelled in July 1876. One of the early co-owners of Dunmore was Charles Hamilton Macknight (1819-1873) from Edinburgh, Scotland (Figure 4). Educated at the University of Edinburgh, he attended the Scottish Naval and Military Academy for a year before sailing to Port Phillip where he arrived on 1 March 1841. James Hamilton Irvine and William Campbell went with him, the three men having agreed to combine resources (Hone 1974). In May the partners took up the 25,000-acre (10,000 ha) Strathloddan run and Bough Yards, 22,400 acres near Castlemaine, but left the district in 1842 and acquired the new run which they called Dunmore. Macknight, like Kilgour, participated in raids into Aboriginal communities that resulted in some of the worst massacres of Aboriginal people. Clark (2017: 51, citing Boldrewood 1885) notes Macknight along with James Irvine and a Mr Cunningham participated in a massacre at Lake Gorrie (Squattersamere, west of the study area) on request of a Joe Burge who travelled to Dunmore to enlist their help. Later histories in contrast state Macknight was said to have "won repute for just dealing and gained the confidence of the Aboriginals" in the area after previously being "a member of punitive expeditions" in response to the maimed stock and stolen station stores.





Willatook Wind Farm, Willatook Victoria: HHA, HV No 3725, April 2022

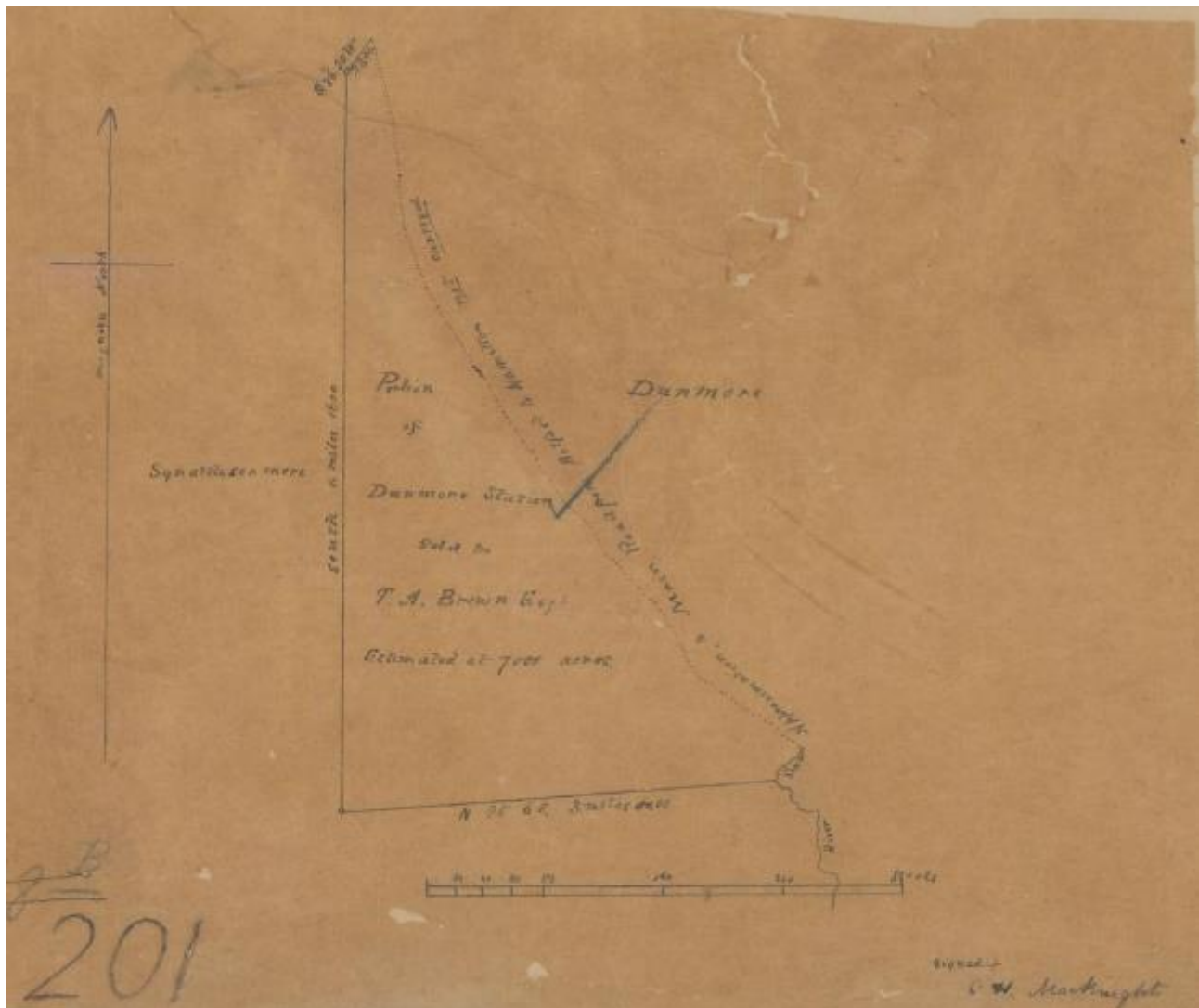


**Figure 4:** Photograph by Joseph Soden taken in 1866 of Dunmore Homestead with the associated Turkish Bath House with its steep peaked roof at the left (Source: SLV).



**Figure 5: Charles Hamilton Macknight (1819-1873) of the Dunmore Run. (SLV Image No. H5056/283)**

In 1863 Dunmore was divided into two properties. Macknight and his partner, Irvine retained one portion while Dunmore West was acquired by the Trust and Agency Co. Irvine continued as Macknight's partner till the early 1870s. At Dunmore, Macknight specialized in the breeding of Shorthorn cattle and created one of the finest herds in the region. Macknight also bred race-horses but later his greatest interest became the breeding of pure merino sheep. He later decided that sheep could not thrive at Dunmore and sold them all, but not before he had established himself as one of the greatest authorities on sheep breeding. He believed in inbreeding and wrote many long argumentative letters to the Melbourne *Economist*, the *Australasian* and other papers. He wrote a book on sheep breeding with a Dr Henry Madden (*On the True Principles of Breeding*) which was published in Melbourne in 1865. Macknight was struck by a falling tree during a bush fire and died three days later on 9 March 1873, leaving little for his family. He was survived by his wife Everina Isabella, née Heatley, four sons and two daughters. Dunmore was sold to Robert Farie in 1873, who left the estate to deteriorate. In 1885 it was sold to Joseph Pearson and John Cuthbert, Samuel Baulch in 1890 and who improved the property. The property was destroyed by fire in 1939 with the kitchen and Turkish Bath House the only surviving structures.

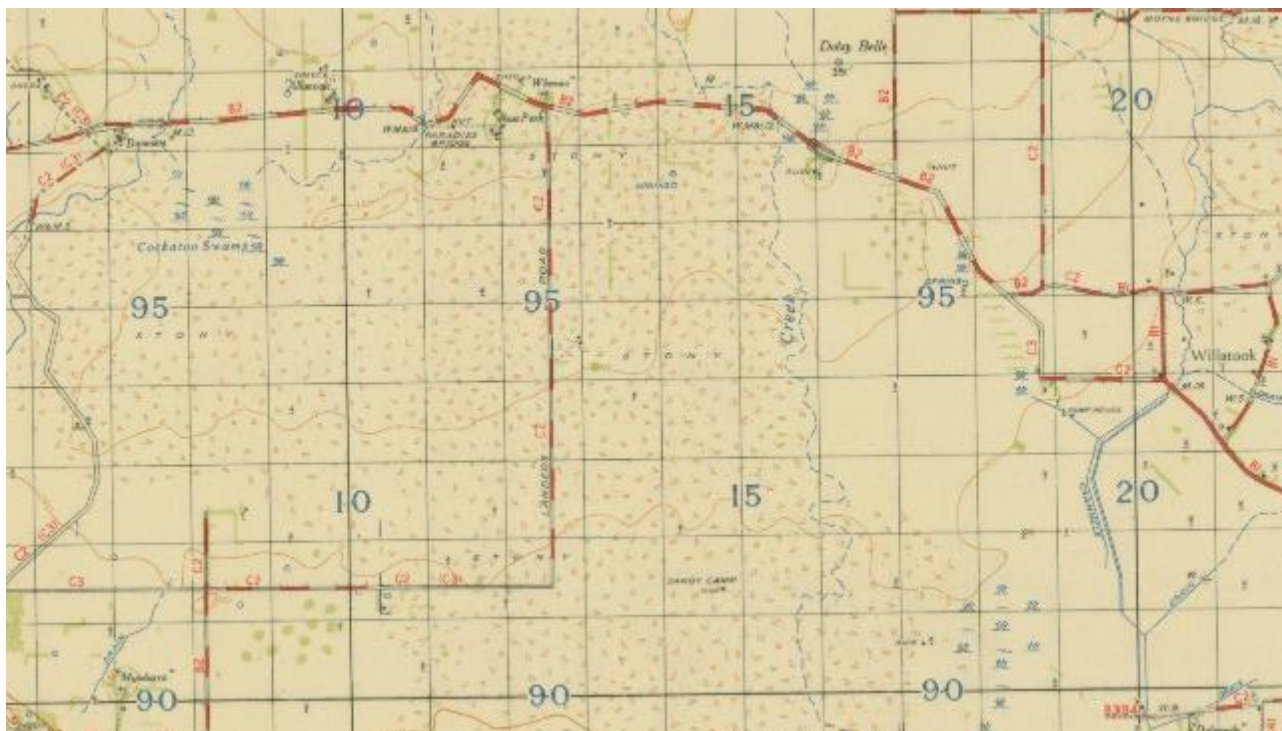


**Figure 6: portion of Dunmore Station sold to T.A. Brown 1882 Source: PROV**

As more people moved to the area, the land in and around the study area continued to be divided and sold for pastoral purposes. The 1882 map of Dunmore Run (Figure 6) shows surrounding property owners and property names added in at an unknown later date that include R.D. Chamberlain (Tarrone), H. Lehman (Woodlands), C & D Aplin (St Kitts), J. Ware. B. Boyd (Euramella), W. Carmichael (Harton Hill) and J. Dawson (Kangatong) and notes the portion sold to T.A. Brown.

A map of Hawkesdale prepared in 1942 by the Australian Section, Imperial General Staff (Great Britain War Office. General Staff Australian Section) (Figure 7 and Map 5) shows the township of Willatook east of the study area as well as a number of topographic features, roads, including Landers Road which bisects the study area, names of pastoral stations and structures likely associated with pastoral use.





**Figure 7: Extract from map of Hawkesdale 1942 prepared by the Australian Section, Imperial General Staff (Great Britain War Office. General Staff Australian Section) Source SLV**

More recently utilities including overhead powerlines and underground optical fibre cable routes, gas and water pipelines have been installed within the study area.

#### **2.2.4 Database Searches**

A review of the various relevant databases was conducted and no listed or registered historical sites were identified within the study area. However, a de-listed historic site D7321-0040 (Landers Lane Dry Stone Wall) is present within the study area. The database review is discussed below in relation to the study area and surrounding region.

##### **2.2.4.1 Victorian Heritage Register**

The Victorian Heritage Register (VHR), established by the Victorian *Heritage Act 2017*, provides the highest level of statutory protection for historical places and objects in Victoria. Only the State's most significant historical places are listed in the VHR.

A search of the VHR was conducted for a 5 km radius area centred on the study area. The search identified no registered historical heritage places in the search area.

##### **2.2.4.2 Victorian Heritage Inventory**

The Victorian Heritage Inventory (VHI), established by the Victorian *Heritage Act 2017*, provides the statutory protection for all historical archaeological sites, areas or relics, and private collections of relics, in Victoria. Places listed on the VHI are not of State significance but are usually of regional or local significance.



A search of the VHI was conducted for a 5 km radius area centred on the study area. The search identified a total of four historical heritage places in the search area, however only one site is currently listed.

The listed site is H7321-0022 (Moyne River Stone Foundations).

The de-listed sites are:

- D7321-0040 (Landers Lane Dry Stone Wall);
- D7321-0039 (Harton Hills Dry Stone Wall Complex); and
- D7321-0025 (Officer Dry Stone Wall 1).

One of these sites, D7321-0040 (Landers Lane Dry Stone Wall), is located within the study area (Map 6).

#### **2.2.4.3 Victorian War Heritage Inventory**

The Victorian War Heritage Inventory (VWHI) was established in 2011 as a means to catalogue Victoria's war history such as war memorials, avenues of honour, memorial buildings, former defence sites and places of commemoration. Places listed on the VWHI do not currently have discrete statutory protection, however many are concurrently listed on the VHR, VHI, or local planning schemes.

A search of the VHI was conducted for a 5 km radius area centred on the study area. The search did not identify any registered historical heritage places in the search area.

#### **2.2.4.4 Local Council**

The study area is located within the Moyne Shire and is governed by the Moyne Planning Scheme. Planning schemes set out policies and provisions for the use, development and protection of land.

The Heritage Overlay (HO) of the Moyne Planning Scheme was examined for a 5 km radius area centred on the study area. The search did not identify any registered historical heritage places in the search area.

#### **2.2.4.5 National Trust Register**

The National Trust of Australia (Victoria) is an independent, not-for-profit organisation that classifies a number of heritage places. Listing on the National Trust Register (NTR) does not impose any statutory protection, however often National Trust listings are supported by the local council Planning Scheme.

A search of the NTR was conducted for a 5 km radius area centred on the study area. The search identified a total of one registered historical heritage places in the search area. This includes:

- B3007 ('Dunmore' Turkish Bath)

This site is not located within the study area.

#### **2.2.4.6 Commonwealth and International Heritage Lists**

The Commonwealth Department of the Agriculture, Water and Environment (DAWE) maintains the National Heritage List (NHL), a register of exceptional natural, Aboriginal and historical heritage places which contribute

to Australia's national identity. DAWE also maintains the Commonwealth Heritage List (CHL), a register of natural, Aboriginal or historical heritage places located on Commonwealth land which have Commonwealth heritage values.

A place can be listed on one or both lists, and placement on either list gives the place statutory protection under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The World Heritage List (WHL) lists cultural and natural heritage places which are considered by the World Heritage Council to have outstanding universal value.

DAWE also maintains the Register of the National Estate (RNE) which is a list of natural, Indigenous and historic heritage places throughout Australia. Following amendments to the *Australian Heritage Council Act 2003*, the RNE was frozen on 19 February 2007, and no new places have been added or removed since then. The RNE ceased as a statutory register in February 2012, although items listed on the RNE may continue to be considered during approvals processes. Many items on the RNE have been listed on the NHL or CHL. They may also be registered on State or local heritage registers. In these cases, those items are protected under the relevant Commonwealth or State heritage legislation. However, items that are only listed on the RNE no longer have statutory heritage protection.

Listings on the NHL, CHL, WHL and RNE are accessed via the Protected Matters Search Tool (PMST) and Australian Heritage Database (AHD), managed by DAWE.

A search of the AHD and HSD was conducted for a 5 km radius area centred around the study area. The search identified a total of one registered historical heritage places in the search area.

- 3785 (Turkish Bath House, Woolsthorpe Heywood Rd).

This site is not located within the study area.

#### 2.2.4.7 Summary

A summary of the relevant historical heritage sites appears in Table 4.

**Table 3: Summary of Previously Identified Historical Heritage Sites within 5 km of the Study Area**

Register & Place Number	Place Name	Place Type	Within Study Area?
VHI D7321-0040	Landers Lane Dry Stone Wall	Dry Stone Wall	Yes
VHI H7321-0022	Moyne River Stone Foundations	Foundation of hut/domestic site	No
VHI D7321-0039	Harton Hills Dry Stone Wall Complex	Dry Stone Wall	No
VHI D7321-0025	Officer Dry Stone Wall 1	Dry Stone Wall	No
B3007 & RNE 3785	Dunmore Turkish Bath/Turkish Bath House, Woolsthorpe Heywood Rd	Structures (bath house and associated domestic building/kitchen)	No

#### 2.2.5 Previous Historical Archaeological Investigations

Regional and localised archaeological investigations have established the general character of historical archaeological sites located within the same geographic region as the study area and, heritage studies have been conducted for the Moyne Shire. These studies often define the historical character of the Local Government Area or for a specific township, predominantly for built heritage but also for archaeological heritage. This information, together with the information gathered in Section 2.2.4 can be used to form the basis for a site prediction statement (Section 6.0).

A summary of archaeological reports relevant to the geographical region of the study area appears below (Table 4).

**Table 4:** Historical Archaeological Reports Relevant to the Study Area

Author	Date	Location and Description	Results
du Cros and Associates	1993	An archaeological survey of the proposed Hamilton gas pipeline, commencing southwest of Orford and terminating in Hamilton. The route runs southwest and west of the current activity area. The pipeline is located immediately adjacent to, but outside, the far eastern boundary of the current activity area.	No historical sites were identified.
I. McNiven and L. Russell	1994a	A desktop study of a proposed optical fibre cable route between Broadwater and Macarthur and Macarthur and Ripponhurst was undertaken. This section of the cable route is located north and west of the current activity area. A second cable route option, between Condah, Wallacedale and Breakaway Creek, more than 30 kilometres northwest of the current activity area, was also investigated.	It was noted that homesteads and a dairy factory were located close to the road reserves. The report did not state that these places had been registered in the VHI.
I. McNiven and L. Russell	1994b	An archaeological sample survey of a proposed optical fibre cable route between Broadwater and Macarthur and Macarthur and Ripponhurst was undertaken. This section of the cable route is located north and west of the current activity area. A second cable route option, between Condah, Wallacedale and Breakaway Creek, more than 30 kilometres northwest of the	Four historical archaeological sites, including two house sites, a dairy site and a piggery site, were identified. The report did not state that these places had been registered in the VHI.

		current activity area, was also investigated.	
I. McNiven and L. Russell	2017	A desktop study of six different proposed optical fibre cable routes in southwest Victoria was undertaken. One of these proposed routes runs between Yambuk, Orford, Willatook and Warrong and bisects the current activity area, running along road reserves which are located within the current activity area.	It was predicted that historical sites would probably not occur within the study area examined as the optical fibre cable route travels along road reserves.
I. McNiven and L. Russell	1998	An archaeological survey of a proposed optical fibre cable route between Broadwater and Bessiebelle, west of the current activity area. One section of the cable route is located immediately north of the easternmost section of the current activity area, along Woolsthorpe-Heywood Road and Dysons Road.	No historical archaeological sites were identified.
V. Wood	2001	An archaeological survey of a proposed gas pipeline route between Iona in Victoria and Adelaide in South Australia was undertaken. The route included land extending northeast of Willatook, bisecting the current activity area.	No historical archaeological sites were identified.
D. Rhodes	2006	An archaeological survey of a proposed timber plantation near Broadwater, west of the current activity area, was undertaken.	No historical archaeological sites were identified.
H. Doyle	2006	Moyne Shire Heritage Study 2006 Stage 2	A general review of the history of the Shire with focus on some significant historic built structures
T. Meara and B. Slavin	2009	An archaeological survey of a proposed gas-fired power station and gas pipeline was undertaken. This is located within the current activity area, running south from Riodans Road to just north of Kangertong Road, and running southwest from Riodans Road west of Tarrone North Road to just north of Poyntons Road.	No historical archaeological sites of high enough significance to be listed on the Victorian Heritage Inventory were identified, however a dry stone wall in very poor condition within the current activity area was identified. It was not considered significant enough to warrant listing.
A.Neylon, J. Briggs, & D. Helms	2013	Review Moyne Shire Heritage Study 2006 Stage 2 Key findings and recommendations	A review of the 2006 study by Doyle to determine which places and precincts should be included or removed from Heritage Overlays as part of Moyne Planning scheme amendment C55. Examines listed site Willatook State school. Recommends Woodlands site and grave on Willatook-Warrong Rd for listing and

			Dunmore Turkish Bath house for VHR and HO.
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## 2.2.6 Historical Archaeological Site Prediction Statement

The following site prediction model has been formulated on the review of the findings of these previous assessments. The model presented is based on a site type approach. The most likely types of historical sites to be present within the activity area include the following:

### Domestic Sites

Evidence of domestic occupation may include structural remains or ruins of homesteads and/or outbuildings, domestic rubbish dumps or bottle dumps, wells or underground storage tanks.

It is likely that this site type will occur within the activity area.

### Dry Stone Walls

Dry stone walls may line internal property divisions or external property boundaries.

It is likely that this site type will occur within the activity area.

### Tree Plantings

Historical tree plantings may be evidenced by large introduced trees planted along original driveways, paddock boundaries or close to homestead sites.

It is likely that this site type will occur within the activity area.

### Farming Sites

Evidence of farming may include fence lines, dams, water channels, plantings or terracing.

It is likely that this site type will occur within the activity area.

### Pastoral Sites

Breeding of livestock and dairying may be evidenced by the remains of stockyards, stables, barns and holding pens.

It is likely that this site type will occur within the activity area.

### Summary

Previous heritage studies demonstrate the region's rich history of pastoralism. Historical heritage archaeological sites that have been identified include homestead and house sites and sites associated with dairying and other animal husbandry.

There is one known historical heritage places located within the Project Area: D7321-0040 (Landers Lane Dry Stone Wall). Although Landers Lane Dry Stone Wall has been delisted from the Victorian Heritage Inventory, it is nevertheless protected under the provisions of the Moyne Planning Scheme. The Turkish Bath House, Woolsthorpe Heywood Road, Broadwater, has been identified near the study area. It is listed on the Register of the National Estate (RNE ID 3785) and will be reassessed as part of the archaeological survey. The site was



previously assessed and recommended for HO and VHR registration in the A.Neylon, J. Briggs, & D. Helms 2013 report.

### **2.2.7 Background Review – Summary of the Results and Conclusions**

The desktop assessment indicated that there are three historical heritage places recorded on the VHD within a 5 km radius outside of the study area VHI H7321-0022 Moyne River Stone Foundations, and two delisted sites VHI D7321-0039 Harton Hills Dry Stone Wall Complex and Officer Dry Stone Wall 1 VHI D7321-0025.

An historic place, Turkish Bath House, Woolsthorpe Heywood Road, Broadwater is listed on the Register of the National Estate (RNE) ID 3785 and the Register of the National Trust (non-statutory archives) but is not within the study area.

A dry stone wall VHI D7321-0040 Landers Lane is also located within the study area and delisted from the VHR, however, under Clause 52.33 of the Moyne Planning Scheme developers are required to seek permission before demolishing, removing or altering a dry stone wall constructed before 1940. Heritage Victoria has also asked that they be notified in writing for works that may affect this place.

Four additional historical places were indicated to be within the study area on a 1942 map of Hawkesdale produced by the Australian Section, Imperial General Staff (SLV) (Map 5), Sandy Camp hut, a hut, a ruin, and Paradise Bridge. A pump house was shown to be near the boundary of the study area.

The desktop assessment concluded that pastoral sites, dry stone walls, tree plantings, farming and domestic sites were the types of historical heritage sites most likely to occur within the study area.

## 3 FIELD ASSESSMENT AND RESULTS

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A ground survey of the study area was conducted to detect the presence of historical cultural heritage, or areas of archaeological likelihood, in or associated with the study area.

### 3.1 Aims and Objectives

The aim of the survey was:

- To identify and record any surface indications of historical heritage sites and/or areas of historical archaeological likelihood in areas that will be impacted by the proposed development; and
- To verify the results of the background review and site predictive statement; and
- To assess the cultural heritage significance of any historical sites identified in the survey.

### 3.2 Methodology of the Survey

The study area was inspected on 11-14 February 2020 by Dr Cherrie De Leiuen, Dr Ashton Sinamai and Andrew Wilkinson (Archaeologists).

The survey took the form of a pedestrian survey in which the three participants walked in transects 3 m apart in targeted areas within the study area where potential historic places were indicated on historic maps, along roadsides and along historic property boundaries. A general survey was undertaken by vehicle where possible to identify any standing structures within the study area.

All structures or potential historic places were recorded using both camera and drone photography where possible. The drone was not used around residential properties, overhead powerlines or outside of the permissions obtained for use within the study area.

### 3.3 Limitations of the Survey

Access to some areas was limited due to active electrical fencing, such as the location of the 'Sandy Camp Hut' and the 'Pump house' shown on historic maps. A drone was used to fly over these areas where possible to identify any in situ remains of structures or building footprints.

Ground surface visibility was poor in most of the targeted area which limited the ability to see any surface artefacts, but this did not limit the recording of structures.

No private property was entered without verbal permission of the land or lease holder.

## 3.4 Results of the Survey

### 3.4.1 Historical Heritage Places Identified During the Survey

#### 3.4.1.1 *Previously Recorded Places*

A total of two previously recorded historical heritage places were identified during the survey.

Site 1: Dunmore Turkish Bath House (B3007 & RNE 3785) Woolsthorpe Heywood Rd, Broadwater



**Plate 1:** Dunmore Turkish Bath House, front, showing portal and highlight window and later timber skillion extension built on western side, view facing north Photo: C. De Leiven

**Location:** ‘Dunmore’ Turkish Bath House and its associated structure is located within the current occupied property Dunmore, on Woolsthorpe-Heywood Road and was accessed with permission of current landowners. The ruin of the ‘kitchen’ site is approximately 25 m east of the bath house (and the site of the old Dunmore homestead, standing at the west and east ends of the old homestead site respectively). The site is not located within the study area and is therefore not in the location of any proposed turbines or wind farm infrastructure and is not under threat from any of the associated or proposed development by Willatook Wind Farm.



**Figure 8: Location of Dunmore Turkish Bath House site**

**Interpretation:** The Turkish bath house at Dunmore was erected in 1866 for Scottish immigrant and pastoralist Charles Hamilton Macknight. The chimney was built by stonemason John Perry, from Cornwall (Context 2011). The bluestone was probably quarried locally. The bath house was most likely added after the homestead had been built in the 1850s. Macknight was the son of Dr Thomas Macknight, a minister of the High Church, St Giles, Edinburgh, and was a temperance advocate.

The bath house was essentially a steam bath, with steam being made by the hearth (right hand side of the structure) rising up through the floorboards. The internal lining of this building was timber so would have been full of moisture.

The Dunmore homestead was destroyed in a fire in 1939; the kitchen building and the bathhouse were the only section of the original homestead to survive the fire.

The Turkish bath house is of historical significance as a rare example (if not the only example) of a bath house built for a mid-19<sup>th</sup> century pastoral homestead. The bath house is also significant for demonstrating new interest in personal hygiene which was achieved through bathing. It also has local historical significance for its association with prominent Western District Scottish squatter Charles Hamilton Macknight (1819-1873).

**Condition:** The Turkish Bath house is constructed of squared, coursed bluestone. There is visible stepped cracking above a triangular pseudo-arch form portal and highlight window (no glass remaining in situ), as well as above the main doorway (see Plate 1). The design is Gothic, and there are two chambers likely serving as a changing room and bathing room.

The lintel stone above the doorway remains and is inscribed 1866 (Plate 5). Wooden door on eastern wall has been repaired and/or replaced at some stage but no longer functional.

The gabled roof is steeply pitched and clad in corrugated iron. This is in a fair condition, with some corrosion and movement of sheeting visible.

A stone chimney is set into the roof line of the right of the main doorway. This is in a more serious state of disrepair with some coursing in a state of collapse above the heath brickwork. The woodwork/ timber skillion adjoining the chimney to the bath house proper is badly deteriorated with wood collapsing into the structure and blocking entry.

The later 20<sup>th</sup> century additions of a weatherboard skillion on the left side and to the rear (north) section remain but are collapsing and hazardous (these are first shown on a 1968 image by J Collins SLV see Plate 2)





**Plate 2: Hawkesdale "Dunmore" by John T Collins, 1968. Source SLV**

Overall, the bath house is currently in a very poor condition and is not being maintained. It is not known whether any internal structures or fittings have survived as the internal rooms were not able to be accessed safely. There are several trees located around the bath house the roots of which may be escalating the cracking and general failure of the northern wall. The timber additions to the structure are collapsed and hazardous. Trees growing around the structure are likely causing additional damage and are a threat. the Turkish Bath House is not in use but used for storage of general household hard rubbish. It is in a neglected state.

The adjacent bluestone kitchen building is in a ruinous state. It includes a bread oven and evidence of two rooms, indicating a past residential use. Plate 3, a photo taken in 1968 and Plate 4 shows the deterioration of the property since that time.



**Plate 3: Hawkesdale. "Dunmore" Kitchen by John T Collins, 1968. Source SLV**

There are remains and layout of the rooms of the original stone structure are visible but in a state of neglect.



**Plate 4: Kitchen site at Dunmore associated with original 1850s estate of Macknight. View South. Photo. A. Wilkinson**



**Plate 5: Kitchen and 2 roomed structure, view south west. Photo C. De Leuven**



**Plate 6: Turkish Bath House, entrance side, showing lintel stone dated 1866 and inside used for storage, view north. Photo A. Wilkinson**





**Plate 7: Turkish bath. eastern wall showing hearth used for heating, collapsed door and timber structure, view north. Photo C. De Leuen**





**Plate 8: Bath house view west showing newer door added and vegetation growing through structure. Photo A. Wilkinson**



**Plate 9: View North NW of Bath House Photo A. Wilkinson**



**Plate 10: Internal wall showing original layout of two rooms, wooden door frame. Photo A. Wilkinson**



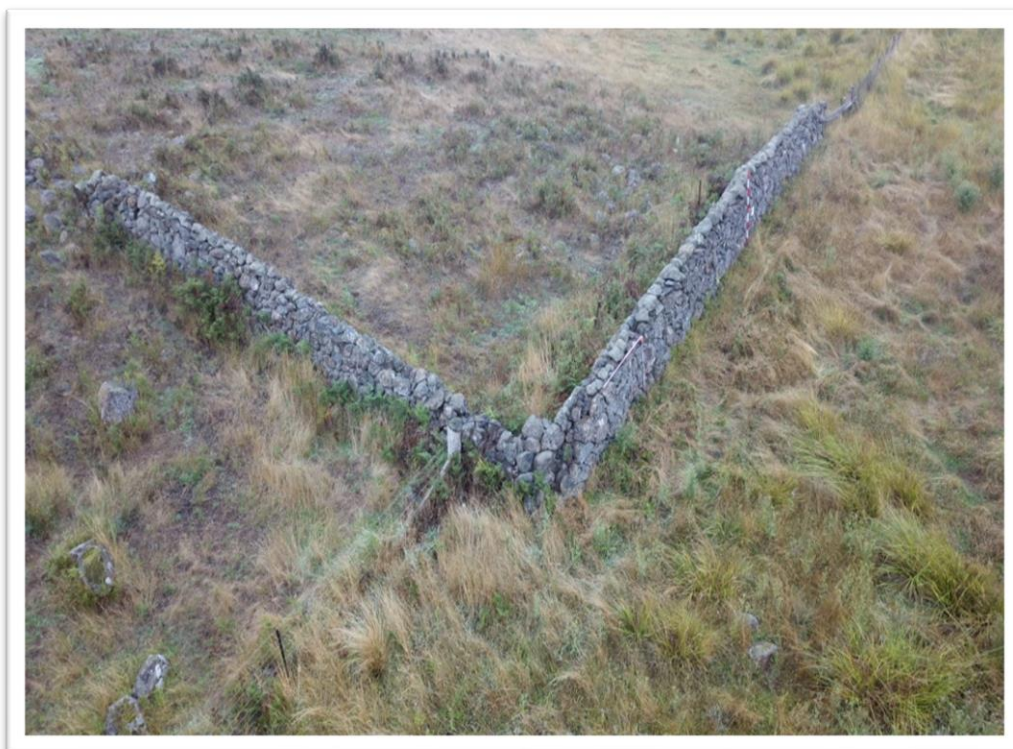
**Plate 11:** Detail of highlight window and stepped cracking on front of Bath House. View North. Photo A. Wilkinson



#### Site 2: Landers Lane Dry Stone Wall VHI D7321-0040

This site is subject to a separate report and management plan (Sinamai 2020). A copy of this report has been provided as Appendix 5.

The study area has several walls that are, in reality, a single wall running along Landers Lane. This was recorded but delisted from the VHD. In this survey the wall was divided into five walls with division being based on breaks like gates or where wall has disappeared or divided by a road. The total length of the wall is approximately 5km. Three of the walls are all stone free standing walls while the other two were composite walls with fences. DSW1 -3 were refined and largely in good condition with cope stones still in place. DSW 4 and 5 were composite, one course walls supporting the bases of fences. Examples are shown in Plates 11 -13. All walls are in fairly good condition and display expert craftsmanship and all walls appear to be pre-1840. They are associated with the Dunmore station and likely constructed by Macknight, Irvine and Campbell on acquiring the property.



**Plate 12: DSW 1 General aerial view DSW-1 showing the two walls, facing south Photo A. Wilkinson**



**Plate 13: DSW 1 West wall showing refined technique of walling facing east Photo A. Wilkinson**





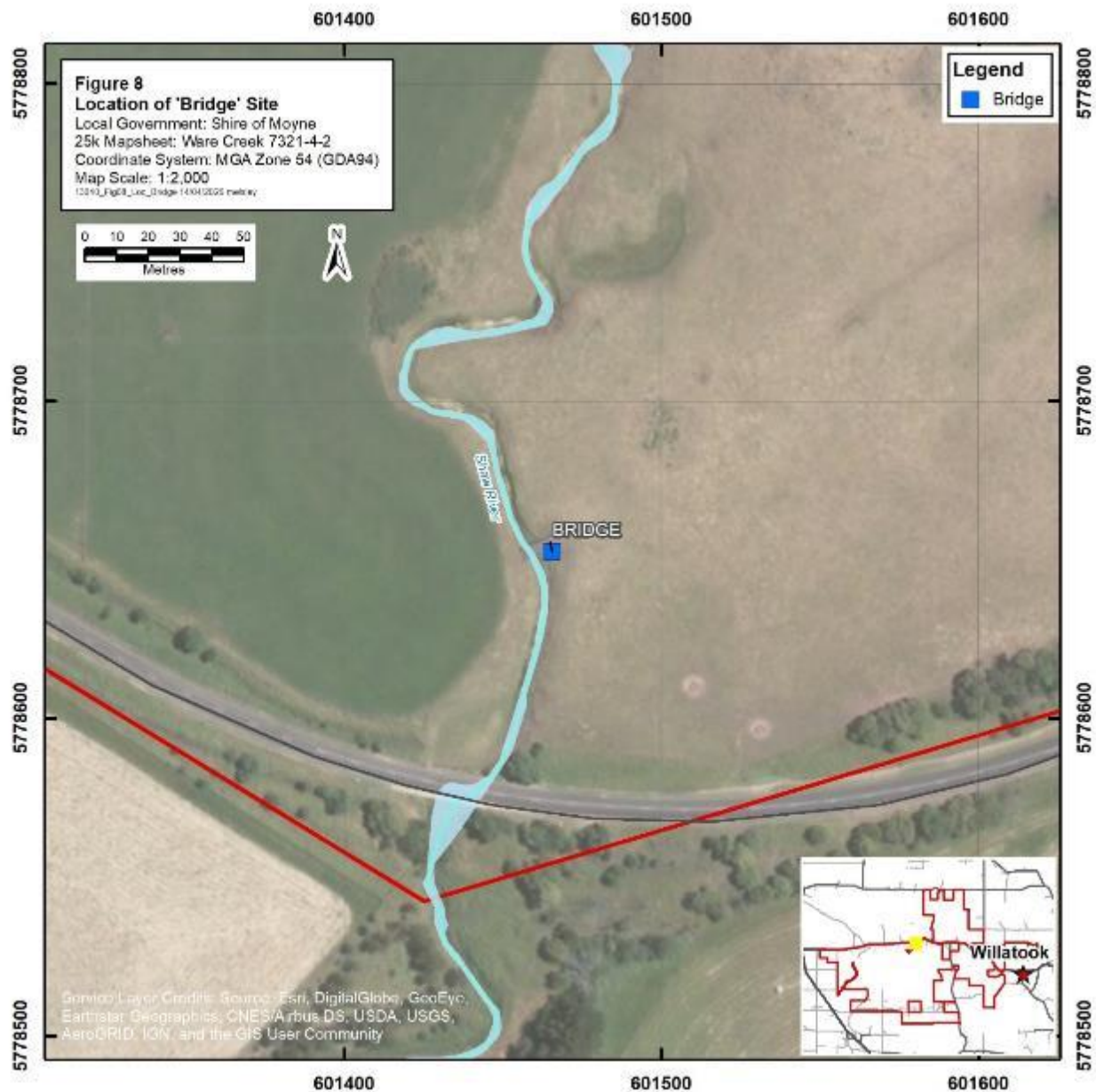
**Plate 14:** DSW 2 Southern end of DSW-2 showing well-constructed section of wall. Photo A. Wilkinson

#### **3.4.1.2 *Previously Unrecorded Places***

A total of three previously unrecorded places were located during the survey.

##### [Site 3: Paradise Bridge](#)

**Location:** northern side of Woolsthorpe-Heyward Road running across the Shaw River, through gate approx. 50m from current road alignment. Site would have been on original road alignment (and within the study) but now on north side of new main Woolsthorpe-Heyward Road and is therefore just outside of the current study area. Hut site was unable to be located.



**Figure 9: Location of Paradise Bridge site**

**Interpretation:** The timber truss and concrete bridge over the Shaw River is a hybrid structure comprised of reinforced concrete piers, timber railings and iron deck beams. It was noted that there is a bluestone bridge now forming part of the Woolsthorpe-Heywood Road, and this may be a more recent road crossing point over the Shaw River superseding the 'Paradise Bridge' as part of a later road alignment. No historical documentation has been located indicating a prior bridge was built in the same location, nor reference to the Paradise Bridge apart from the 1942 ordinance map. The concrete piers and iron deck beams indicate a 20<sup>th</sup> century construction.

The hut listed adjacent on the 1942 map was not able to be located and likely to be demolished or removed for pastoral activities at the location however very poor ground surface visibility was a limitation in this location.

**Condition:** Poor, abandoned/not in use. The inspection of the timber and iron bridge was limited due to dense ground vegetation along the eastern bank of the Shaw River and general state of disrepair of the bridge itself. The bridge still connects either side of the River but is disused and in a state of deterioration. The timber running deck is in overall poor condition with some collapsing. The supports were unable to be inspected in detail but appear to be constructed of iron which is corroding. There appears to be decay also under flashing and at the ends of the deck system at abutments, with particularly on contact areas with the piers. The piers appear to be in fair condition, made of concrete and some bricks visible around reeds. There appear to be serious internal deterioration that may be manifest at joints and connections.



**Plate 15:** Paradise Bridge crossing Shaw River approx. 50 m north of Woolsthorpe-Heyward Road. Photo C. De Leiuén

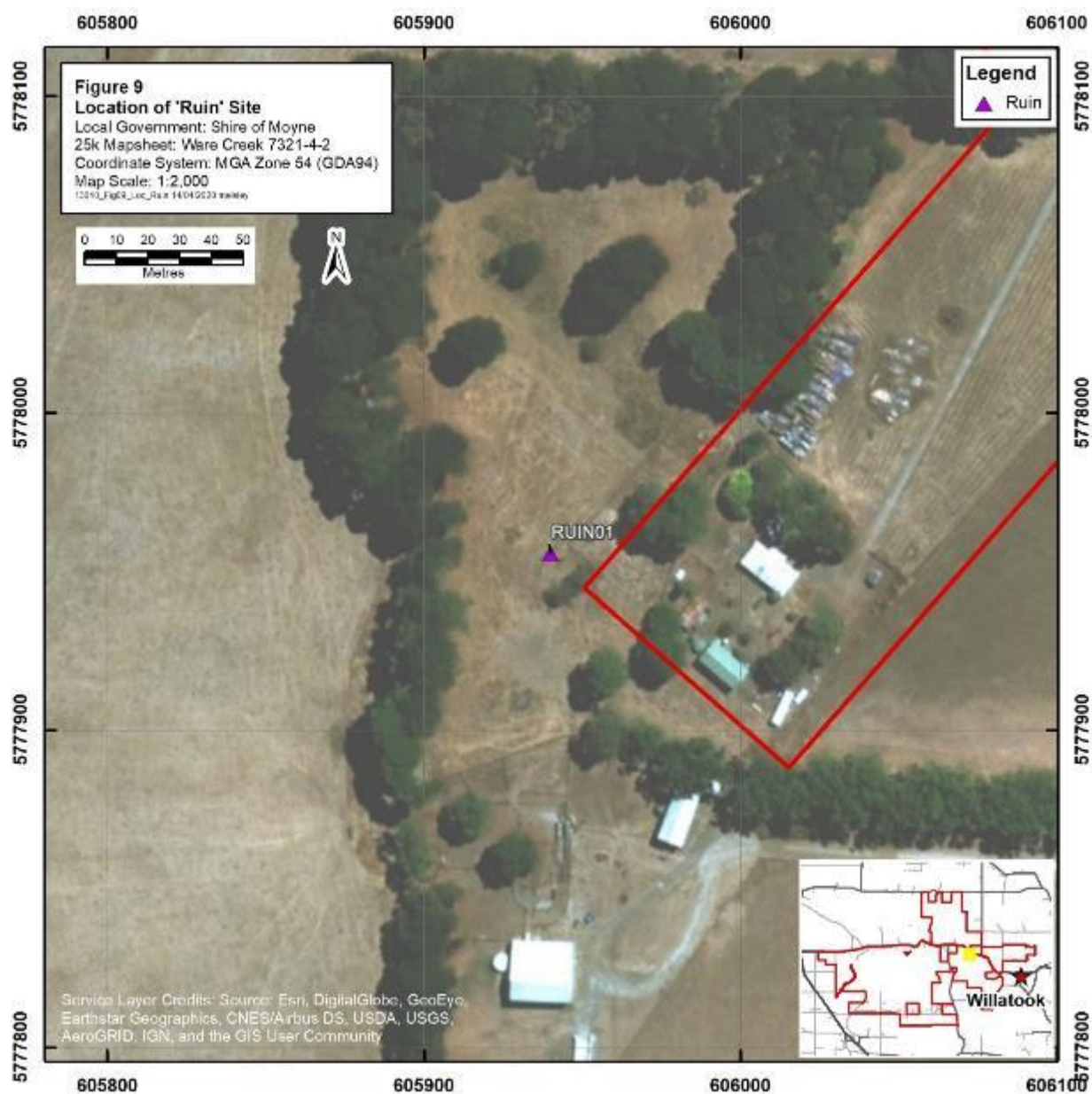


**Plate 16:** Paradise Bridge crossing Shaw River approx. 50 m north of Woolsthorpe-Heyward Road. Photo A. Wilkinson



#### Site 4: Ruin – Woolsthorpe- Heywood Road

**Location:** Adjacent to 2169 Woolsthorpe- Heywood Road.



**Figure 10: Location of 'Ruin' site**

**Interpretation:** Some of the large bluestone rubble present has been dressed and combined with a number of machine-made bricks indicates that a hearth or chimney structure was built in this location and possibly a small structure build with bluestone walls or footings. This may be the location of a previous homestead or a shepherd's hut associated with property management on large estates in the Moyne region, circa 1900-1920. The bricks present are not manufactured in 19<sup>th</sup> century, are machine made and regular. May be related to 'hut' site approximately 1km west of this site.



**Condition:** Site has been demolished/ not in use. A bluestone and brick structure has been demolished and stone pushed into two main piles, one approx. 10 m x 5 m with brick and cut bluestone on surface, the second approx. 5 x 5 m and is bluestone rubble. A 1942 ordinance marks the site as 'ruin' so likely to have been demolished some years prior. Mounds are on otherwise flat/levelled section of the property and the mound containing bricks is likely to be in the location of original structure. One metal machinery part also located on top of the rubble pile, likely from farming machinery.



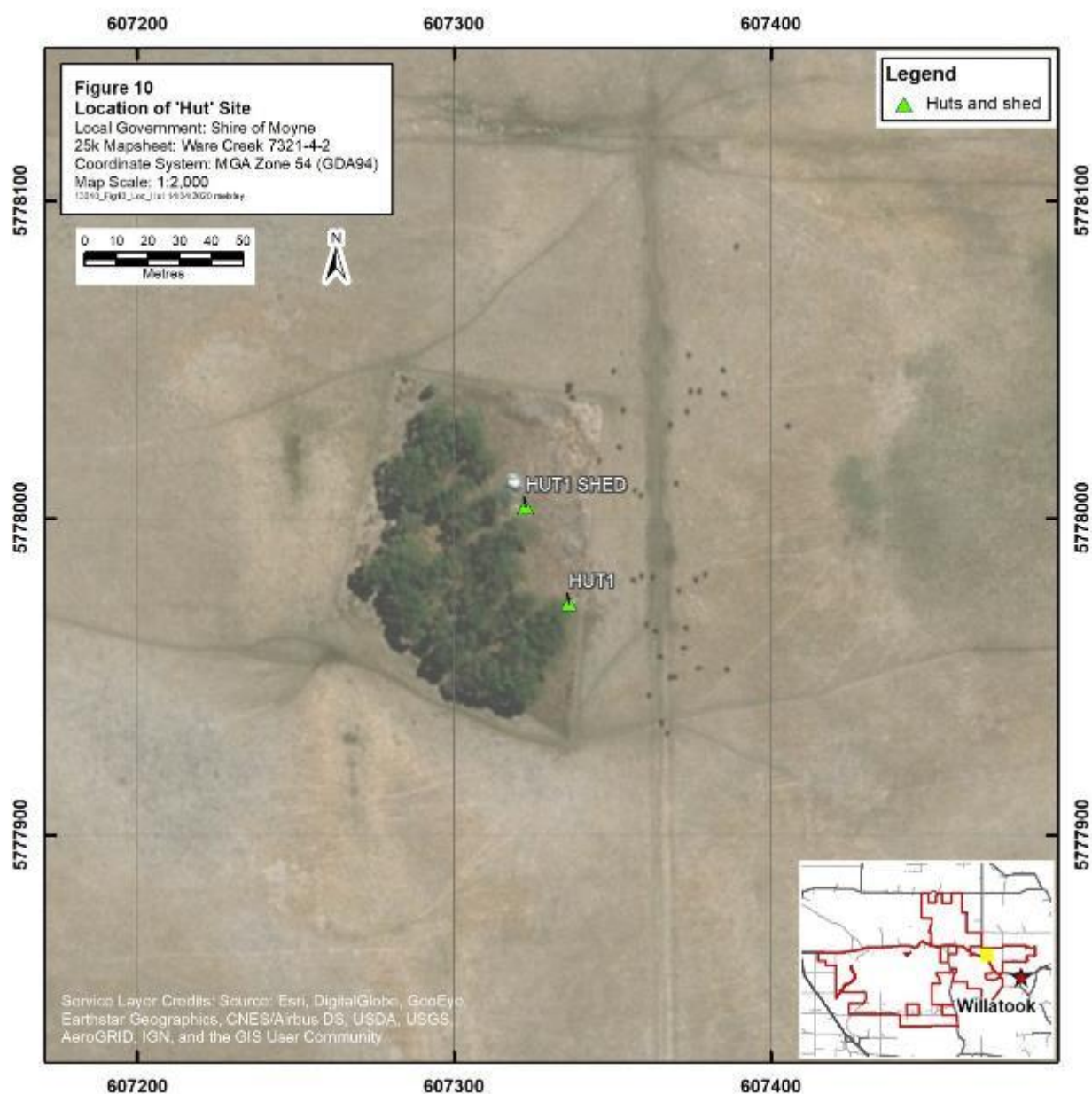
**Plate 17:** Ruin site, view NE. Photo C. De Leuven



**Plate 18: Ruin site, detail of in situ bricks. Photo C. De Leuven**

#### Site 5: Hut 1 Woolsthorpe- Heyward Road

**Location:** Located off the main Woolsthorpe-Heyward Road, approximately 1km west of the Poyntons Road intersection. Approximately 350 m north of the main road in a fenced area surrounded by eucalypts.



**Figure 11: Location of 'Hut' site**

#### Interpretation:

No evidence of footings for surrounding building located, no other stone present (natural or cultural) indicating substantive residence or outbuilding. It is remains of possible shepherds hut, with chimney left in situ where surrounding structure made of wood has been removed or reclaimed. Bricks indicate 20<sup>th</sup> century construction, likely an example of property management on large stations in the local region. Possibly



corrugated iron also used in construction and removed as is remaining on adjacent shed or re-used to build the shed.

**Condition:** The area is not used/ area fenced and has stored farming machinery. Bluestone, sandstone and brick fireplace and chimney only remain. Two courses of cut bluestone at base of fireplace/hearth remain in situ as well as large piece at top of hearth area. Ten further courses of dressed sandstone blocks to base of brick chimney.

Some bricks inside hearth area with evidence of burning. These could have been added later to replace sandstone blocks that may have been robbed out or damaged/fallen out and have been mortared in between bluestone and sandstone courses. Mostly complete and in fair to good condition.

Brick chimney is approximately 20 courses, some missing from the very top. Stepped cracking and movement where mortar has eroded in between sandstone blocks. Some rubble in front of hearth; is unstable.

25 m north west is a corrugated iron shed constructed with timber beams. This structure is in very poor condition, and is collapsing, with half of the roof coming away from beams and leaning towards the ground. Some corrosion also present. The shed contains farming machinery that is also in a poor condition. About 5 m west of this shed is farming machinery (uncovered) with the makers mark 'Made in Australia' visible. Highly corroded, but in an overall fair condition.



**Plate 19:** Hut 1 site chimney view NE. Photo C. De Leiu



**Plate 20:** Hut 1 site back of chimney showing courses. View NW. Photo C. De Leiu



Plate 21: Hut 1 site showing location of chimney shed and farming machinery. View S. Photo A. Wilkinson



Plate 22: Detail of bricks inside chimney structure indicating replacement and/or reuse. Photo A. Wilkinson





Plate 23: Shed remains at Hut 1 site. View SE. Photo A. Wilkinson



Plate 24: Farming machinery at hut 1 site view SE. Photo A. Wilkinson



**Plate 25: Detail of farming machinery showing trademark. Photo C. De Leiu**

### *Additional locations surveyed*

#### *Hut 2: Sandy Camp Hut*

Location: Corner of Riordans Road and Tarrone North Road. Present use is pastoral, with the larger property boundary currently used for cow paddocks and run.

Condition: demolished or unable to be located. Area has been cleared of trees and rock and rubble. Any natural rock and possibly the remains of the hut have been pushed into pile in corner of property. No other evidence of building footprint in the area, however access limited due to electric fencing. Drone photography did not locate any other building footprint in the wider area. No site remaining in situ.



**Plate 26: Likely location of Sandy Camp Hut. Rubble pile may contain some remains from a camp hut. View W.  
Photo A. Wilkinson**



Site: Pump House

Location: From 1942 ordinance map is approx. 250m SE of the intersection of Commete Road and Poyntons Road. Directed by land area to location outside current activity area on Willatook-Warrong Road.

Unable to be located, on private property, no access and there were also bulls on property.

Location given was outside activity area and is likely the location of another site listed on HO 2424 Woodlands Homestead and grave remains, this was built under soldier settlement scheme post WW1. Headstone located Frederick Smith, 9 month old child. Photo taken but no further investigation as well outside activity area and not related to pump house.

Condition: The pumphouse was unable to be located or accessed, thus its condition (if present) was unable to be assessed. There was a windmill in the approximate location of the pumphouse on the 1942 map, which was visible in the distance from the roadside. The pump house could relate to this windmill which seems to be in low lying area subject to flooding.



**Plate 27: View east showing windmill in distance. May be site of historic pump house. Photo. A. Wilkinson**



**Plate 28: Grave site located outside activity area. View E. Photo A. Wilkinson**

### **3.4.2 Survey – Summary of Results and Conclusions**

The desktop assessment indicated that there was one historical heritage place recorded on the VHD within the study area, VHI D7321-0040 Landers Lane DSW (Map 3). This was inspected and recorded and is subject to a separate report (Sinamai 2020). ‘Dunmore’ Turkish Bath House is listed on the Register of the National Estate (RNE) ID 3785 and the Register of the National Trust ID B3007 (both non-statutory archives) and is within the study area. This was inspected and it and the associated kitchen structure were recorded.

Five potential historical places were indicated to be within the study area on a 1942 map of Hawkesdale produced by the Australian Section, Imperial General Staff (SLV) (Map 5). These were indicated on the map to be a hut, ruin, Paradise Bridge, Sandy Camp Hut and a Pump House. Three of these, the ruin, hut and Paradise Bridge were located and recorded and as such must be listed on the Victorian Heritage Inventory. In accordance with Section 127 (1) of the *Heritage Act 2017*, site cards were submitted for the three located heritage sites.



## 4 CULTURAL HERITAGE SIGNIFICANCE

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### 4.1 Assessing Cultural Heritage Significance

#### 4.1.1 Assessment of Significance

Scientific significance of a heritage place (particularly archaeological sites) is also assessed in Victoria using a commonly accepted formula developed by Bowdler (1981) and Sullivan and Bowdler (1984). These are relative estimates of significance based on the current knowledge available about sites or places in a region. The assessment criteria used to assess the scientific significance of historical places in Victoria are presented in Appendix 3. The same three main categories apply to historical places: *site contents* (cultural material, organic remains and site structure), *site condition* (degree of disturbance of a site), and '*representativeness*' (the regional distribution of a particular site type).

Each place is given a score or rating on the basis of these criteria – the overall scientific significance is determined by the cumulative score. The results of each place are in Tables 8-13.

#### 4.1.2 Historical Cultural Significance

Heritage Victoria administers the *Heritage Act 2017* and has provided formal criteria for assessing cultural heritage significance. Applying these criteria will determine if a heritage place should be considered for addition to the Victorian Heritage Register or other statutory lists.

On the basis of these criteria, heritage places are generally given a significance ranking of State, Local or none. Historical archaeological sites, as with other heritage places, can be considered for addition to the Victorian Heritage Register if they have State significance.

However, all historical archaeological sites are included on the Victorian Heritage Inventory and are given statutory protection, irrespective of their level of significance. Sites that are considered to be of local historical interest but are not considered to be of specific archaeological significance are allocated 'D'-list numbers (e.g. D7822-0099). 'D'-listed sites are not protected by legislation.

The historical places identified within the study area have been assessed using the Heritage Victoria criteria (outlined in Appendix 3). The significance assessments are summarised in Tables 8-13.

#### 4.1.3 Statements of Significance

A Statement of Significance describes what is important about a place and is an evaluation of its cultural heritage significance. The Statement of Significance was prepared in accordance with the ICOMOS Burra Charter and the Heritage Council of Victoria's Criteria for Assessing Cultural Heritage Significance as required by the HV Technical Guides *Guidelines for Conducting Historical Archaeological Surveys* and *Guidelines for Investigating Historical Archaeological Sites*.

The cultural heritage significance was assessed against the following six categories:

- Aesthetic significance;
- Archaeological significance;
- Architectural significance
- Historical significance;
- Scientific significance; and
- Social or spiritual significance.

A full description on the methodology used for the significance assessment is provided in Appendix 3.

Four historical archaeological places were located within the study area:

- VHI D7321-0040- (Landers Lane Dry Stone Wall);
- Woolsthorpe- Heyward Road Hut 1; and
- Woolsthorpe- Heyward Road Ruin 1.

As VHI D7321-0040- (Landers Lane Dry Stone Wall) is subject to a separate report its significance will not be assessed in this report and is excluded from Section 4.2 below.

## 4.2 Cultural Heritage Significance of B3007/ RNE 3785 (Dunmore Turkish Bath House)

The following is an assessment of the cultural heritage significance of B3007/ RNE 3785 (Dunmore Turkish Bath House).

### 4.2.1 Assessment of Significance

The scientific significance of the site is shown below (Table 5).

**Table 5:** Assessment of the Scientific Significance of B3007/ RNE 3785 (Dunmore Turkish Bath House)

Place Contents	Place Condition
Site contents	3
Site condition	2
Representativeness	3
<b>Overall scientific significance (score)</b>	<b>8</b>
<b>Overall scientific significance (rating)</b>	<b>High</b>

Note: a description of each criterion is provided in Appendix 3.

#### 4.2.2 Historical Cultural Significance

The Dunmore Turkish Bath house is significant to the State of Victoria and Moyne Shire, and an assessment of the cultural heritage significance of the site is provided below (Table 6).

**Table 6:** Assessment of the Cultural Heritage Significance of B3007/ RNE 3785 (Dunmore Turkish Bath House)

HV Criterion	Assessment	Significance (State/local)
A	The site is of historical importance to Victoria's history and early pastoral settlements in the region. It is associated with C. Macknight and example of mid 19 <sup>th</sup> Century health practices	State
B	The site displays good design or aesthetic characteristics	State
G	The site displays rare features for the 1860s and for pastoral settlements	State

Note: a description of each criterion is provided in Appendix 3.

#### 4.2.3 Statement of Significance

##### What is Significant?

The Turkish bath house and kitchen ruin at the former Dunmore homestead site were built in the 1860s. The bath house was in part by Port Fairy stonemason John Perry, for the Scottish-born Charles Hamilton Macknight. It is a Gothic inspired bluestone structure comprising two chambers, with a pointed portal, referring to the triangular pseudo-arch form above the highlight window, and a steeply pitched roof.

The bluestone kitchen located adjacent to the Bath house is a ruin that has potential archaeological evidence of the former homestead complex, its occupants and provide an insight into early settlement in the region.

##### How is it Significant?

The Turkish bath house and kitchen ruin at the former Dunmore homestead site are of historical, architectural and aesthetic significance to the State of Victoria and Moyne Shire.

##### Why is it Significant?

The site is significant to the State of Victoria and the Moyne Shire for the following reasons:

The Turkish bath house and kitchen ruin at the former Dunmore homestead site were built in the 1860s. The bath house is thought to have been constructed in part by Port Fairy stonemason John Perry, for the Scottish-born Charles Hamilton Macknight in 1866. It is a Picturesque Gothic styled bluestone structure comprising two chambers, with a portal, pointed-arch highlight window and a steeply pitched roof.

The 1866 constructed Turkish bath house at the former Dunmore homestead site is of historical significance to the State as it is perhaps the only bath house built for a mid-nineteenth century pastoral homestead. The bath house is significant for demonstrating new interest in personal hygiene which was achieved through bathing. It also has local historical significance for its association with prominent Western District Scottish squatter Charles Hamilton Macknight (1819-1873). Macknight, the son of a minister, was a strong advocate of temperance and a firm believer in the merits of health and fitness; the bath house celebrates these same principles of personal hygiene. The bath house is also of local historical significance for demonstrating the lifestyle of the gentleman squatter in nineteenth-century pastoral Victoria.

The Turkish bath house at the former Dunmore homestead site, Broadwater, is of architectural significance to the State of Victoria as the only known example of this particular building type. It is of local architectural interest as a Gothic-inspired design by noted Port Fairy stonemason, John Perry. The steep pitched gabled roof, portal window, and stone construction suggest elements of the Picturesque Gothic style, which was popular in Victoria in the 1850s and 1860s. The Turkish bath house is also an innovative design for the period of the 1860s - a time when plumbing to private dwellings was especially rare.

The Turkish bath house at the former Dunmore homestead site, Broadwater, is of aesthetic significance to the State of Victoria for its stone masonry, as an example of the Picturesque Gothic style, and as an unusual building type.

#### *Recommendation Reason*

The site of the Bath House and the Kitchen is listed on the RNE and the National Trust of Victoria however, these are non-statutory listings and offer no protection to the sites it is therefore recommended for listing VHR and for Heritage Overlay for Moyne Shire. It is assessed as being significant site for its aesthetic, historic and rare values.

#### *Outcome*

A site card was submitted and the site is now listed as: H7321-0103 Dunmore Turkish Bathhouse and homestead kitchen site.

## 4.3 Cultural Heritage Significance of Hut 1 Site, Willatook

The following is an assessment of the cultural heritage significance of Hut 1 site Willatook.

The scientific significance of the site is shown below (Table 7).

**Table 7: Assessment of the Scientific Significance of Hut 1 site Willatook.**

Place Contents	Place Condition
Site contents	1
Site condition	2
Representativeness	1
<b>Overall scientific significance (score)</b>	<b>4</b>
<b>Overall scientific significance (rating)</b>	<b>Low</b>

Note: a description of each criterion is provided in Appendix 3.

### 4.3.1 Historical Cultural Significance

The site is significant to the Moyne Shire and an assessment of the cultural heritage significance of the site is provided below (Table 8).

**Table 8:** Assessment of the Cultural Heritage Significance of (Hut 1 Site Willatook)

HV Criterion	Assessment	Significance (State/local)
A	The site is of historical importance to the regions history and provides insight into early pastoral settlements and their operations	Local

Note: a description of each criterion is provided in Appendix 3.

### 4.3.2 Statement of Significance

#### What is Significant?

The chimney is likely to be associated with a structure such as shepherd's huts or an early dwelling which occur in the Moyne Shire and is an example of property management on large stations in the region.

#### How is it Significant?

The hut site and associated sheds are of historical significance to the Moyne Shire.

#### Why is it Significant?

The site is significant to the Moyne Shire for the following reasons:

The shepherd's hut is of historical significance because it demonstrates a way of life which relates to a late 19<sup>th</sup> and early 20<sup>th</sup> century development of the pastoral industry, when shepherds tended sheep in isolation at remote outstations on vast squatting runs. The chimney that remains is of historic significance for its humble construction and vernacular style and as a comparison with the grander homesteads in the region.

#### Recommendation Reason

The *Heritage Act 2017* specifies that all sites, or potential historical archaeological sites, discovered during a survey must be reported to Heritage Victoria through the prescribed form (a site card). In accordance with Section 127 (1) of the *Heritage Act 2017*, a site card was submitted to Heritage Victoria. The site is now listed as H7321- 0104 Woolsthorpe- Heyward Road Hut 1.

## 4.4 Cultural Heritage Significance of Ruin Site, Willatook

The following is an assessment of the cultural heritage significance of Ruin site, Willatook

### 4.4.1 Assessment of Significance

The scientific significance of the site is shown below (Table 9).



**Table 9:** Assessment of the Scientific Significance of Ruin site, Willatook

Place Contents	Place Condition
Site contents	1
Site condition	0
Representativeness	1
<b>Overall scientific significance (score)</b>	<b>2</b>
<b>Overall scientific significance (rating)</b>	<b>Low</b>

Note: a description of each criterion is provided in Appendix 3.

#### 4.4.2 Historical Cultural Significance

The study area is significant to the Moyne Shire and an assessment of the cultural heritage significance of the study area is provided below.

**Table 10:** Assessment of the Cultural Heritage Significance of Ruin site, Willatook

HV Criterion	Assessment	Significance (State/local)
A	The site is of potential historical importance to the regions as it may provide insight into early pastoral settlements and their operations	Local

Note: a description of each criterion is provided in Appendix 3.

#### 4.4.3 Statement of Significance

##### What is Significant?

The ruin is likely to be the remains and in situ footings of a structure such as shepherds hut or an early dwelling which may date to the early settlement of the Moyne Shire and is an example of property management on large stations in the region.

##### How is it Significant?

The Ruin site is of historical significance to the Moyne Shire.

##### Why is it Significant?

The ruin is of historical significance because it's in situ remains can potentially shed light on a way of life which relates to a late 19<sup>th</sup> and early 20<sup>th</sup> century development of the pastoral industry, and/or rural domestic sites.

##### Recommendation Reason

The *Heritage Act 2017* specifies that all sites, or potential historical archaeological sites, discovered during a survey must be reported to Heritage Victoria through the prescribed form (a site card). In accordance with Section 127 (1) of the *Heritage Act 2017*, a site card was submitted to Heritage Victoria. The site is now listed as H7321-0105 Woolsthorpe- Heyward Road Ruin 1.

## 4.5 Outcomes

Site cards were sent to Heritage Victoria on 4 June 2020. A reply was received on 6 July 2020 notifying that Heritage Victoria had completed the assessment of the submitted site cards. Heritage Victoria made the decision to list the following sites on the Victorian Heritage Inventory (HI), as they do meet the threshold policy:

- Dunmore Turkish Bathhouse and homestead kitchen site – H7321-0103
- Woolsthorpe- Heyward Road Hut 1– H7321- 0104
- Woolsthorpe- Heyward Road Ruin 1– H7321-0105

Heritage Victoria did not list the following sites to the HI, as they did not meet the threshold policy:

- Sandy Camp Hut
- Paradise Bridge

## 5 INTERPRETATION AND DISCUSSION

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The 'Dunmore' Turkish Bath House and the associated 'kitchen' ruins were located and recorded during the survey. The site is listed by the National Trust of Victoria and the RNE. This site was wholly within the study area at the time of the field inspection but is no longer within the extent of the wind farm development. The inspection found the 1866 bluestone structure comprising two chambers, with a pointed arched highlight window, and a steeply pitched roof. The structure is of historical significance to the State as it is perhaps the only bath house built for a mid-nineteenth century pastoral homestead. The bath house is significant for demonstrating new interest in personal hygiene and for its association with Charles Hamilton Macknight (1819-1873). The bath house is also of historical significance for demonstrating the lifestyle of the gentleman squatter in mid-nineteenth-century pastoral Victoria. The Turkish bath house is also an innovative design for the period of the 1860s - a time when plumbing to private dwellings was especially rare. It is of aesthetic significance to the State of Victoria for its stone masonry, as an example of the Picturesque Gothic style, and as an unusual building type. As such the site should be afforded protection under the Moyne Shire Heritage Overlay and the VHI. In addition, the bluestone kitchen located adjacent to the bath house is a ruin that has potential archaeological evidence of the former homestead complex, its occupants and provides an insight into early settlement in the region. It likely pre-dates the bath house, and the only remains of the original homestead after all other structures were destroyed in a fire in 1939.

The 'Hut' site, which currently has the standing remains of a chimney and shed is likely to be the remains of a shepherd's hut or early dwelling. There are a number of shepherds' huts in the Moyne Shire listed on the VHI as they offer an insight into early property management. There may be subsurface remains however it is likely that building materials from the site were removed or reused. The site should be listed on the VHI. It is noted that the hut site is near, but not in the location of a proposed turbine location. The turbines in this area will not harm the Hut Site.

Little could be determined from a surface visual survey, regarding the purpose of the 'Ruin' site nor its features. It is most likely however that it is the remains of a shepherd's hut or a very early domestic dwelling, demolished prior to 1942. This period of ownership is currently unknown and further research is required to establish the sequence of ownership in that period, which may offer further insight as to the site's purpose. The site likely has a number of features that may contain subsurface archaeological deposits. Consequently, the site should be listed on the VHI. The Ruin site is not in the location of any proposed turbines or associated infrastructure, however it is recommended a buffer of approximately 50 m around the site be maintained during construction works.

The Paradise Bridge is also of historic significance but is outside of the current study area. The Sandy Camp Hut has likely been removed and the location of the Pump House is likely to also be outside of the study area and was unable to be located.

Recommendations for VHI D7321-0040- (Landers Lane Dry Stone Wall) are discussed in a separate report by Ecology and Heritage Partners (Sinamai 2020; Appendix 5).

In summary, there is one historic heritage places in the study area, but no historic heritage will be harmed by the proposed Willatook Wind Farm turbines or associated infrastructure.

## 6 MANAGEMENT RECOMMENDATIONS

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This section provides a summary of the recommendations made in relation to the historical heritage values of the study area.

### **Recommendation 1: Contingency**

There are no known historical heritage issues in regard to the proposed development. However, if any historical heritage issues are encountered during the course of construction then works should cease within 50 m of the area of concern and a buffer zone established, and a qualified Heritage Advisor (or Heritage Victoria) should be contacted to investigate.

### ***Archaeological Deposits***

In the event that future works need to take place within the extent of a listed VHI site, the consent process will need to be followed before any works can be conducted within the site extent. The consent process is as follows:

- Consent to Uncover; then,
- Consent to Excavate; then,
- Consent to Damage.

The consent process is subject to consultation with Heritage Victoria.

### ***Permits***

In the event that future works need to take place in the extent of a registered VHR site, a permit or permit exemption will need to be acquired from Heritage Victoria. The permit will need to be supported by a Heritage Impact Statement written by a suitably qualified heritage consultant, which clearly outlines all potential impacts to the registered significance of the place.

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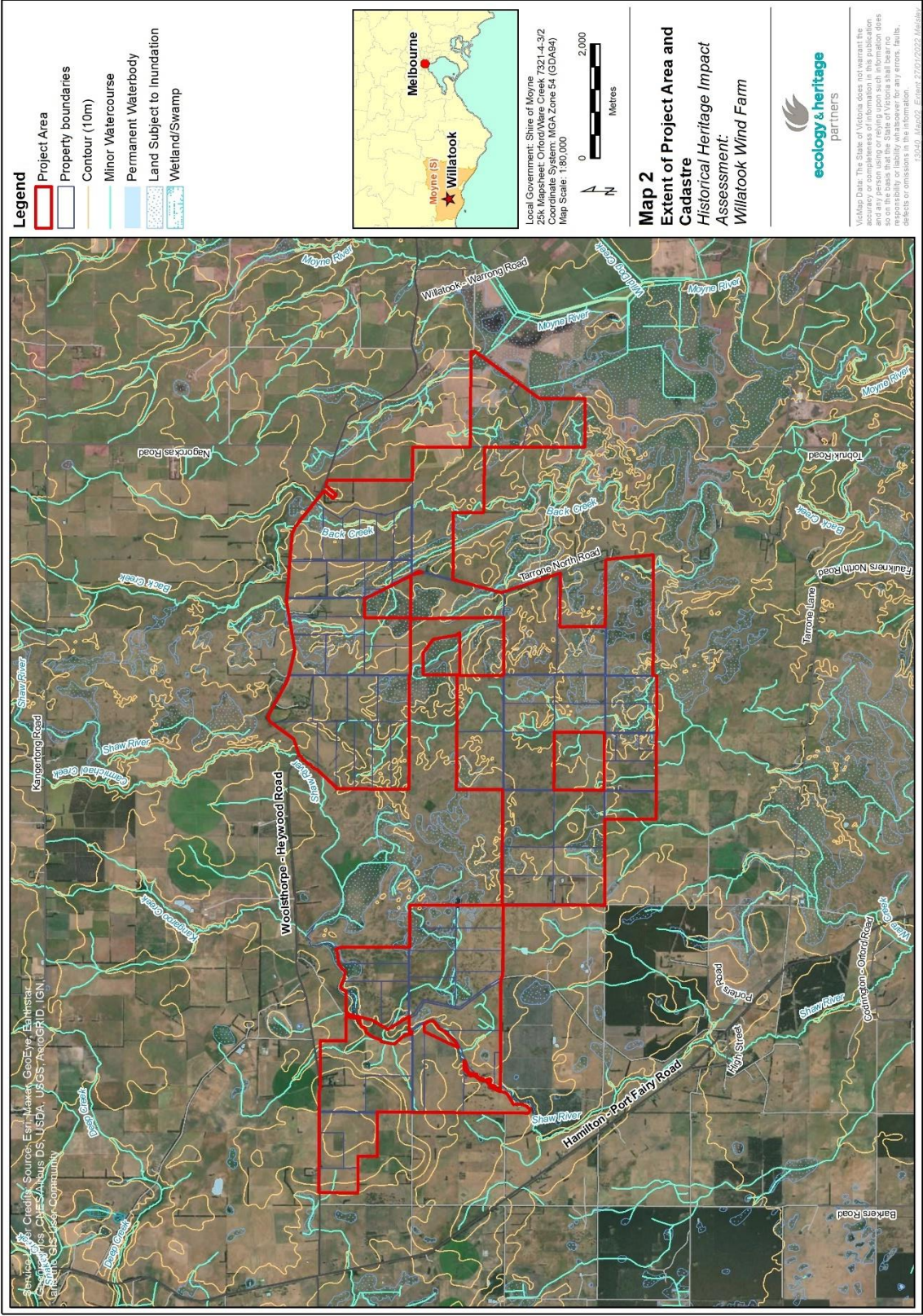
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## MAPS

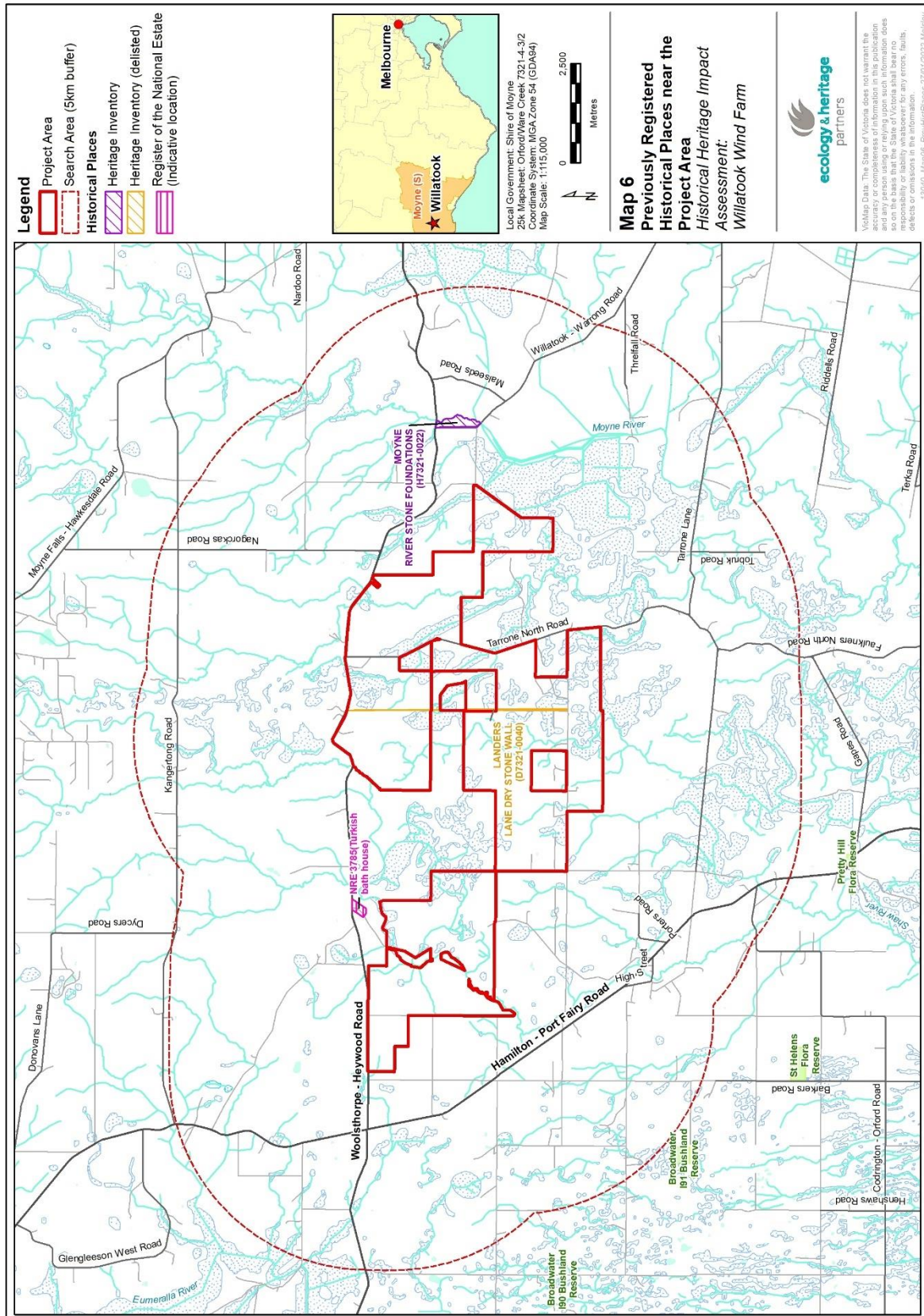
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## APPENDICES

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## Appendix 1: Heritage Legislation

### ***Heritage Act 2017***

Section 12 of the *Heritage Act 2017* is Assessment criteria regarding cultural heritage significance.

This section of the Act states that in determining assessment criteria for includes of places and objects in the Heritage Register under S.11(1)(k), the Heritage Council must have regard to the following matters:

- Criterion A: historical importance, association with or relationship to the State's history;
- Criterion B: Good design or aesthetic characteristics;
- Criterion C: Scientific or technical innovations or achievements;
- Criterion D: Social or cultural associations;
- Criterion E: Potential to educate, illustrate or provide further scientific investigation in relation to the State's cultural heritage;
- Criterion F: Importance in exhibiting a richness, diversity or unusual integration of features;
- Criterion G: Rarity or uniqueness of a place or object; and
- Criterion H: The representative nature of a place or object as part of a class or type of places or objects.

The Heritage Council must also have regard to the methods of establishing the extent to which land or object nominated for inclusion in the Heritage Register in association with a registered place or a place nominated for inclusion are integral to the State-level cultural heritage significance of the place and any other matter which is relevant to the determination of State-level cultural heritage significance.

In addition, it is appropriate when assessing the significance of a site in Victoria to consider whether it is of Local, Regional or State (or potentially National) significance.

The Victorian Heritage Register (VHR) provides the highest level of statutory protection for historical places in Victoria. Places included in the VHR are subject to the provisions of the *Heritage Act 2017*.

This Act protects all heritage places deemed to be of State significance by registration in the Victorian Heritage Register (VHR). Proposed impacts to any site registered in the VHR will require a Permit from Heritage Victoria (HV). This Act also protects all non-Aboriginal archaeological sites older than 75 years. If non-Aboriginal archaeological sites of State Significance are listed in the VHR a Permit is required to impact the site from Heritage Victoria. If a non-Aboriginal archaeological site is not of State significance and has archaeological value it is usually listed in the Victorian Heritage Inventory (VHI) and a Consent from Heritage Victoria would be required to impact the site.

### ***Planning and Environment Act 1987 (State)***

All municipalities in Victoria are covered by land use planning controls which are prepared and administered by State and local government authorities. The legislation governing such controls is the *Planning and Environment Act 1987*. Places of significance to a locality can be listed on a local planning scheme and

protected by a Heritage Overlay (or other overlay where appropriate). Places of Aboriginal cultural heritage significance are not often included on local government planning schemes.

### ***Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)***

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a national framework for the protection of heritage and the environment and the conservation of biodiversity. The EPBC Act is administered by the Australian Government Department of Environment and Energy (DoEE). The Australian Heritage Council assesses whether or not a nominated place is appropriate for listing on either the National or Commonwealth Heritage Lists and makes a recommendation to the Minister on that basis. The Minister for the Environment, Water, Heritage and the Arts makes the final decision on listing. DoE also administers the Register of the National Estate.

The objectives of the EPBC Act are:

- To provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance;
- To promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources;
- To promote the conservation of biodiversity;
- To provide for the protection and conservation of heritage;
- To promote a cooperative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples;
- To assist in the cooperative implementation of Australia's international environmental responsibilities;
- To recognise the role of indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; and
- To promote the use of indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.

### ***Aboriginal Heritage Act 2006 (State)***

The *Aboriginal Heritage Act 2006* protects Aboriginal cultural heritage in Victoria. A key part of the legislation is that Cultural Heritage Management Plans (CHMPs) are required to be prepared by Sponsors (the developer) and qualified Cultural Heritage Advisors in accordance with the *Aboriginal Heritage Act 2006* and the accompanying *Aboriginal Heritage Regulations 2007*. A CHMP is the assessment of an area (known as an 'study area') for Aboriginal cultural heritage values, the results of which form a report (the CHMP) which details the methodology of the assessment and sets out management recommendations and contingency measures to be undertaken before, during and after an activity (development) to manage and protect any Aboriginal cultural heritage present within the area examined.

The preparation of a CHMP is mandatory under the following circumstances:

- If the *Aboriginal Heritage Regulations 2007* require a CHMP to be prepared (s. 47);
- If the Minister of Aboriginal Affairs Victoria requires a CHMP to be prepared (s. 48); or



- If an Environmental Impact Statement (EIS) is required by the *Environment Effects Act 1978* (s. 49).

The *Aboriginal Heritage Regulations 2007* require a CHMP to be prepared:

- If all or part of the proposed activity is a 'high impact activity'; and
- If all or part of the study area is an area of 'cultural heritage sensitivity'; and
- If all or part of the study area has not been subject to 'significant ground disturbance'.

The preparation of a CHMP can also be undertaken voluntarily. Having an approved CHMP in place can reduce risk for a project during the construction phase by ensuring there are no substantial delays if sites happen to be found. Monitoring construction works is also rarely required if an approved CHMP is in place.

Approval of a CHMP is the responsibility of the Registered Aboriginal Party who evaluates the CHMP and then it is lodged with the Secretary of the Department of the Premier and Cabinet (DPC) to take effect or, the Secretary of the DPC (AV). They will be examining the CHMPs in detail with key points including:

- Addressing whether harm to heritage can be avoided or minimised;
- All assessments (including test excavations) must be completed before management decisions are formulated; and
- Survey and excavation must be in accordance with proper archaeological practice and supervised by a person appropriately qualified in archaeology.

There are three types of CHMPs that may be prepared (*The Guide to preparing a CHMP 2010*). These are:

- Desktop;
- Standard; and
- Complex.

A desktop CHMP is a literature review. If the results of the desktop show it is reasonably possible that Aboriginal cultural heritage could be present in the study area, a standard assessment will be required.

A standard assessment involves a literature review and a ground survey of the study area. Where the results of ground survey undertaken during a standard assessment have identified Aboriginal cultural heritage within the study area, soil and sediment testing, using an auger no larger than 12 cm in diameter, may be used to assist in defining the nature and extent of the identified Aboriginal cultural heritage (Regulation 59[4]).

Where the results of ground survey undertaken during a standard assessment have identified Aboriginal cultural heritage within the study area or areas which have the potential to contain Aboriginal cultural heritage subsurface, a complex assessment will be required. A complex assessment involves a literature review, a ground survey, and subsurface testing. Subsurface testing is the disturbance of all or part of the study area or excavation of all or part of the study area to uncover or discover evidence of Aboriginal cultural heritage (Regulation 62[1]).

It is strongly advised that for further information relating to heritage management (e.g. audits, stop orders, inspectors, forms, evaluation fees, status of RAPs and penalties for breaching the Act) Sponsors should access the AV website (<http://www.aboriginalaffairs.vic.gov.au/>).

The flow chart below also assists in explaining the process relating to CHMPs.

### ***Native Title Act 1993 (Commonwealth)***

Native Title describes the rights and interests of Aboriginal and Torres Strait Islander people in land and waters, according to their traditional laws and customs. In Australia, Aboriginal and Torres Strait Islander people's rights and interests in land were recognised in 1992 when the High Court delivered its historic judgment in the case of *Mabo v the State of Queensland*. This decision overturned the legal fiction that Australia upon colonisation was *terra nullius* (land belonging to no-one). It recognised for the first time that Indigenous Australians may continue to hold native title.

Native Title rights may include the possession, use and occupation of traditional country. In some areas, native title may be a right of access to the area. It can also be the right for native title holders to participate in decisions about how others use their traditional land and waters. Although the content of native title is to be determined according to the traditional laws and customs of the title holders, there are some common characteristics. It may be possessed by a community, group, or individual depending on the content of the traditional laws and customs. It is inalienable (that is, it cannot be sold or transferred) other than by surrender to the Crown or pursuant to traditional laws and customs. Native Title is a legal right that can be protected, where appropriate, by legal action.

Native Title may exist in areas where it has not been extinguished (removed) by an act of government. It will apply to Crown land but not to freehold land. It may exist in areas such as:

- Vacant (or unallocated) Crown land;
- Forests and beaches;
- National parks and public reserves;
- Some types of pastoral leases;
- Land held by government agencies;
- Land held for Aboriginal communities;
- Any other public or Crown lands; and/or
- Oceans, seas, reefs, lakes, rivers, creeks, swamps and other waters that are not privately owned.

Native Title cannot take away anyone else's valid rights, including owning a home, holding a pastoral lease or having a mining lease. Where native title rights and the rights of another person conflict the rights of the other person always prevail. When the public has the right to access places such as parks, recreation reserves and beaches, this right cannot be taken away by Native Title. Native Title does not give Indigenous Australians the right to veto any project. It does mean, however, that everyone's rights and interests in land and waters have to be taken into account.

Indigenous people can apply to have their native title rights recognised by Australian law by filing a native title application (native title claim) with the Federal Court. Applications are required to pass a test to gain certain rights over the area covered in the application. The Native Title Tribunal (NNTT) was established to administer application processes. Once applications are registered, the NNTT will notify other people about the application and will invite them to become involved so all parties can try to reach an agreement that respects

everyone's rights and interests. If the parties cannot agree, the NNTT refers the application to the Federal Court and the parties argue their cases before the Court.

As a common law right, native title may exist over areas of Crown land or waters, irrespective of whether there are any native title claims or determinations in the area. Native Title will therefore be a necessary consideration when Government is proposing or permitting any activity on or relating to Crown land that may affect native title<sup>1</sup>.

### ***Coroners Act 2008 (State)***

The Victorian *Coroners Act 2008* requires the reporting of certain deaths and the investigation of certain deaths and fires in Victoria by coroners to contribute to the reduction of preventable deaths. Of most relevance to heritage is the requirement for any “reportable death” to be reported to the police (s. 12[1]). The *Coroners Act 2008* requires that the discovery of human remains in Victoria (s. 4[1]) of a person whose identity is unknown (s. 4[g]) must be reported to the police.

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<sup>1</sup> The information in this section was taken from the Department of Sustainability and Environment, Fact Sheet on Native Title, 2008

## Appendix 2: Site Gazetteer

**Table A3.1:** Historical Site Gazetteer

Place Name & Number	Primary Grid Coordinate (GDA 94, Zone 54)	Place Type
H7321-0103 Dunmore Turkish Bathhouse and homestead kitchen site	E 597810.58 N 5778309.87	VHI
H7321- 0104 Woolsthorpe- Heyward Road Hut 1	E 597810.58 N 5778309.87	VHI
H7321-0105 Woolsthorpe- Heyward Road Ruin 1	E605937.88 N5777970.80	VHI

## Appendix 3: Significance Assessment

### A4.1. The ICOMOS Burra Charter

The standard for determining significance of places is derived from an international formula developed by ICOMOS (International Council on Monuments and Sites). In Australia, the Burra Charter has been developed by ICOMOS which is a Charter for the Conservation of Cultural Significance (Australia ICOMOS 1999).

The Burra Charter defines cultural significance as “aesthetic, historic, scientific, social or spiritual value for past, present or future generations” (Australia ICOMOS 1999: Section 1.2). Cultural significance is a concept which helps in estimating the value of places. The Burra Charter Cultural Significance Guidelines definitions of the values implicit in assessing cultural significance are as follows (Australia ICOMOS 1999):

**Aesthetic value:** Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; the smells and sounds associated with its place and use.

**Historic value:** historic value encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all the terms set out in this section.

A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

**Scientific value:** The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information.

**Social value:** Social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group.

### National Historic Themes

It is noted that when assessing historic values that the use of historic themes is of benefit. Historic themes are used by heritage professionals to assist in understanding the meanings and connections that historic places may have in addition to the physical fabric of a place. Themes can help explain how particular elements of a place are significant because of their ability to illustrate important aspects of its history (Australian Heritage Commission 2001). The nine theme groups that are most commonly used nationally are:



Theme 1	Tracing the evolution of the Australian environment
Theme 2	Peopling Australia
Theme 3	Developing Local, Regional and National economies
Theme 4	Building settlements, towns and cities
Theme 5	Working
Theme 6	Educating
Theme 7	Governing
Theme 8	Developing Australia's cultural life
Theme 9	Marking the phases of life

These theme groups are further expanded into more focussed sub-themes which will not be expanded on here. The themes are intended to be non-hierarchical and a historic place may have a number of themes, which reflects how we look at the past, allowing for an integrated, diverse and complex human experience (Australian Heritage Commission 2001).

#### **A4.2. The *Heritage Act 2017* Criteria**

The *Heritage Act 2017* defines eight criteria against which cultural heritage significance can be assessed. These criteria are used to assist in determining whether places of potential State significance should be included in the Heritage Register. They are as follows:

Criterion A	The historical importance, association with or relationship to Victoria's history;
Criterion B	Good design or aesthetic characteristics;
Criterion C	Scientific or technical innovations or achievements;
Criterion D	Social or cultural associations
Criterion E	Potential to educate, illustrate or provide further scientific investigation in relation to Victoria's cultural heritage;
Criterion F	Importance in exhibiting a richness, diversity or unusual integration of features;
Criterion G	Rarity or uniqueness of a place or object; and
Criterion H	The representative nature of a place or object as part of a class or type of places or objects.

In addition it is appropriate when assessing the significance of a site in Victoria to consider whether it is of Local, Regional or State (or potentially National) significance.

#### **A4.3. Scientific Significance**

Scientific significance of a heritage place (particularly archaeological sites) is also assessed in Victoria using a commonly accepted formula developed by Bowdler (1981) and Sullivan and Bowdler (1984). These are relative estimates of significance based on the current knowledge available about sites or places in a region. The assessment uses three criteria; site contents, site condition and representativeness.

### Site Contents Rating

- 1 No cultural materials remaining.
- 2 Site contains a small number (e.g. 0-10 artefacts) or limited range of cultural materials with no evident stratification.
- 3 Site contains:
  - a. A larger number, bit limited range of cultural materials; and/or
  - b. Some intact stratified deposit.
- 4 Site contains:
  - a. A large number and diverse range of cultural materials: and/or
  - b. Largely intact stratified deposit; and/or
  - c. Surface spatial patterning of cultural materials that still reflect the way in which the cultural materials were laid down.

### Site Condition Rating

- 0 Site destroyed.
- 1 Site in a deteriorated condition with a high degree of disturbance but with some cultural materials remaining.
- 2 Site in a fair to good condition , but with some disturbance.
- 3 Site in an excellent condition with little or no disturbance. For surface artefact scatters this may mean that the spatial patterning of cultural material still reflects the way in which the cultural materials were laid.

### Representativeness

Representativeness refers to the regional distribution of a site type. It is assessed on whether the site type is common, occasional or rare within a given region. Current knowledge on the number of and distribution of archaeological sites in a region can change according depending on the extent of previous archaeological investigation.

The assessment of representativeness also takes into account the contents and condition of a particular site. An example is that in any region, there may be a limited number of sites of a particular type, which have been subject to minimal disturbance. These sorts of undisturbed sites (containing in situ deposits) would therefore be given a high significance rating for representativeness.

The **representativeness ratings** used for archaeological sites are:

- 1 Common occurrence
- 2 Occasional occurrence
- 3 Rare occurrence

### Overall Scientific Significance Rating

An overall scientific significance rating is assigned to the site based on a cumulative score from the assessment. This results in one of the following ratings being assigned for scientific significance:

1-3	Low
4-6	Moderate
7-9	High

## Appendix 4: Glossary

Items highlighted in ***bold italics*** in the definition are defined elsewhere in the glossary.

Acronym	Description
Assemblage	The name given to encompass the entire collection of artefacts recovered by archaeologists, invariably classified into diagnostic items used to describe the material culture.
AV	<b>Aboriginal Victoria</b> , formerly the Office of Aboriginal Affairs Victoria. A division of <b><i>DPC</i></b> responsible for management of Aboriginal cultural heritage in Victoria.
CHL	<b>Commonwealth Heritage List</b> . A register of heritage places, under the EPBC Act, on Commonwealth land or managed by the Commonwealth.
CHMP	<b>Cultural Heritage Management Plan</b> . A plan prepared under the <i>Aboriginal Heritage Act 2006</i> .
DAWE	<b>Department of Agriculture, Water and Energy</b> . The Commonwealth Government department responsible for management of heritage places on Commonwealth land or listed on the <b><i>WHL</i></b> , <b><i>NHL</i></b> or <b><i>CHL</i></b> .
DELWP	<b>Department of Environment, Land, Water and Planning</b> . The Victorian State Government department, of which <b><i>HV</i></b> is a part, responsible for management of historical (non-Aboriginal) heritage in Victoria.
DPC	<b>Department of the Premier and Cabinet</b> . The Victorian State Government department, of which <b><i>AV</i></b> is a part, responsible for management of Aboriginal cultural heritage in Victoria.
EPBC Act	<b><i>Environment Protection and Biodiversity Conservation Act 1999</i></b> (Commonwealth)
Fabric (Heritage)	Any physical element, feature, material or finish that is associated with the heritage values in all or part of a structure, place, object, feature or site. The original heritage fabric is any such physical element that was an integral part of the original heritage site.
Feature (Archaeological)	A collection of one or more contexts representing some human non-portable activity that generally has a vertical characteristic to it in relation to site stratigraphy.
Heritage Place	A <i>registered</i> historical site listed on a heritage planning instrument that affords statutory protection to the site.
Heritage Values	The values of a heritage site that relate to its historical, social, cultural, spiritual, architectural, archaeological or technological significance.
Historical Heritage Likelihood	An area assessed by a Heritage Advisor as having potential for containing either surface or subsurface historical archaeological deposits or fabric.
Historical Site	An historical site, whether or not recorded in the <b><i>VHR</i></b> , <b><i>VHI</i></b> or other historical site database (cf. <b><i>Heritage Place</i></b> ).
HHA	<b>Historical Heritage Assessment</b> . An assessment of the historical heritage values of a defined study area by a qualified heritage consultant.
HO	<b>Heritage Overlay</b> . A list of Heritage Places of local significance with statutory protection under a local government planning scheme.
HV	<b>Heritage Victoria</b> . A division of <b><i>DTPLI</i></b> responsible for management of historical heritage in Victoria.
NHL	<b>National Heritage List</b> . A register of heritage places, under the EPBC Act, of heritage places of national significance.
RNE	<b>Register of the National Estate</b> . A commonwealth-managed register of heritage assets; as of 2012 the RNE no longer provides statutory protection to heritage places.
Taphonomy	The study of the processes (both natural and cultural) which affect the deposition and preservation of both the artefacts and the site itself.

Acronym	Description
VAHR	<b>Victorian Aboriginal Heritage Register.</b> A register of Aboriginal places and Aboriginal historic Places maintained by <i>OAAV</i> .
VHI	<b>Victorian Heritage Inventory.</b> A register of places and objects in Victoria identified as historical archaeological sites, areas or relics, and all private collections of artefacts, maintained by <i>HV</i> . Sites listed on the VHI are not of State significance but are usually of regional or local significance. Listing on the <i>VHR</i> provides statutory protection for that a site, except in the case where a site has been “D-listed”.
VHR	<b>Victorian Heritage Register.</b> A register of the State’s most significant heritage places and objects, maintained by <i>HV</i> . Listing on the VHR provides statutory protection for that a site.
WHL	<b>World Heritage List.</b> A register of heritage places, under the EPBC Act, of heritage places of international significance.



## **Appendix 5: Dry Stone Wall Assessment and Management Plan for Willatook Wind Farm, Victoria (Sinamai 2020)**

Final Report

# Dry Stone Wall Assessment and Management Plan for Willatook Wind Farm, Victoria

Client

Willatook Wind Farm Pty Ltd

04 March 2022



Ecology and Heritage Partners Pty Ltd

Author

Ashton Sinamai

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- Heritage Victoria; and
- Moyne Shire Council.

**Cover Photo:** Dry Stone Wall 2 along Landers Lane

(Photo by Ecology and Heritage Partners Pty Ltd)

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## ABBREVIATIONS

Acronym	Description
The Act	<i>Heritage Act 2017</i>
CHL	Commonwealth Heritage List
CHMP	Cultural Heritage Management Plan
CMA	Catchment Management Authority
DAWE	Department of Agriculture, Water and the Environment (Commonwealth)
DELWP	Department of Environment, Land, Water and Planning (Victoria)
DPC	Department of the Premier and Cabinet (Victoria)
EES	Environment Effects Statement
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EVC	Ecological Vegetation Class
FPSR	First Peoples-State Relations
HA	Heritage Advisor
HHA	Historical Heritage Assessment
HO	Heritage Overlay
HV	Heritage Victoria
MSC	Moyne Shire Council
NES	National Environmental Significance
NHL	National Heritage List
NTR	National Trust Register (Victoria)
PMST	Protected Matters Search Tool
RNE	Register of the National Estate
SLV	State Library of Victoria
VGf	Victorian Geomorphological Framework
VHI	Victorian Heritage Inventory
VHR	Victorian Heritage Register
VWHI	Victorian War Heritage Inventory
WHL	World Heritage List



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# 1 INTRODUCTION

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## 1.1 Background and Scope of Works

Ecology and Heritage Partners Pty Ltd was commissioned by Willatook Wind Farm Pty Ltd. to prepare a Dry Stone Wall Management Plan for dry stone walls at the proposed Willatook Wind Farm, Victoria (Moyne Shire Council) (Map 1).

Willatook Wind Farm Pty Ltd (the proponent) is developing the proposed Willatook Wind Farm (the project) in Moyne Shire, Victoria. The project will harness strong and reliable winds to generate renewable energy through the construction and operation of up to 59 wind turbines generators and would operate for a period of at least 25 years following a two-year construction period. The wind farm would generate more than 1,400 gigawatt hours (GWh) of renewable electricity to the National Electricity Market (NEM) each year.

The project is located approximately 22 km to the north of Port Fairy, 32 km to the northwest of Warrnambool and to the south of the Woolsthorpe–Heywood Road. The project is located within an area of private and public land that is largely used for agriculture, predominantly sheep and cattle grazing.

Approximately 60.4 km of access tracks (both new and existing) would be required to provide access from the public road network to each wind turbine and supporting infrastructure. These access tracks provide access for project construction and maintenance vehicles and can be used by emergency vehicles and by landowners for their farming operations.

Electricity produced by the project will be fed through underground cables to the on-site substation, from where it will be exported to the NEM via the Tarrone Terminal Station and the existing Moorabool to Heywood 500 kilovolt (kV) transmission line.

Other project infrastructure would include:

- an on-site quarry for basalt rock that will be used to provide aggregate for access tracks and hardstand areas
- a battery energy storage system (BESS) located immediately to the west of the substation
- an operations and maintenance (O&M) facility consisting of site offices and amenities.

### Operational Activities

Key operational activities will focus on the effective operation of the wind farm. This will include monitoring (on-site or remotely), maintenance and repairs. This would include routine inspections, servicing and repair of wind turbines, maintenance of access tracks and of the electrical system and buildings and plant, including control systems. The project area is currently used as rural farmland, and this would continue after construction. The proposed development footprint consists of 222.3 ha, which is 5.4% of the study area. Construction of the wind farm is expected to take approximately two years to complete, followed by an operational phase of at least 25 years.

## **Decommissioning**

Within 12 months of wind turbines permanently ceasing to generate electricity, the wind farm would be decommissioned. This would include removing all above ground equipment; restoration of all areas associated with the wind farm, unless otherwise useful to the ongoing management of the land; and post decommissioning revegetation.

## **Study Area**

The activity area is located west of Willatook, southwest of Hawkesdale, east of Orford and Broadwater and east and south of Dunmore in southwest Victoria (Moyne Shire Council) (see Map 1). The activity area is approximately 4154 ha in size and is roughly bounded by Woolsthorpe-Heywood Road to the north, Riordans Road to the south, Old Dunmore Road and Macknights Road to the west, and Tarrone North Road and the Moyne River to the east (Map 2). The project area is currently used for residential, agricultural, pastoral and utilities purposes. The dry stone wall subject to this report is located at the side of Landers Lane and continues for another kilometre south of Landers Lane (Map 3)

## **1.2 Desktop Assessment**

An up to date review of the relevant cultural heritage databases and literature was be undertaken, including:

- Any relevant available literature (e.g. Council heritage studies) legislation and policies; and
- A desktop assessment, including:
  - Review the previous AHHA report in relation to the study area;
  - Review Council Planning Scheme requirements in relation to DSWs;
  - Review recent aerial photography; and
  - A brief review of the land use of the subject site.

### **1.2.1 Fieldwork and Reporting**

A site investigation was conducted by a qualified heritage advisor to visually assess the walls, their condition and integrity, and a basic description of the walls' features. As a minimum the following information will be incorporated:

- Detailed desktop assessment;
- The location, nature and extent of the dry-stone walling;
- Maps or plans will be provided showing:
  - North point and study area boundaries;
  - The location of any unusual features of the wall;
  - Wall sections used for the site condition assessment; and
  - Location where photographs were taken, and the direction from which they were taken.

- Management policies, aligned with the relative cultural significance identified;
- Mitigation measures to be taken during the construction and maintenance phase.

The management plan will include:

- Assessment and documentation of the walls including feature plans which show the extent and height of the walls, openings in the wall and structural condition of the wall;
- Conservation policies for the walls, including guidelines as to how the wall can be appropriately adapted and interpreted for wind farm development; and
- All recommendations designed to meet the needs of the client.

### **1.3 Report Production Team**

This report was prepared by Dr Ashton Sinamai (Archaeologist/Heritage Advisor).

Ashton is an archaeologist with experience in heritage management and museum studies with expertise in heritage identification, preservation and interpretation. He also has experience in cataloguing identification and analysis of artefacts as well as project management. For 14 years, Ashton worked as an archaeologist at Great Zimbabwe and Khami World Heritage sites which are some of the most extensive dry stone walled sites on the World Heritage list. His experience includes the monitoring, assessment, documentation conservation and interpretation of dry stone walls. Prior to his working at Ecology and Heritage Partners, Ashton has worked an archaeologist in Zimbabwe and Namibia for 16 years and was involved in ensuring compliance in development processes. He is an experienced researcher and has worked at the University of York, UK as an Experienced Marie Curie Research Fellow for two years.

Ashton has carried out numerous excavations in both research and testing/salvage condition in Zimbabwe, Namibia, Kenya, Botswana and also carried out documentation work in the Sudan, Tanzania, South Africa as well as France. He has published a book and several papers on dry stone walling sites in southern Africa.

Ashton has a BA (Hons) in Archaeology from the University of Zimbabwe, a Master of Arts in Public History/Heritage (cum laude) from the University of the Western Cape (South Africa) and a PhD in Cultural Heritage and Museum Studies from Deakin University. His PhD thesis focused on the mapping of cultural landscapes around the dry stone walled World Heritage site of Khami in Zimbabwe. He has presented his research in numerous conferences.

His formal qualifications include:

- PhD. Cultural Heritage and Museum Studies, Deakin University 2013
- Masters (Visual and Public History), University of the Western Cape, South Africa 2003
- Bachelor of Arts (Hons)(Archaeology), University of Zimbabwe, 1991
- Bachelor of Arts (History/Archaeology University of Zimbabwe, 1990



The quality assurance review was undertaken by Oona Nicolson (Director/Principal Heritage Advisor). The field work was undertaken by Ashton Sinamai (Archaeologist), Cherrie de Leuen and Andrew Wilkinson (Archaeologist/Heritage Advisors). Mapping was provided by Monique Elsley (GIS Coordinator).

## 1.4 Report Review and Distribution

Copies of this report will be lodged with the following organisations:

- Willatook Wind Farm Pty Ltd;
- Shire of Moyne; and
- Heritage Victoria.

## 1.5 Heritage Legislation

An overview of the Victorian *Heritage Act 2017*, the *Victorian Planning and Environment Act 1987*, the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, is included in Appendix 1. This legislation is subordinate to the *Victorian Coroners Act 2008* in relation to the discovery of human remains

## 1.6 Local Council

The study area is located within the Shire of Moyne. Development within Moyne Shire is governed by the Moyne Planning Scheme which sets out policies and provisions for the use, development and protection of land, places and properties. Broad planning controls for dry stone walls are implemented under Clause 52.37 of the Moyne Shire Planning Scheme Particular Provisions.

## 1.7 Cadastral Details

The cadastral details of the activity area are as follows:

**Table 1:** Cadastral Details of the Activity Area

PARCEL_SPI	PARCEL_SPI	PARCEL_SPI	PARCEL_SPI	PARCEL_SPI	PARCEL_SPI
2043\PP2237	6\TP403368	2B~21\PP2835	1A~16\PP2835	1\TP843774	2\PS513764
2044\PP2237	7\TP403368	3~A\PP2835	2~16\PP2835	4\TP843774	1\PS519322
2041\PP2237	4\TP403368	1\TP119974	3B~16\PP2835	5\TP843774	2\PS519322
2040\PP2237	5\TP403368	8~A\PP2835	3A~16\PP2835	4B~8\PP2835	2B~4\PP2835
2039\PP2237	1A1~8\PP2835	5\TP242579	4A~16\PP2835	2\TP396974	1B~4\PP2835
2038\PP2237	1~8\PP2835	1\TP843794	1~15\PP2835	1\TP396974	3\TP843794
2009\PP2835	2~8\PP2835	2\LP98389	1\TP123936	4~10\PP2835	2A~4\PP2835
2049\PP2237	2A~8\PP2835	36A\PP2237	2\TP529477	1\TP242579	1A~4\PP2835
2050\PP2237	3A~8\PP2835	36B\PP2237	3A~15\PP2835	3A~5\PP2835	5A~4\PP2835
2051\PP2237	3B~8\PP2835	35A\PP2237	1\TP529477	3B~5\PP2835	2\TP242579

2015\PP2835	4A~8\PP2835	35B\PP2237	2B~20\PP2835	4B~5\PP2835	3\TP242579
2048\PP2237	9\TP403368	15D\PP2237	1A~21\PP2835	5A~5\PP2835	4B~16\PP2835
2026\PP2835	2\TP826990	15E\PP2237	1B~21\PP2835	5B~5\PP2835	1B~16\PP2835
2025\PP2835	1\LP218923	15A\PP2237	1B1~21\PP2835	3A~4\PP2835	2\PS601753
2\TP843794	2\LP218923	1\TP403368	1B2~21\PP2835	3B~4\PP2835	
4B1~4\PP2835	2045\PP2237	3\TP403368	1B3~21\PP2835	2\TP843774	
4B2~4\PP2835	2010\PP2835	2\TP403368	2C~21\PP2835	3\TP843774	
1~11\PP2835	2043\PP2237	8\TP403368	2A~21\PP2835	4\TP242579	

## 2 BACKGROUND REVIEW

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The section reviews the historical context of the study area and includes an examination of historical and ethnohistorical sources regarding previously recorded dry-stone walls near the study area. This section also briefly reviews the history of dry stone walling as a common fencing type in parts of rural Victoria.

### 2.1 Dry Stone Walling and the Western Districts of Victoria

Stone is one of the most common materials used by humans in building shelter as well as demarcations. In Australia, most stone walls are a later addition to the landscape, and are mostly to mark boundaries, create paddocks or demarcate homesteads. With the abundance of basalt on the Victorian Volcanic Plain, and the need to clear fields for sheep and cattle grazing as well as cropping, it became the most common stone used in demarcating spaces in Victoria when farming began.

Due to their enormous size, most of the land claimed for the early pastoral runs was poorly defined with boundaries often following natural features such as creeks and lakes or were simply marked by plough lines or blazed trees (Paynter et al. 2004: 6), or by wooden hurdle type fencing (McLellan 1989). Boundaries became more defined during the 1850s following survey by the Colonial government.

Initially, settlers employed shepherds to manage their flocks of sheep across the pastoral runs. The shepherds lived in small huts scattered around the properties. Flocks were moved to take advantage of suitable feed and were penned each night (Holdsworth et al. 2011a). Although the runs were not freehold tenure, they were purchased by the squatters and semi-permanent buildings were erected. After a pastoral run had been occupied for five years, a Pre-Emptive Right was granted, giving the squatter 640 acres on which, a residence was usually constructed. These buildings were often the first areas to be fenced off. During the 1850s, the government sought to provide land for smaller farmers and many of the large squatting runs were subdivided and sold off. Much of the pastoral land was purchased by wealthy squatters.

With greater security of tenure for pastoralists, the arrival of the gold rush saw many shepherds leave the land to try their luck on the goldfields and labour for stock management became expensive. This created the need for fencing to manage stock and to form markers to define property boundaries (Holdsworth et al. 2011a). According to Pickard (2007) the transition from managing sheep with shepherds to allowing flocks to roam in fenced paddocks is one of the most important technological revolutions in Australian pastoral development. The introduction of fencing was a result of the increase in labour expense; capital outlay on fencing was more cost-effective and pastoralists realised that the new fencing technology could give them higher profits (Pickard 2008). Under the *Land Act 1862*, which allowed for the selection of blocks for purchase, there was a requirement to 'improve' the land by cultivation, establishment of a residence or by fencing. An 1873 article in the *Australasian* concluded that:

In the abstract, stone walls may be considered model fences for a country that is subject to bush-fires, and where stone everywhere obtainable we would feel no hesitation in declaring in favour of its application to such purposes. Breaches are easily repaired, for the material is always there. The first cost is greater than of wood, when the latter is at hand, but for permanence and durability stone has

no peer; moreover, it takes nothing from the soil; the grass at the foot of the wall is as sweet and nutritious as that in any other portion of the field.

In nineteenth century rural Victoria, the most common forms of fencing included dry stone walls, post and rail, hedges, ditches or combinations of the above. The use of wire became more widespread in later years due to its low cost and perceived aesthetics, due to it being largely invisible (Paynter et al. 2004). The use of wire rose exponentially during the 'boom' years between 1861 and the 1890s, especially after the mid-1880s when wire imports increased resulting in lower costs (Pickard 2010).

In regions where there was a plentiful supply of stone, as in much of the Western District, dry stone walls were erected. Western Victoria is characterised by extensive volcanic plains covering an area from western Melbourne to Millicent in South Australia. The landforms of the Victorian Volcanic Plains are characterised by stony rises and extensive screes of surface volcanic rock. Costs for erecting these walls were comparable to other fencing technologies. In addition to the primary function of stock separation and/or boundary definition, dry stone walling provided a secondary benefit of allowing for the removal of stone from paddocks and providing a convenient and useful way of storing the collected stone.

Dry stone construction is found in several other parts of the State - in the goldfields area around Maldon, Castlemaine, Chewton and Walhalla where walls and some buildings were constructed from sandstone. These structures were mainly built by Swiss, Italian and German immigrants and were different in the type of stone and in the style of construction from those built in the Western District. This was because of the difference of local available stone types. The Swiss, Italians and Germans whose dry stone skills had come from the fact that their homeland stone was of a similar nature to the stone where they were settling – coursed flat bedded stone.

The Depression brought an end to the stone mason's craft in the 1930s. By the 1960s, more than 100 years after the first stone walls were built in Western Victoria, dry stone walling was considered a dying art. Many of the stone masons who had constructed walls in the first half of the 20th century had reached retirement age without passing on the skills and expertise to the next generation, as technological advancement was changing the landscape forever.

## 1.8 Fencing Specifications

The *Fences Statute 1874* provided specifications for the construction of dry stone walls (*Bendigo Advertiser* 4 February 1874). In Victoria, a standard dry stone field fence, traditionally known as a 'five-quarter', stood 3' 9" (1.143 m) to the top course, upon which cope stones were often laid. The specifications required cope stones to only extend a further 12" (300 mm), giving a total wall height to 4' 9" (1.448 m). The specifications also required that the wall should be 2' 0" (610 mm) wide at the base and 15" (381 mm) wide at the top course.

Sometimes added height was required to provide more functionality depending on the purpose of the fence (e.g. changing stocking patterns from sheep to cattle requiring higher fencing). In areas where stone was less abundant, post and wire or post and rails were added to the top of the wall in place of cope stones. In later years, posts and wire netting was added to fences for greater efficiency, particularly in containing rabbits. In some areas, trenches were dug, and the walls commenced below ground level to hinder rabbits burrowing (Paynter et al. 2004: 7). McLellan (1989) describes the walling in the following terms:

*The craftsmen or 'cowans' as they were sometimes known, would lay two rows of stone about three feet apart, filling the centre with smaller stones and rubble. Courses were added, the two single walls tapering inwards towards the top where the width would be one foot to eighteen inches. Large stones were laid across the top of the wall to bind the two sides together and to provide weight to settle the stones. Top stones laid flat were called capping stones or coping stones. Each stone was handled once only, 'there being a place for every stone'. Breaking or chipping stones to make them fit was seriously frowned upon, although each stone is given a judicious tap with a small hammer to make it settle. The rate of progress varied between half-a-chain to a chain a day, depending on the style of wall and whether ground trenching was required by the owner.*

Dry stone walls can be either a 'single wall' or a 'double wall'. Single walls are constructed to the width of a single rock (known as 'building stones') so that the same rock is visible on both sides of the wall. Double walls are constructed using two single walls (known as 'doubling'), tapering towards each other at the top, with the void between packed with smaller rocks and rubble (known as 'hearting'). Smaller gaps between building stones, particularly in doubling, is filled using smaller stones (known as 'plugging') to create a neat, aesthetic and more stable wall face.

Marshal et al. (2004) summarises the characteristics of Victorian dry stone walls as follows:

- They are constructed through the careful placement of rocks without using any cementing or other binding substances;
- They are invariably built from local sources of stone, either quarried or unquarried;
- Unquarried sources of stone are generally located in the surrounding area as basalt floaters on the surfaces of paddocks;
- Walls generally taper in shape and have wide bases;
- Walls can vary in terms of style, structure and technique of construction; and
- Walls can include a combination of other materials or additions which can either be added on after the construction of the wall or be contemporaneous to the time of construction.

## 1.9 Historical Context

The section reviews the historical context of the study area and includes an examination of historical sources, previously recorded historical archaeological site types and locations in the geographic region of the study area, previous Council heritage studies and previous archaeological studies undertaken in the area. Together, these sources of information can be used to formulate a predictive site statement concerning what types of sites are most likely to occur in the study area, and where these are most likely to occur.

### 1.9.1 Regional History

Nicolas Baudin, a French explorer sailed from Cape Otway to Cape Northumberland in 1802. By the time that Major Mitchell arrived in Portland in 1836 of the so-called 'Australia Felix' he was surprised that a significant number of people were already living in the region. In the late 1700s the coastal areas along the Bass Strait were renowned for extensive seal colonies and schools of whales (Eslick, 1983: 17). By the 1800s over 200



sealers were known to frequent the region especially around the Lady Julia Percy Island and Lawrence Rocks (Sayer 1981: 9). Two graves found by a fisherman in 1842 on Lady Julia Percy Island are believed to be those of early sealers (Wiltshire 1981: 11, 13).

In Port Fairy whaling also became established in the 1830s. James Wishart named the port and stayed in the areas later called 'Belfast'. John and Charles Mills established a sealing camp at Griffiths Island. John Griffiths also moved his whaling operation from Portland Bay to the island in 1836 and established himself there permanently the following year (Carroll 1989: 152-153). By 1836 there were approximately 100 whalers operating out of Portland Bay and Port Fairy and at peak, seven whaling stations were operating in Portland alone (Wiltshire 1981: 22). The whaling season was variable, determined by the winter arrival of Southern Right Whales in the bays of south-western Victoria but the industry was kept busy year-round employing blacksmiths, coopers, shipwrights and general hands for building and repairing (Learmonth 1983: 50-53). However, by the mid-1830s, the major industrial focus had changed from whaling, which had caused whale numbers to rapidly recede, to pastoralism.

### **Squatter Settlements**

Long-term European occupation commenced with the Hentys moving to Portland Bay in 1834 and the arrival of members of the 'Port Phillip Association' at Port Phillip Bay the following year. In both cases people and livestock came from Tasmania. Settlers moved quickly into the Port Fairy area and hinterland from Geelong as well across the Murray River, in response to explorer Thomas Mitchell's descriptions of his discovery of a "veritable 'Australia Felix'" offering extensive grasslands and open savannah landscapes for immediate use by land-hungry pastoralists (Powell 1996:79). Many of the first squatters were from Scotland, made possible by the passage of an Act in 1833. Their occupation was legitimized in 1836 with the ascension of a further Act and a payment of 10 pound yearly licence fee. Though the licence did not permit the erection of any buildings, most squatters did build temporary buildings for use on the run and to protect their land from other squatters.

Most settlers became pastoralists and today the land is used mostly for sheep and cattle grazing. By 1843 much of the area in the western volcanic plains was taken up and used for grazing. With the development of agriculture labour was also required and mostly ex-convicts were engaged. It was mostly males in this harsh environment; women and children were not so welcome in the harsh and crude conditions of early settlement. In many cases the wives, sisters and daughters of the settlers were either left behind in Tasmania or England.

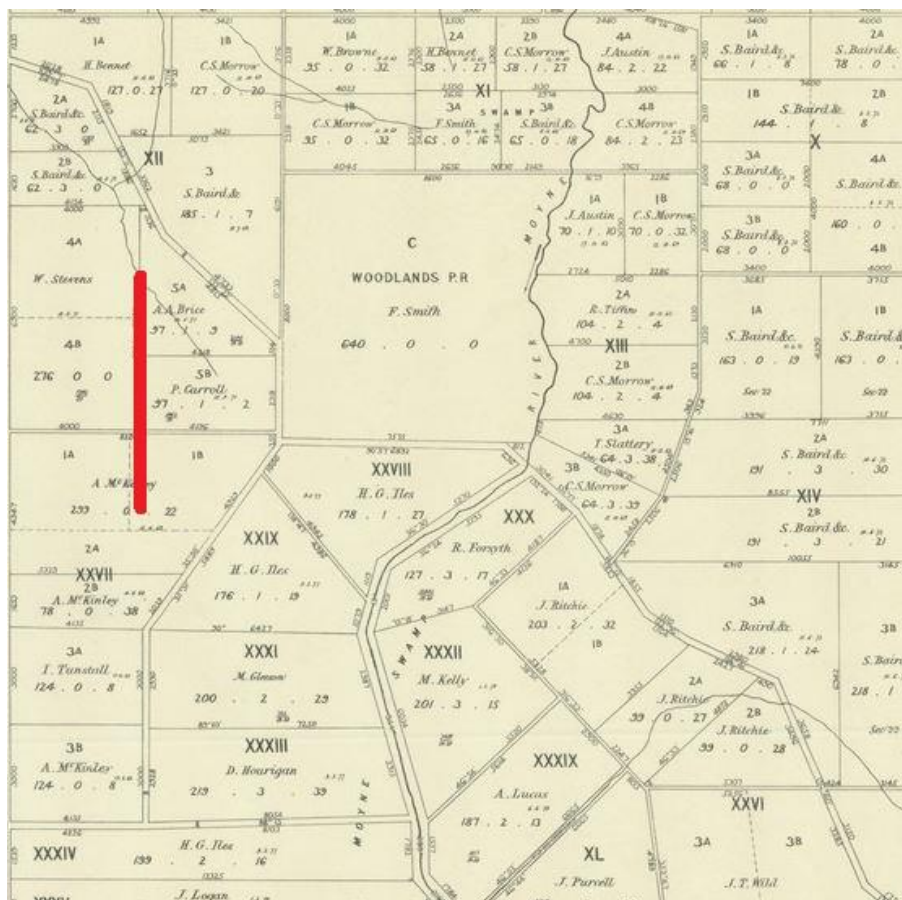
During this period Aboriginal women were often mistreated by the squatters and station hands. European women first appeared in the district around 1840. Makeshift huts were the first buildings erected on a run, as tenure was not secure, and many pastoral ventures were purely speculative. Bark huts were common, with bark walls and roof, and a stamped earthen floor. Huts were also built of split stringy bark slabs, and in the study area some sod huts were constructed from blocks of rich black earth and topped by thatched roofs. Elsewhere pise (rammed earth) huts, or wattle and daub huts, went up and were also covered in thatch (LCC 1996:36-7). Shortly after the first buildings were erected on runs, other structures began to cluster around the huts of the early head stations. These included kitchen and gardens, a store, stables, men's huts, yards and pens, barn, blacksmith's shop, woolshed and dairy.

With the acquisition of freehold land, principally homesteads were constructed on properties. The new buildings were sturdy and functional, often constructed of brick or local stone (bluestone and other basalts). As with the earlier buildings, these homes were often surrounded by a variety of outbuildings. With the introduction of women into the squatting districts, improvements to the interior of early structures quickly followed. As wealth grew in the district, the size and style of homesteads on stations changed. Large homesteads based on English country houses first appeared in district in the 1870s. In the late 1950s pastoral activity in the district experienced a second boom following a major government-sponsored Soldier-Settler scheme which resulted in the clearing of 400 square kilometres of the Heytesbury Forest (LCC:1996). Dry stone walls demarcating property were also constructed at this time. Not many remain in the Shire but one of the most substantial dry stone walls is along Landers Lane. With the availability of timber, many of the fences were made of wooden posts with rough stone walling; later, however, stone walls were constructed in some areas though they were not as extensive as those in the Corangamite region. Later, soldiers from the 1<sup>st</sup> and 2<sup>nd</sup> World Wars were also settled in the region.

### **The Activity Area**

Europeans began to permanently settle in the Melbourne region in 1835, and by 1840s small townships had expanded to the Willatook area, approximately 280 km west of Melbourne. The activity area and the surrounding land were first occupied by European people, particularly Irish settlers, in the mid-1830s and early 1840s. The area has been used for pastoral and agricultural purposes since that time, especially the running of sheep and dairy cattle, and the growing of potatoes, onions, oats and hay (LCC 1996: 41). The pastoral runs and farms were often delineated by kilometres of dry stone walls which can be seen in the surrounding area today. Three prominent stations near the activity area were Tarrone Station, owned by Dr Kilgour, located in the east of the activity area (Clark 1990: 53), Dunmore Station, owned by William Campbell on the Shaw River, and Kangatong Station, owned by James Dawson (Clark 1990: 69; SLV 2017).

To the north-eastern end of the activity area, the Hawkesdale Inn was opened in 1855 and a school was opened in 1866. Catholic, Presbyterian and Methodist denominations also operated church services in the area by this time. In 1871 parts of Hawkesdale were removed from the Shire of Belfast and renamed Minhamite Shire. With these developments, the population grew around the study area and in 1890 a railway was established from Koroit to Hamilton, which also serviced Hawkesdale. A hospital was established in nearby Macarthur in the mid-1900s, and a high school opened in Hawkesdale in 1963. In 1994 the Moyne Shire Council was established and absorbed the Shires of Belfast, Mortlake, Minhamite and Port Fairy, the former Borough of Port Fairy and small sections of other nearby areas (Moyne Shire Council 2017). More recently, utilities such as overhead powerlines and underground optical fibre cable routes, gas and water pipelines have been installed within the study area. An electrical terminal station is also present near the intersection of Riordans Road and Landers Lane.



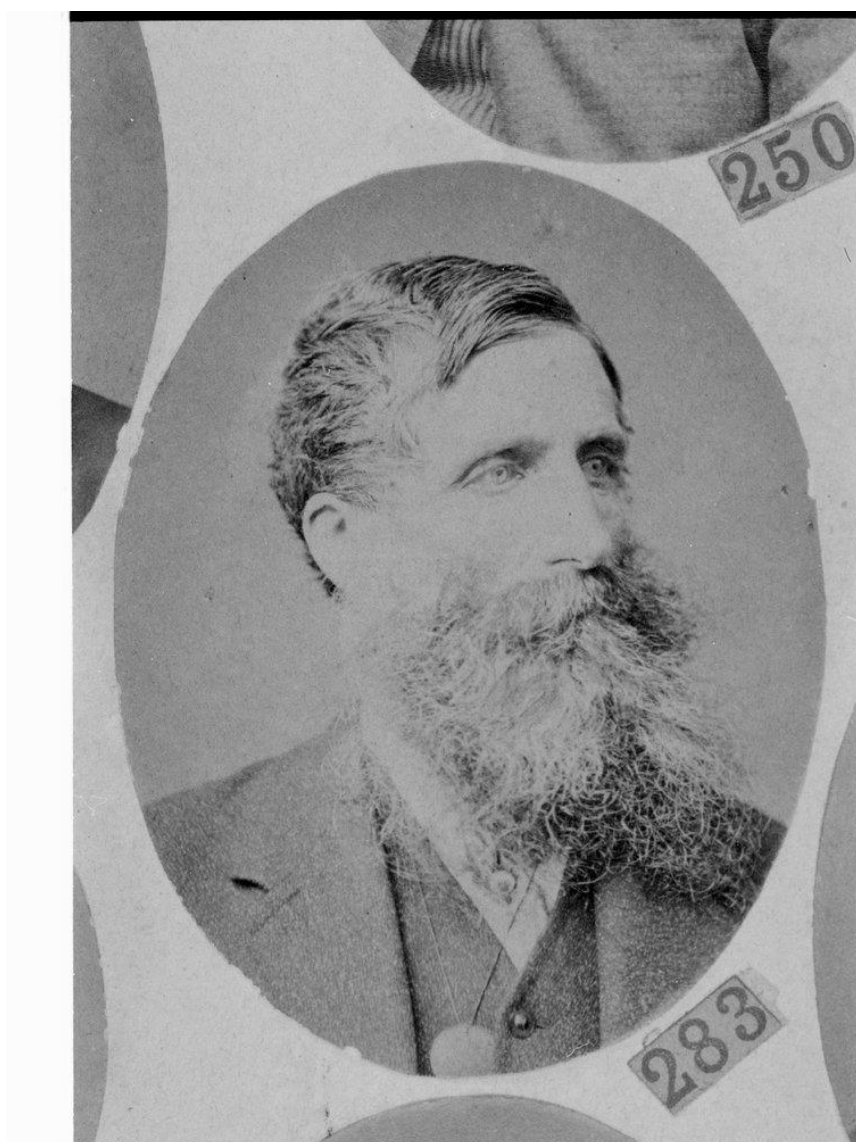
**Figure 1:** Parish map of Willatook area dated 1928 showing dry stone wall Landers Lane within the Activity Area (Source: SLV No. 2079001).

### 1.9.2 Local History

The Landers Lane Dry Stone Wall is within the historic 'Dunmore' Run. Dunmore was 47,228 acres and in 1849, was recorded as holding 1200 cattle and 55 horses. This run was divided into Dunmore and Dunmore West in 1863 which were both cancelled in July 1876. One of the early co-owners of Dunmore, Charles Hamilton Macknight, was said to have "won repute for just dealing and gained the confidence of the Aborigines" in the area after previously being "a member of punitive expeditions" in response to the maimed stock and stolen station stores. After Dunmore was divided, Macknight stayed and became a specialist in breeding Short-horned cattle. He also bred racehorses on the property and, later, pure merinos. His many years of sheep breeding established Macknight as "the greatest authority" on the subject. Along with "three substantial slab huts with great chimneys and a pise dairy with a large milking shed", Macknight also constructed dams on the property. The property however became infested with rabbits and the swampy areas were left undrained. The new owner who took the farm in 1895 improved it. This region was a scene of extreme violence against the Aborigines by cattle and sheep farmers.

The wall was once listed on the Victoria Heritage Inventory and has now been delisted (D7321-0040).

Charles Hamilton Macknight (1819-1873) came from Edinburgh and became a pastoralist in the Port Fairy area. He arrived in Port Phillip in 1841 and quickly joined forces to take up land that became the Strathloddan Run and Bough Yards near Castlemaine; however, he left the region with his partners in 1842 after acquiring land between Macarthur and Port Fairy in the Western District. They drove their 600 head of cattle and horses from their old stations to the new run, which they called Dunmore. Here, their settlement was slowed down by Aboriginal people who tried to drive settlers out by maiming their livestock and breaking into stores. Punitive raids into Aboriginal communities resulted in some of the worst massacres of Aboriginal people. Macknight was determined to develop the run, even pondering the possibilities of emu oil. Dunmore was soon regarded as the most improved homestead in the district. It had three substantial slab huts with great stone chimneys and a *pisé* dairy with a large milking shed. Macknight also constructed dams on the property.



**Figure 2:** Charles Hamilton Macknight (1819-1873) of the Dunmore Run. (SLV Image No. H5056/283)





In 1863 Dunmore was divided into two properties. Macknight and his partner Irvine retained one portion while Dunmore West was acquired by the Trust and Agency Co. Irvine continued as Macknight's partner till the early 1870s. At Dunmore, the Macknights specialized in the breeding of Shorthorn cattle and created one of the finest herds in the region. Macknight also bred race-horses but later his greatest interest became the breeding of pure merino sheep. He later decided that sheep could not thrive at Dunmore and sold them all, but not before he had established himself as one of the greatest authorities on sheep breeding. He believed in inbreeding and wrote many long argumentative letters to the Melbourne *Economist*, the *Australasian* and other papers. He wrote a book on sheep breeding with a Dr Henry Madden (*On the True Principles of Breeding*) which was published in Melbourne in 1865. By the time he died in 1873 Dunmore Run had become one of the most important farms in the region.



## **1.10 Air Photo Interpretation**

Examination of recent aerial photos corroborates documentary evidence that the area has been used for pastoral and agricultural purposes, with a number of residential dwellings. It is known that much of this area was used for dairy farming until recently. Aerial photos also show the characteristics of this agricultural landscape with stone walls being some of the most prominent. Currently the area is mostly used for pastoral agriculture.

## 2 DATABASE SEARCHES

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A review of the various relevant databases was conducted, including the Victorian Heritage Register (VHR), Victorian Heritage Inventory (VHI) and Heritage Overlay to the Moyne Planning Scheme (HO). The following section provides an overview of the relevant registrations

### 2.1 Victorian Heritage Register

The Victorian Heritage Register (VHR) lists the places, objects and shipwrecks of State significance which are protected under the *Heritage Act 2017*.

No part of the Landers Lane dry stone wall is included in the VHR.

### 2.2 Victorian Heritage Inventory

The *Heritage Act 2017* also protects all non-Aboriginal (historical) archaeological sites in the State. If an archaeological site is not of State significance but has archaeological value, it is usually listed on the Victorian Heritage Inventory (VHI). The Landers Lane dry stone walls were listed under the VHI but were de-listed (D7321-0040) with all other dry stone walls. The protection of these dry stone walls was moved to councils

### 2.3 Moyne Planning Scheme

#### ***Moyne Planning Scheme***

The Moyne Shire's Heritage Clause 15.03-15 outlines the strategies for conserving heritage:

- Identification, assessment and documentation of places of natural and cultural heritage significance as a basis for their inclusion in the planning scheme.
- Provide for the protection of natural heritage sites and man-made resources. Provide for the conservation and enhancement of those places that are of aesthetic, archaeological, architectural, cultural, scientific or social significance.
- Encourage appropriate development that respects places with identified heritage values. Retain those elements that contribute to the importance of the heritage place.
- Encourage the conservation and restoration of contributory elements of a heritage place.
- Ensure an appropriate setting and context for heritage places is maintained or enhanced. Support adaptive reuse of heritage buildings where their use has become redundant.
- Consider whether it is appropriate to require the restoration or reconstruction of a heritage building in a Heritage Overlay that has been unlawfully or unintentionally demolished in order to retain or interpret the cultural heritage significance of the building, streetscape or area.

It also gives the policy guidelines that are considered relevant in conservation of heritage:

- The findings and recommendations of the Victorian Heritage Council.
- The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013.

It also under Clause 52.33 of the Moyne Planning Scheme requires developers to seek permission before demolishing, removing or altering a dry stone wall constructed before 1940 on land specified in the schedule to this provision.

A review of the HO Schedule for the Moyne Shire shows that there are no places listed in or near the study area. Dry stone walls are however protected by Moyne Planning Scheme Clause 52.33 which protects all dry stone walls and post boxes.

### ***Particular Provisions***

Planning controls for all dry stone walls in the LGA is administered under Clause 52.33 of the Moyne Planning Scheme (Particular Provisions). The current terms of Clause 52.33 states that a permit is required to demolish, remove or alter a dry stone wall constructed before 1940 on land specified in the Schedule to this provision- other than to install a gate or to reconstruct damaged or collapsed walls using the same specifications and materials as the existing walls. A permit is therefore required from Moyne Shire pursuant to Clause 52.33 to damage or demolish dry stone walls in the study area.

## 3 FIELD ASSESSMENT AND RESULTS

This section discusses the methodology used to record the dry stone walls, the result of the recording and the limitations of the recording. The investigation included an inspection of all of the existing dry stone walls within the study area.

The dry stone walls within the study area were inspected on the 12<sup>th</sup> – 14<sup>th</sup> of February 2020 by Ashton Sinamai (Archaeologist) Andrew Wilkinson and Cherrie de Leiuen (Archaeologist/Heritage Advisors).

### 3.1 Aims and Objectives

The aim of the survey was to:

- To identify and record all dry stone walls which could be impacted by the proposed development; and/or
- To assess the condition of the dry stone walls in the study area.
- To assess the cultural heritage significance of the dry stone walls identified in the survey and create a management plan for them.

### 3.2 Methodology of the Survey

All of the dry stone walls within the study area were identified as part of the field assessment.

The wall construction type for each wall was recorded using the nomenclature adapted from terminology used in Vines (1990) and Pickard (2009). Photographs were taken at 5 m intervals of each wall, and notes were made on existing condition of the wall as well as impacts to the surviving walls.

#### 3.2.1 Construction Technique

Notes were taken regarding the general appearance and the techniques used to construct the wall ('refinedness'). The criteria used by Vines (1990) were used to assess this aspect (Table 2).

**Table 2:** Dry Stone Wall Assessment Criteria (Vines 1990)

Technique	Description
Unrefined	The wall is simply a piling of stones intended to act as a supplement to other fencing material, but which does not show evidence of skilful construction. Throughstones are absent, coping is irregular or non-existent, there is no plugging and often no evidence of double walling, hearting, courses of sorted stone. These walls have probably been built by farmers untrained in wall building techniques.

Technique	Description
Technically Competent	The walls demonstrate basic aspects of dry stone wall construction but do not have the refinements of the better walls. Double walling with hearting and coping with throughs in the taller walls are always evident, but appearance was a secondary consideration. Therefore, an uneven batter prevails, and plugging is restricted to eliminating larger gaps and securing stones which may not be seated evenly. Professional wallers were almost certainly employed and, as they would have been required to work speedily, the lack of refinement could be explained in terms of economic construction.
Refined Technique	The basic construction techniques are combined with refinements to produce a wall that is decorative as well as functional. Coping stones are more carefully selected to create an even and more balanced effect. Plugging may be extensive depending on the available material but, where small stone is lacking, refinement is evident in more careful placement of stone to minimize gaps in the wall. These walls tend to be higher and associated with homesteads or other dwellings. They must have been built by skilled professional wallers and it is possible that stone masons versed in house construction were responsible for some walls.
Specialist Technique	Demonstrates specialist or unusual construction techniques designed for a particular function or aesthetic effect. For example, the split paling cope of the Western District walls or the sloping courses of "Greystones".

For each wall within the study area, notes were taken on the degree of preservation (condition) using criteria adapted from Vines (1990). Those criteria are shown in Table 3. As part of that assessment, the number of extant stone courses in each dry stone wall was recorded, noting that these were varied across the length of a number of the walls. It was also noted whether the wall appears to be original or a reconstruction. Original walls usually have consistent colouring created by weathering and a layer of moss or lichen growth; rebuilt walls usually lack a moss or lichen coating (Vines 1990: 32). The walls were recorded every 5m through still photography as well as drone footage. Though the latter was not part of the scope of this project, the footage is available at cost if required by the sponsor.

**Table 3: Criteria Used for Preservation Assessment**

Intactness	Meaning
Intact	The wall appears to be intact with little sign of stone loss/collapse. For a double wall, the wall is structurally sound with ample evidence of hearting, plugging and coping stones. Its associated fence (if relevant) is intact with the posts and wires in good condition; whilst some decay may be evident, the fence is still strong, upright and not broken.
Largely Intact	The majority of the wall (>75%) appears to be intact (as above) with little sign of stone loss/collapse and/or damage/decay to the fence to the fence. Small sections (<25%) may have suffered some damage, collapse or theft of stone. The associated fence is generally still functional.



Intactness	Meaning
Partially Intact	Approximately 25-75% of the wall appears to be intact (as above), but large sections have suffered damage, collapse or theft. There may only be 1-2 courses of stone remaining. The associated fence may still be upright but is showing marked decay and wires are generally highly rusted or broken.
Mostly Collapsed / Highly Impacted	There is very little (<25%) of the wall left intact; there may be only a single course of stone remaining or stone may be scattered nearby. The associated fence (if applicable) is highly decayed and/or broken.
Not Extant / Destroyed	There is no longer any evidence of the dry stone wall in place.

### 3.2.2 Impacts or Potential Impacts

The presence of potentially harmful influences, e.g. the presence of existing drainage ditches, trenching for utilities (e.g. electrical/services cabling) and vegetation growth, which have potential to impact the wall, were recorded.

## 3.3 Limitations of the Survey

Recording was limited to walls falling within the activity area. Representative sub-sections of each dry stone wall were recorded and detailed recording, (though not part of this report) was carried out with drone technology. The documentation thus includes aerial photography and other formats that can be used to create photogrammetric views of the walls as well as archival records.

Each dry stone wall within the study area was recorded “as is, where is” and no attempt was made to uncover any section of the walls where covered by either soil or vegetation. Scaled drawings of the walls were not taken.

### 3.3.1 Survey – Summary of Results and Conclusions

Five walls were identified and documented within the activity area. Three of the walls are all stone free standing walls while the other two were composite walls with fences. DSW1 -3 were refined and largely in good condition with cope stones still in place. DSW 4 and 5 were composite, one course walls supporting the bases of fences. All walls are in fairly good condition and display expert craftsmanship and all walls appear to be pre-1940.

## 4 DRY STONE WALLS

The activity area has several walls that are, in reality, a single wall running along Landers Lane. The wall was divided into 5 walls (DSW-1-5) with division being based on breaks such as gates or where the wall has disappeared or been intersected by a road. The total length of the wall is about 5km. The walls are in various states of conservation and are also built in various techniques. All walls are on a North-South alignment.

### 4.1 DSW-1

DSW-1 is two walls that form a corner at the northern end of Landers Lane. The wall is only 37m long. It is an all-stone wall and still has cope stones at the top. The wall is well built and shows a specialist technique in its workmanship. It is well preserved even though the East-West wall is progressively collapsing on the eastern side.

<b>Wall</b>	<b>1</b>							
<b>Wall Type</b>	All stone							
<b>Construction</b>	Specialist technique							
<b>Condition</b>	Excellent							
<b>Intactness</b>	Intact except for progressive collapse on the E/W wall							
<b>Wall Dimensions:</b>	<b>Length</b>	37m	<b>Base</b>	1000mm	<b>Cope</b>	800mm	<b>Height</b>	1600mm
<b>Courses</b>	about 5							
<b>Stone Grading</b>	Excellent							
<b>Plugging</b>	Present							
<b>Hearting</b>	Present							
<b>Cope Stones</b>	Present							
<b>Through Stones</b>	Present							
<b>Foundations</b>	Wall is built on firm ground and on a Stoney Rise							
<b>Posts</b>	No posts							
<b>Wires</b>	No barbed wire							



**Plate 1:** Corner of DSW-1 facing east (A. Wilkinson 2020).



**Plate 2:** General aerial view DSW-1 showing the two walls, facing south (A. Wilkinson 2020).



**Plate 3:** DSW-1 showing collapse at the corner where walls meet facing east (A. Wilkinson 2020).



**Plate 4:** The East-West aligned part of DSW-1 showing poor bonding (A. Wilkinson 2020).



**Plate 5:** North face of DSW-1 facing south (A. Wilkinson 2020).



**Plate 6:** West wall showing refined technique of walling facing east (A. Wilkinson 2020).

## 4.2 DSW-2

DSW-2 begins at a gate that is between this wall and DSW-1. It is a freestanding all stone wall which is, like DSW-1, very well preserved. Its condition is assisted by the workmanship that is displayed. It is built in specialist technique and shows very few collapses, mostly of cope stones toppling from the top of the wall. The stones used are rather large and the joints are seamless making it very stable. It has a total length of 218m. Some sections are being impacted by vegetation growing near or within the wall. Other attributes of the wall are listed in the table below.

<b>Wall</b>	2						
<b>Wall Type</b>	All stone						
<b>Construction</b>	Specialist technique						
<b>Condition</b>	Excellent						
<b>Intactness</b>	Intact except for progressive collapse on the E/W wall						
<b>Wall Dimensions:</b>	<b>Length</b>	218m	<b>Base</b>	1000mm	<b>Cope</b>	900mm	<b>Height</b> 1800mm
<b>Courses</b>	about 6 courses						
<b>Stone Grading</b>	Excellent						
<b>Plugging</b>	Present						
<b>Hearting</b>	Present						
<b>Cope Stones</b>	Present						
<b>Through Stones</b>	Present						
<b>Foundations</b>	Wall is built on firm ground and passes through several stoney rises						
<b>Posts</b>	No posts						
<b>Wires</b>	No barbed wire						





**Plate 7:** DSW-2 at the northern end of the wall facing east (A. Wilkinson 2020).



**Plate 8:** View of DSW-2 showing toppling of cope stones (A. Wilkinson 2020).



**Plate 9:** General view of DSW-2 facing south (A. Wilkinson 2020).



**Plate 10:** The middle section of DSW-2 showing collapse (A. Wilkinson 2020).



**Plate 11:** Southern end of DSW-2 showing cope stones (A. Wilkinson 2020).



**Plate 12:** Southern end of DSW-2 showing well-constructed section of wall. (A. Wilkinson 2020).



### 4.3 DSW-3

DSW-3 is 487 m in length and is a continuation of wall 2 after a gate. The wall displays refined technique. The wall is constructed in a specialist technique and has a maximum height of about 1.8m. Like DSW-1 and 2 the wall also still has copestones. Cope stones have, however, toppled from several sections of the wall, probably as a result of branches falling on the wall or contact with farm animals. There is vegetation impacting on it.

<b>Wall</b>	<b>3</b>							
<b>Wall Type</b>	All stone							
<b>Construction</b>	Specialist technique							
<b>Condition</b>	Excellent							
<b>Intactness</b>	Intact except for sections with toppled cope stones							
<b>Wall Dimensions:</b>	<b>Length</b>	487m	<b>Base</b>	1200mm	<b>Cope</b>	800mm	<b>Height</b>	1800mm
<b>Courses</b>	about 6							
<b>Stone Grading</b>	Excellent							
<b>Plugging</b>	Present							
<b>Hearting</b>	Present							
<b>Cope Stones</b>	Present							
<b>Through Stones</b>	Present							
<b>Foundations</b>	Wall is built on firm ground and on a Stoney Rise							
<b>Posts</b>	No posts							
<b>Wires</b>	No barbed wire							



**Plate 13:** Beginning of DSW-3 at gate, facing east (A. Wilkinson 2020).



**Plate 14:** First 30m of DSW-3 showing cope stones in place facing east (A. Wilkinson 2020).



**Plate 15:** DSW-3 showing well-constructed section of wall facing east (A. Wilkinson 2020).



**Plate 16:** View of section of DSW showing vegetation growth on walls (A. Wilkinson 2020).



**Plate 17:** Last 20m of DSW-3 (A. Wilkinson 2020).



**Plate 18:** Southern end of DSW-3 (A. Wilkinson 2020).

#### 4.4 DSW-4

DSW-4 is, for most of its length, a low one-course wall that is more of a foundation for the fence. Though there is more vegetation in this section, the wall has not been affected. The wall ends at Riordans Road where for 3m to a new line it is a multi-coursed wall and has a height of about 1.2m. The wall is composite and has a cyclone mesh fence. Much of the wall was covered with grass and vegetation and photography was impossible from the side and occasionally from above. All photographs are aerial due to poor visibility at ground level.

<b>Wall</b>	<b>4</b>							
<b>Wall Type</b>	Composite with a small section of 3m all stone at the southern end							
<b>Construction</b>	Technically competent							
<b>Condition</b>	Good							
<b>Intactness</b>	Intact							
<b>Wall Dimensions:</b>	<b>Length</b>	874m	<b>Base</b>	1000mm	<b>Cope</b>	900mm	<b>Height</b>	600mm
<b>Courses</b>	1 course and 5 courses at the southern end for 3m							
<b>Stone Grading</b>	Good							
<b>Plugging</b>	Present							
<b>Hearting</b>	Absent in the 1 course section present in the 3m section of all stone wall							
<b>Cope Stones</b>	Absent							
<b>Through Stones</b>	Absent							
<b>Foundations</b>	On firm ground and Stoney rises							
<b>Posts</b>	Star pickets and wood							
<b>Wires</b>	Cyclone mesh							





**Plate 19:** Aerial view of DSW-4 beginning of wall (A. Wilkinson 2020).



**Plate 20:** Aerial view DSW-4 (A. Wilkinson 2020).



**Plate 21:** Segment 17 (240-255 m) general view of the DSW<sub>1</sub> largely collapsed (A. Wilkinson 2020).



**Plate 22:** View of DSW-4 from the west side where it is covered by grass and trees (A. Wilkinson 2020).



**Plate 23:** End of DSW-4 south-end at Riordans Road (A. Wilkinson 2020).



**Plate 24:** Aerial view of DSW-4 at South end (A. Wilkinson 2020).

## 4.5 DSW-5

DSW-5 is a low wall composed of only one course of large stones that act as a foundation to the fence. The wall is composite and is also stable due to lack of courses. The wall begins at the intersection of Landers Lane and Riordans Road. From Riordans Road the wall is has a length of about 3m which is all stone and stands to a height of about 1.4m but drops off to 600mm for the rest of its length of 873m. There are few bushes growing on it, but it is generally in good condition.

<b>Wall</b>	<b>5</b>							
<b>Wall Type</b>	All stone and composite							
<b>Construction</b>	Technically competent							
<b>Condition</b>	good							
<b>Intactness</b>	Intact except for a section crossing a creek							
<b>Wall Dimensions:</b>	<b>Length</b>	873m	<b>Base</b>	1000mm	<b>Cope</b>	900mm	<b>Height</b>	600mm
<b>Courses</b>	1							
<b>Stone Grading</b>	Not observed as the wall only has one course							
<b>Plugging</b>	Absent							
<b>Hearting</b>	Absent							
<b>Cope Stones</b>	Absent							
<b>Through Stones</b>	Absent							
<b>Foundations</b>	Wall is built on firm ground and on a Stony Rise except sections wetlands and creeks							
<b>Posts</b>	Star pickets and wood							
<b>Wires</b>	Cyclone mesh							





**Plate 25:** Beginning of DSW-5 at Riordans Road, aerial view (A. Wilkinson 2020).



**Plate 26:** Beginning of DSW-5 at Riordans Rd disturbed by electricity post facing west (A. Wilkinson 2020).



**Plate 27:** Segment of DSW-5- aerial view (A. Wilkinson 2020).



**Plate 28:** General view of segment 18 (260-270 m) showing sections of the wall still standing (A. Wilkinson 2020).



**Plate 29:** Aerial profile of section of DSW-5 (A. Wilkinson 2020).



**Plate 30:** End of DSW-5 (A. Wilkinson 2020).

## Conclusions

The walls are within what was the Dunmore Run, a historic property that was run by Charles Macknight, a prominent personality in the Willatook/Port Fairy area. These were probably constructed after 1840 as the area was first settled by squatters around 1842. The walls may have been commissioned by Macknight himself. Generally, the walls are in a very good state of conservation. DSW 1-3 are well-constructed free-standing walls with cope stones still in place and DSW 4 and 5 are composite walls with both stone and fences. DSW 4 and 5 are very low walls with only a single course with maximum height of about 60 cm. Documenting these two walls through photography was difficult as they were covered by grass and bushes. Some sections between DSW 3 and 4 are missing, either not having been built or cleared later. The total length of free standing all-stone walls in good condition about is 642m.



## 5 SIGNIFICANCE ASSESSMENT

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### 5.1 Previous Significance

Scientific significance of a heritage place (particularly archaeological sites) is also assessed in Victoria using a commonly accepted formula developed by Bowdler (1981) and Sullivan and Bowdler (1984). These are relative estimates of significance based on the current knowledge available about sites or places in a region. The assessment criteria used to assess the scientific significance of historical places in Victoria are presented in Appendix 2. The same three main categories apply to historical places: *site contents* (cultural material, organic remains and site structure), *site condition* (degree of disturbance of a site), and *'representativeness'* (the regional distribution of a particular site type).

#### 5.1.1 Historical Cultural Significance

Heritage Victoria administers the *Heritage Act 2017* and has provided formal criteria for assessing cultural heritage significance. Applying these criteria will determine if a heritage place should be considered for addition to the Victorian Heritage Register or other statutory lists.

On the basis of these criteria, heritage places are generally given a significance ranking of State, Local or none. Historical archaeological sites, as with other heritage places, can be considered for addition to the Victorian Heritage Register if they have State significance.

However, all historical archaeological sites are included on the Victorian Heritage Inventory and are given statutory protection, irrespective of their level of significance. Sites that are considered to be of local historical interest but are not considered to be of specific archaeological significance are allocated 'D'-list numbers (e.g. D7822-0099). 'D'-listed sites are not protected by legislation. The Landers Lane dry stone walls were listed under the VHI but were de-listed (D7321-0040).

#### 5.1.2 Significance Criteria

The following criteria, which are drawn out of the Burra Charter, are used for the assessment of the heritage value of heritage places. These criteria have been broadly adopted by heritage jurisdictions across Australia and can be used for the assessment of places of local and State significance. The significance criteria include walls along Landers Lane and south of Riordans Road. 'Local' significance includes places that are important to a particular community or locality/region (VPP Practice Note *Applying the Heritage Overlay*, July 2015: 1-2).

***Criterion A: Importance to the course or pattern of our cultural or natural history (historical significance).***

Dry stone walls may be associated with historical persons or properties. With construction of walls often occurring in the 1850s and 1860s, they were often constructed by squatters during the early pastoral era or are representative of Closer Settlement land patterning following the introduction of the various Lands Acts during the mid-19<sup>th</sup> century. They are representative of both continuity and change in farming practices over a period of more than 160 years. The walls are usually built in areas of basaltic flow where stone is located close to the surface.

The walls within the study area provide evidence of early land use – including farming as well as fencing practices whereby the material for fencing was accumulated from the land within proximity to the surviving walls. They also provide a visual reference to early subdivision in the municipality. Criterion A is met.

***Criterion B: Possession of uncommon rare or endangered aspects of our cultural or natural history (rarity).***

Dry stone walls are common throughout the rural Victoria in areas where, in the mid-nineteenth century, ‘a proliferation of stone in the geological landscape necessitated a clearing of the land’ (Dry Stone Wall Association of Australia Inc.). As an economic form of fencing, dry stone walls are common throughout a number of municipalities in Victoria, including Moyne Shire. Walls 1, 2 and 3 are excellent examples of well-built walls which still have cope stones. Though copestones were common in the western districts many walls have lost these through toppling. Criterion B is met.

***Criterion C: Potential to yield information that will contribute to an understanding of our cultural or natural history (research potential).***

This criterion typically relates to archaeological potential. Although dry stone walls are an expression of ‘material culture’ using the broader definition of archaeology, Heritage Victoria no longer considers dry stone walls to be archaeological features as they rarely contain subsurface archaeological deposits. Walls that were previously listed on the Victorian Heritage Inventory have, almost without exception, been delisted. Criterion C is not met.

***Criterion D: Importance in demonstrating the principal characteristics of a class of cultural or natural places or environments (representativeness).***

Criterion D relates to representativeness and places which meet Criterion D would typically have a high level of intactness. DSW 1, 2 and 3 are intact and are good representative examples of early dry-stone wall construction in Moyne Shire. The three walls seem to have been constructed by an expert stone mason as they are of refined nature. They represent some of the best walls which still have cope stones in place in Moyne Shire. Criterion D is met.

***Criterion E: Importance in exhibiting particular aesthetic characteristics (aesthetic significance).***

Dry stone walls are often iconic features of the landscape, particularly walls that have high levels of structural integrity and/or technical competence or refinement. They often accentuate changes in local elevation and provide a point of focus in a broader rural landscape. The ongoing aging and patination of the walls, together with lichen growth and the provision of wildlife habitat also adds aesthetic appeal. Three walls on Landers Lane (DSW 1, 2 and 3) meet Criterion E.

***Criterion F: Importance in demonstrating a high degree of creative or technical achievement at a particular period (technical significance).***

The scientific or research potential of dry stone walls will depend on the relative quality, rarity or representativeness, and the degree to which they may contribute further substantial information (Australia ICOMOS 1999). Criterion F is not met.

***Criterion G: Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons. This includes the significance of a place to Indigenous peoples as part of their continuing and developing cultural traditions (social significance).***

Dry stone walls may hold some value to the people of the Moyne Shire as a tangible link with the area's rural past. However, the extent of social significance cannot be determined at this stage and is beyond the scope of this report.

***Criterion H: Special association with the life or works of a person, or group of persons, of importance in our history (associative significance).***

As outlined at Criterion A (above), dry stone walls may be associated with historical persons, typically squatters during the early pastoral era or notable landowners. The walls in the study area are part of the famous Dunmore Run where significant events happened in terms of relationships between Aboriginal communities and Europeans settlers as well as livestock breeding history in Victoria. It also associated with a historical figure, Charles Hamilton Macknight (1819-1873). Macknight was a prominent figure in the Port Fairy area and became a prominent cattle, sheep and horse breeder in the Willatook area, as well as a magistrate, regional government councillor and agricultural writer. Criterion H is met.



## 6 IMPACT ASSESSMENT

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The walls within the study area are likely pre-1840 and were part of the historic Dunmore Run. The five walls are in various states of conservation. DSW 1, 2 and 3 are all stone walls which were expertly constructed and stand between 1.6-1.8m in height. The fact that they are still standing shows the quality of the workmanship of the original stone mason. There are very few areas which show reconstructions and also collapses which seem to have been caused by falling branches. Walls 4 and 5 are low one-course walls which are part of composite fences. There are no previous studies on these walls, so it is not possible to historically examine their condition over time. The condition assessment of the walls is therefore based on what was observed during fieldwork.

All wind turbines will be located at a distance greater than 50 m from Landers Lane. Access roads to the turbines will also be constructed. Four of these will directly impact DSW-4 as there two turbines which are near the alignment of the wall; a road leading to these turbines is expected to breach the wall. One access track and cable route will likely impact DSW-2 and DSW-3 as they will pass through the gate between these walls; this may result in indirect impacts through vibration emanating from construction and construction traffic. Indirect impacts for DSW-1 to 4 will include increased heavy traffic as roads are constructed as well as when turbine parts are moved into the construction zones, although Landers Lane itself will not be used for construction traffic.

A turbine will be constructed near the southern extent of DSW-5 (which is not included within the current extent of the listing in the VHI). A cable will run parallel with the wall and cross it at one point, which may result in indirect impacts. Existing gates in the wall may be used in some instances but there may be a need to create wider access points which will have the potential to impact the wall.

### 6.1 Potential Impacts

It is envisaged that there are two principal agents of negative impact that may occur, namely, direct impact and indirect impact:

- Direct impact to walls or wall sections in the study area from either machine or personnel (e.g. wall collapse resulting from the excavator arm/bucket inadvertently striking the wall, or collapse as a result of construction personnel climbing on the stone wall or leaning against unstable fence posts); and
- Vibration impact to walls resulting from mechanical excavation in close proximity to the wall or increased heavy vehicle traffic causing toppling of loose stones.
- Vibration impacts may normally be reduced by maintaining a minimum distance of 5 m from the wall as a buffer.

However, as the heritage significance of the wall is largely aesthetic and not structural, any rebuilding of the wall should aim to improve its stability, but still following the basic construction guidelines. The Moyne Planning Scheme does not provide specific guidelines for rebuilding of stone walls but the guidelines of other

councils in Victoria (e.g. Corangamite, Wyndham and Melton) may be useful in carrying out reconstructions. Table 4 reviews the perceived impacts of the layout of the wind farm on DSW-1 to 5.

**Table 4: Summary of Potential Impacts to DSW-1 to 5**

Wall #	DSW Likely Impacts
DSW-1	A large section of DSW-1 is located outside of the Project area and will not be directly impacted by the development of the wind turbines. The portion of the wall within the project area may be affected by indirect impacts resulting from the vibration of machinery used in construction.
DSW-2	DSW-2 will have an access track and cable trench constructed across it, which will likely pass through a gate between DSW2 and DSW-3. A turbine will be constructed to the east of the wall. This may not have negative impact on the DSW; however, the construction of the access track will indirectly impact on the wall.
DSW-3	DSW-3 will be indirectly impacted by the construction of the access track and internal transmission line that will pass between DSW-2 and DSW-3. A turbine will be constructed approximately 50m away from the wall.
DSW-4	DSW-4 will be partly directly impacted by the construction of the transmission lines and access tracks which will breach the wall in four places. Efforts have been made to locate access tracks and cables so that they pass near or through existing breaks in the wall. Two turbines are expected to be constructed approximately 50 m east of the wall; this has the potential to impact the wall. Turbine will be constructed more than 50m to the west, but these are not expected to impact the wall.
DSW-5	Four turbines will be constructed along the length of DSW-5; however, these will be located at a distance of 50 m or more away from the wall and will not have a direct impact on it. There are, however, two points at the northern and southern extent of the wall that will be impacted by the construction of an access track; in addition, there will be subsurface transmission cabling installed at the northern extent of the wall, near its intersection with DSW-4.

## 7 MANAGEMENT PRINCIPLES

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Management policies and aligned conservation strategies are determined by the types of potential impact to the walls.

### 7.1 Management Recommendations

The Landers Lane Dry Stone Wall was previously listed in the Victorian Heritage Inventory but was delisted. There is only one dry stone wall listed on the Moyne Shire Heritage Overlay under the Stone Cottage, Dry Stone Walls and Trees at 122 Toolong Road, Port Fairy. However, Clause 52.33 of the Moyne Planning Scheme states that:

- *A permit is required to demolish, remove or alter a dry stone wall constructed before 1940 on land specified in the schedule to this provision.*
- *This does not apply to:*
  - *Dry stone structures other than walls and fences.*
  - *The demolition or removal of a section of a dry stone wall to install a gate.*
  - *The reconstruction of damaged or collapsing walls which are undertaken to the same specifications and using the same materials as the existing walls.*

The following management recommendations are made:

- All work along Landers Lane should not negatively impact on the dry stone walls;
- The walls along Landers Lane were constructed before 1940 and a permit will be required if any part of the walls is to be removed.
- Demolition of a wall to create a road and gate however is permitted;
- In developing access roads, it is recommended that the landscape character is maintained, and existing gates are used rather than opening new sections on the dry stone walls to access assets;
- Should negative impacts be inadvertently caused to a wall, or section of a wall, in line with the Burra Charter's guiding principle regarding management of heritage places, the general management principle is to 'make good', that is, to rebuild the wall to its current construction standard, as best as possible, to its current configuration of height and general integrity.
- Consultation and negotiation with Council must be undertaken before any wall is removed. It is envisaged that there are three principal agents of negative impact that may occur:
  - Direct impact to the walls and wall sections to be removed, to accommodate access road building of transmission line and substations;

- Direct impact to walls from either machine or personnel (e.g. wall collapse resulting from the excavator arm/bucket inadvertently striking the wall, or collapse as a result of construction personnel climbing on the stone wall or leaning against unstable fence posts); and
  - Walls can also be directly impacted during the decommissioning of the turbines
- As the landscape changes to accommodate the wind farm the dry-stone walls can also lose meaning if efforts are not made to preserve them in the new environment. To this end, if any stones are removed from any of the walls, they should be stockpiled in a suitable location nearby and fenced to prevent stone theft. These stones should be used to consolidate any wall heads or to repair any sections damaged during construction (if necessary).
- DSW-1, 2 and 3 are particularly well-constructed and reflect not only skills that have disappeared, but also reflects the Victorian agricultural landscape. Any dismantling or reconstruction on DSW-1, 2 and 3 should be carried out by an experienced stone mason.

## 7.2 Working Close to the Retained Wall

Depending on the structural integrity of the wall, dry stone walls may be inadvertently subject to either direct or indirect impacts. Positive action should be taken to avoid or minimise the potential for impact.

Actions that may be taken include:

- Conducting a pre-construction briefing on the importance of dry stone walls to all construction personnel and the need for care operating in proximity to the wall.
- Where the buffer between works by machinery is less than 2 m, it may be considered necessary to erect a temporary fence on both sides of the wall to limit direct impact.
- Where a temporary safety fence is not erected, briefing all workers especially not to operate machinery closer than 1.5 m to the dry stone wall.
- Briefing all construction personnel not to stand, sit or lean on any of the wall components during the activity.

## 7.3 Other Issues

Other issues in the management of the wall involve safety and standards of construction.

Working in close proximity to the walls, there is potential for safety issues for construction personnel. This is likely to be from two sources:

- *Tripping hazard*: in some areas the wall has partially collapsed, and stones may be lying on the ground on the outer (road) side of the wall. In many areas long grass and weeds may obscure these stones and construction personnel may inadvertently trip over the stones causing injury.
- *Vibration* from mechanical trenching and/or backfilling works may dislodge loose stones from the wall and strike construction personnel standing in proximity.

Construction in the vicinity of the walls should be conducted so that potential injury to construction personnel is minimised. It is recommended that construction personnel do not enter the space within 5 m of a wall, where possible.

## **7.4 Standard of Construction**

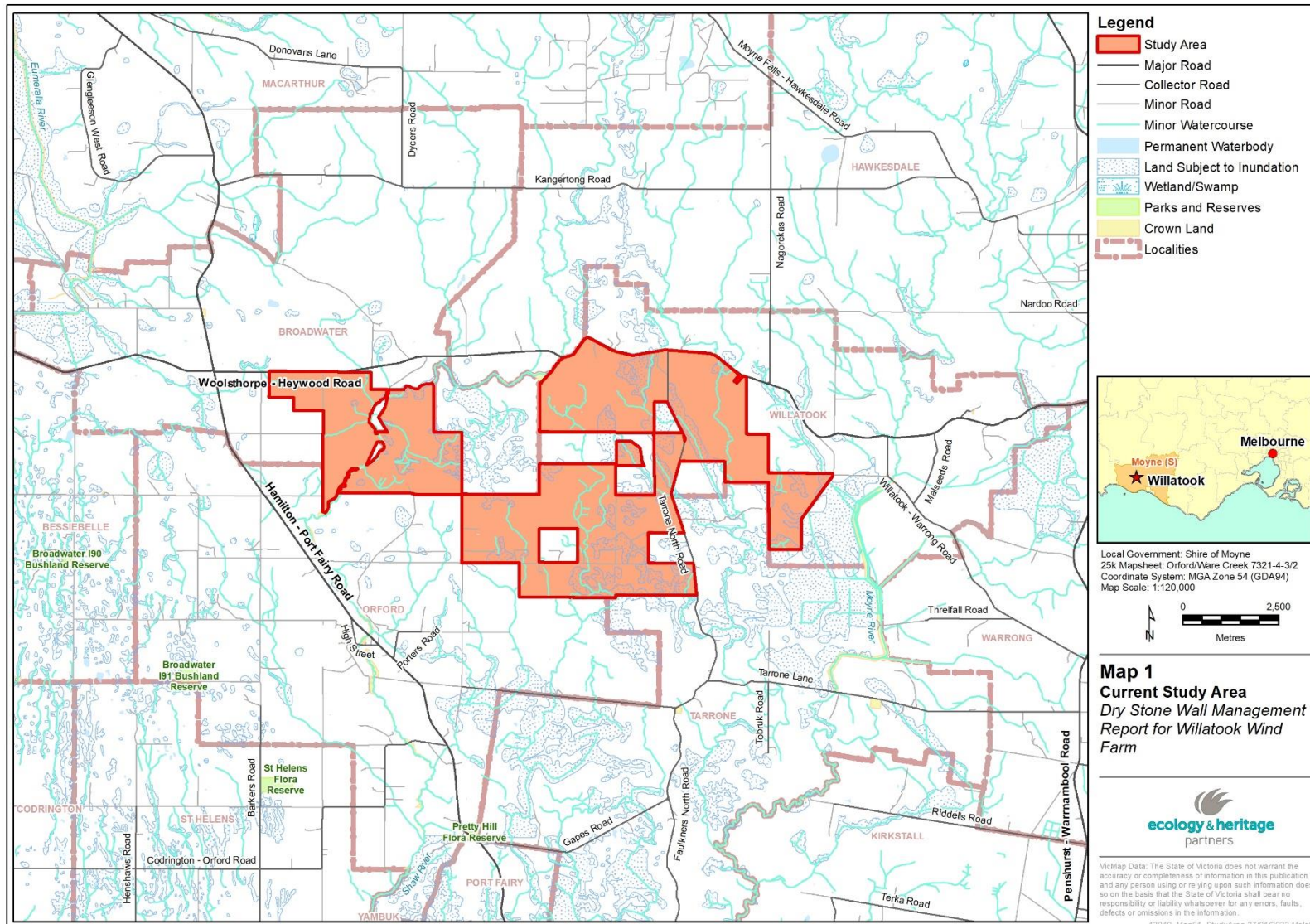
The walls are generally of very refined and in specialist technique and also have a course of cope stones.

If for any reasons that any of the walls is affected by current development and requires reconstruction, the reconstruction should respect the techniques initially used in the construction of the walls and be undertaken by an appropriately experienced dry stone waller.

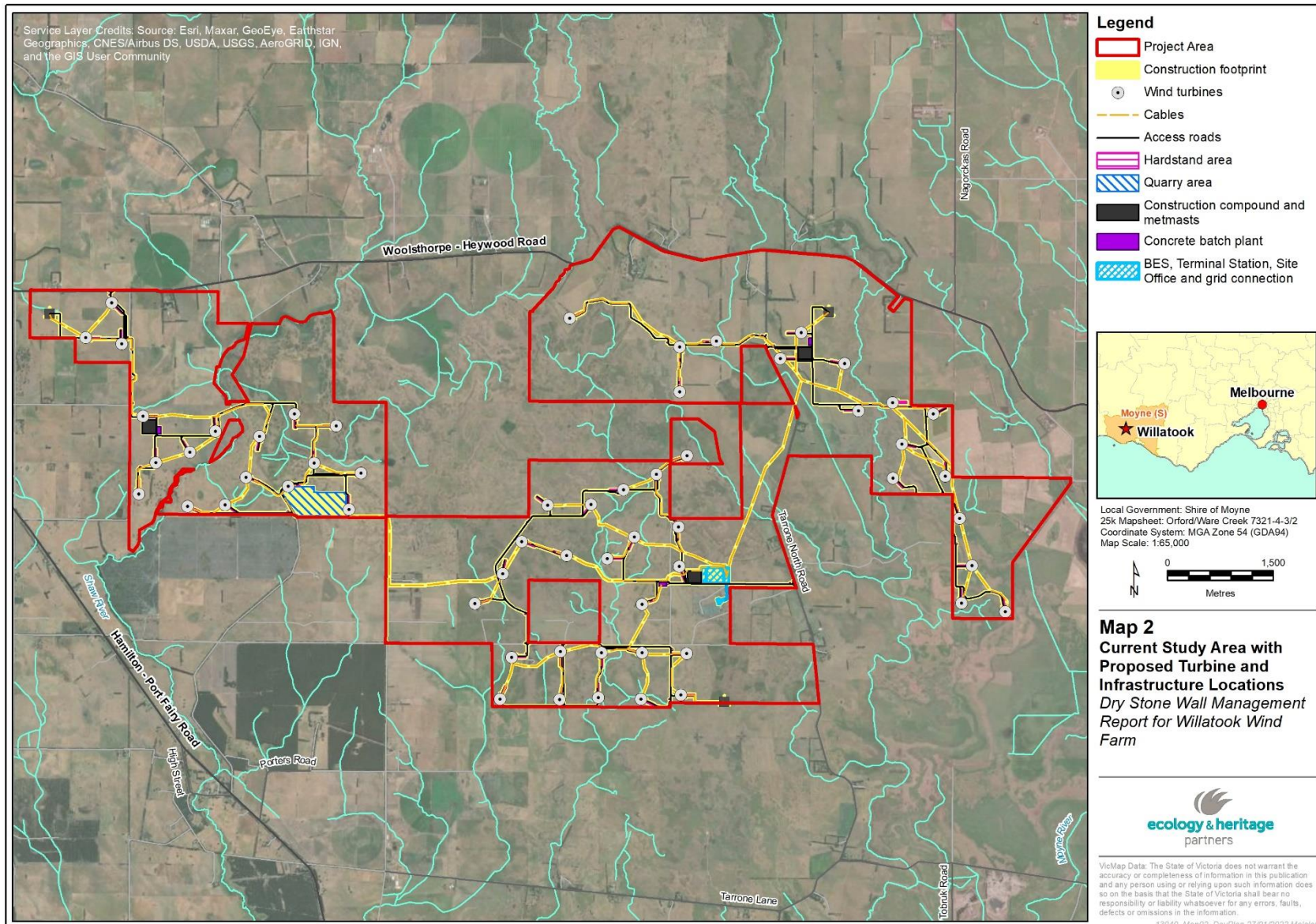


## MAPS

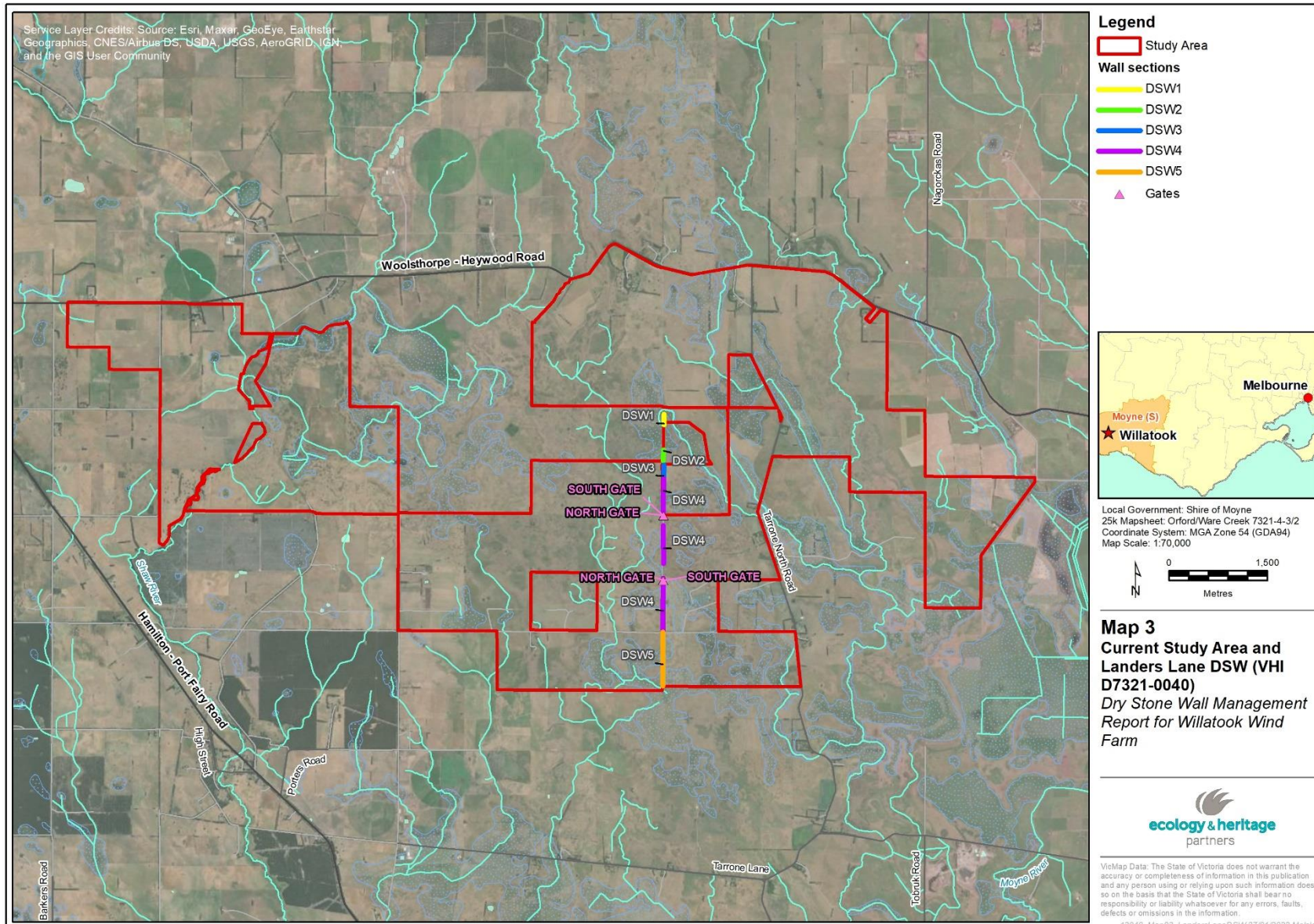
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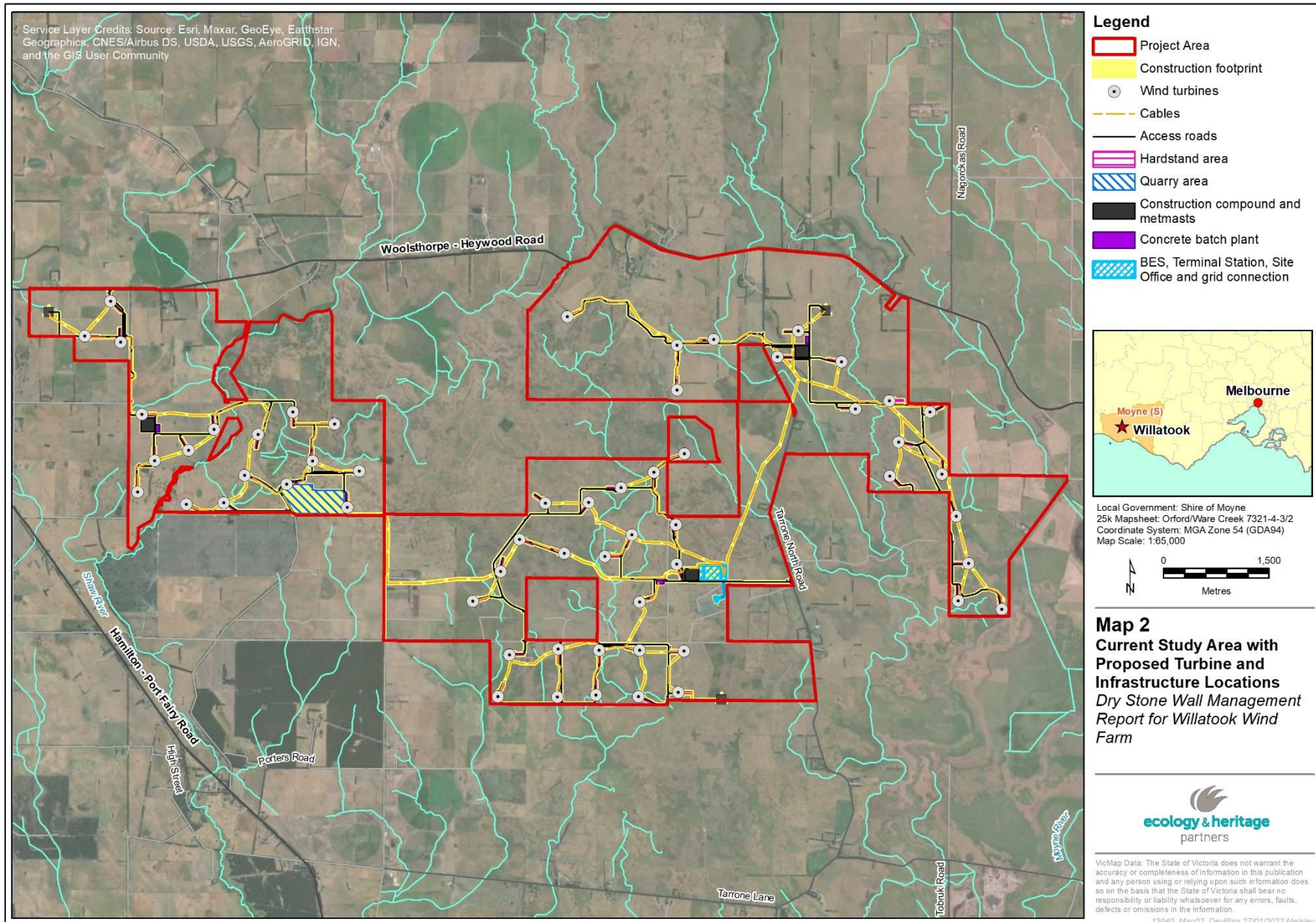




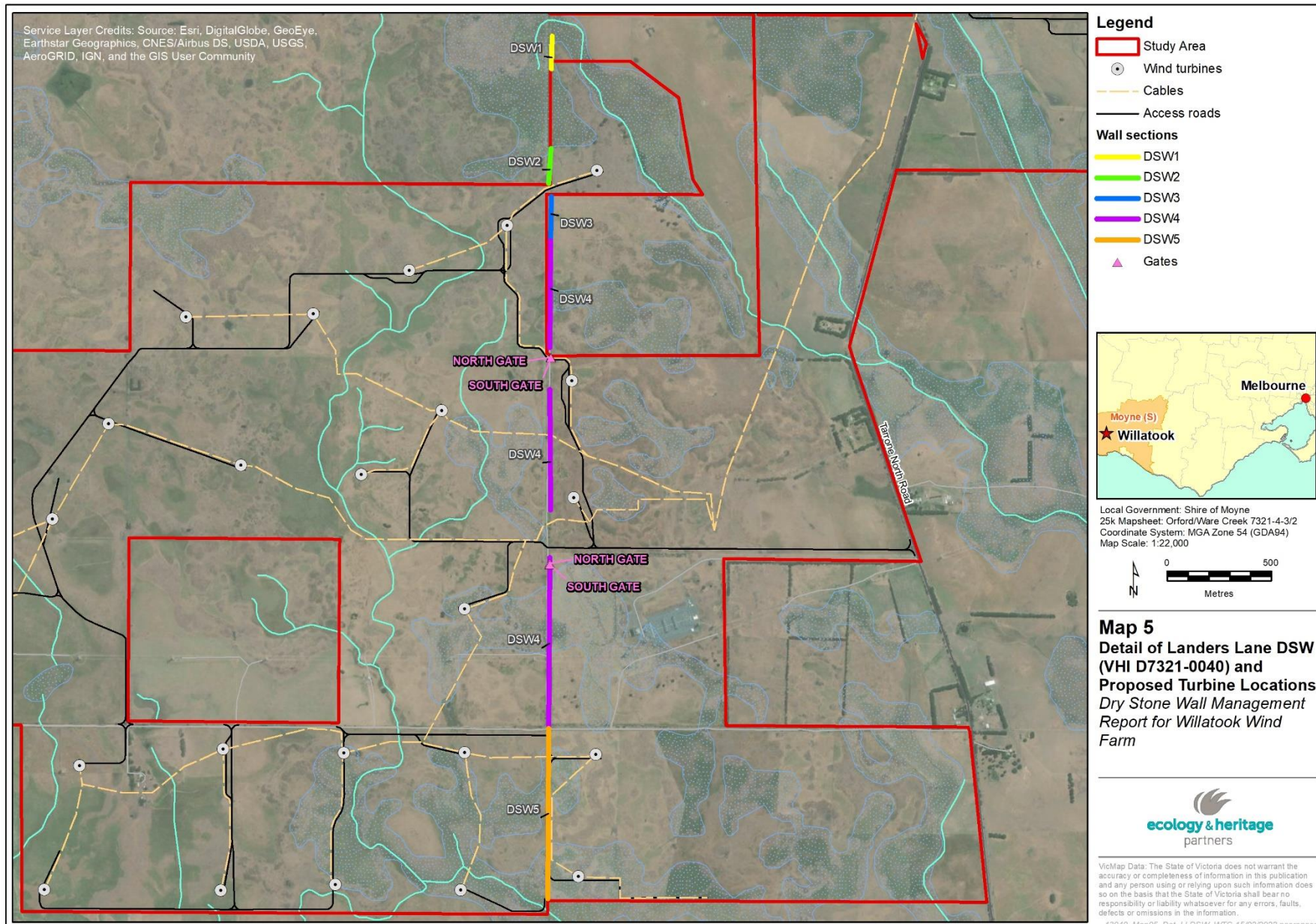












## APPENDICES

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## Appendix 1: Heritage Legislation

### A2.1 *Heritage Act 2017 (State)*

The Victorian *Heritage Act 2017* (the Act) is administered by Heritage Victoria (HV) and is the Victorian Government's key piece of historical heritage legislation.

The Act identifies and protects heritage places and objects that are of significance to the State of Victoria including:

- Historic archaeological sites and artefacts;
- Historic buildings, structures and precincts;
- Gardens, trees and cemeteries;
- Cultural landscapes;
- Shipwrecks and relics; and
- Significant objects.

#### *The Victorian Heritage Register*

The Victorian Heritage Register (VHR) lists the State's most significant heritage places and objects. These can be searched on the Victorian Heritage Database.

The Heritage Council determines what places and objects are included and only those places and objects of outstanding significance are added. The process for adding a place or object is a considered one.

A place or object cannot be added to the Register before the Heritage Council seeks the views of the owner. If a heritage place or object is recommended to the Register, then owners are given a report that includes a statement of cultural heritage significance, a proposed extent of registration, and any proposed activities that may not require a permit.

A heritage object can include furniture, shipwreck relics, archaeological artefacts, equipment, transport vehicles, and articles of everyday use that contribute to an understanding of Victoria's history. Objects can be registered in association with heritage places, or in their own right.

#### *The Victorian Heritage Inventory*

Under Section 121 of the *Heritage Act 2017*, the Victorian Heritage Inventory (VHI) records all places or objects identified as historic archaeological sites, areas or relics, all known areas where archaeological relics are located, all known occurrences of archaeological relics and all persons known to be holding private collections of artefacts.

Under Section 127 of the *Heritage Act 2017* it is an offence to damage or disturb an archaeological site or relic, irrespective of whether it is listed on the Heritage Inventory or Heritage Register.

Under Section 129 of the *Heritage Act 2017* a Consent from Heritage Victoria is required if a person wishes to:

- a) Uncover or expose an archaeological relic;
- b) Excavate any land for the purpose of discovering, uncovering or moving an archaeological relic; or

- c) Deface or damage or otherwise interfere with an archaeological relic or carry out an act likely to endanger an archaeological relic; or
- d) Possess an archaeological relic for the purposes of sale; or
- e) To buy or sell an archaeological relic.

Any application for a consent to the Executive Director must be accompanied by the prescribed fee. Various classes of works apply to the application fees. The Heritage Council may waive the fees if it is satisfied that the activities to which the application relates:

- a) Are for the purposes of conservation or protection of the archaeological relic; or
- b) Are to assist in relevant anthropological, archaeological, ethnographic; historical or scientific research; or
- c) Are to educate the public as to the cultural heritage significance of the archaeological relic in its context; or
- d) Are for the safety of the public; or
- e) Are the same, or primarily the same, as those for which a consent has previously been issued to an applicant in relation to that registered place or registered object.

Up until late 2009, Heritage Victoria had a 'D' classification for places that are considered to have low historical or scientific significance. These sites are listed on the Victorian Heritage Inventory but are not subject to statutory protection, therefore there is no requirement to obtain a Consent to Disturb or destroy these sites. Heritage Victoria has requested that a letter be sent to them informing them if 'D' listed sites or places are destroyed to maintain records of these destroyed sites.

## **A2.2 *Planning and Environment Act 1987 (State)***

All municipalities in Victoria are covered by land use planning controls which are prepared and administered by State and local government authorities. The legislation governing such controls is the *Planning and Environment Act 1987*. Places of significance to a locality can be listed on a local planning scheme and protected by a Heritage Overlay (or other overlay where appropriate). Places of Aboriginal cultural heritage significance are not often included on local government planning schemes.

## **A2.3 *Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)***

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a national framework for the protection of heritage and the environment and the conservation of biodiversity. The EPBC Act is administered by the Australian Government Department of Environment and Energy (DAWE). The Australian Heritage Council assesses whether or not a nominated place is appropriate for listing on either the National or Commonwealth Heritage Lists and makes a recommendation to the Minister on that basis. The Minister for the Environment, Water, Heritage and the Arts makes the final decision on listing. DAWE also administers the Register of the National Estate.

The objectives of the EPBC Act are:

- To provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance;
- To promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources;
- To promote the conservation of biodiversity;
- To provide for the protection and conservation of heritage;
- To promote a cooperative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples;
- To assist in the cooperative implementation of Australia's international environmental responsibilities;
- To recognise the role of indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; and
- To promote the use of indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.

#### **A2.5 Coroners Act 2008 (State)**

The Victorian *Coroners Act 2008* requires the reporting of certain deaths and the investigation of certain deaths and fires in Victoria by coroners to contribute to the reduction of preventable deaths. Of most relevance to heritage is the requirement for any "reportable death" to be reported to the police (s. 12[1]). The *Coroners Act 2008* requires that the discovery of human remains in Victoria (s. 4[1]) of a person whose identity is unknown (s. 4[g]) must be reported to the police.



## Appendix 2: Significance Assessment

### A4.1. The ICOMOS Burra Charter

The standard for determining significance of places is derived from an international formula developed by ICOMOS (International Council on Monuments and Sites). In Australia, the Burra Charter has been developed by ICOMOS which is a Charter for the Conservation of Cultural Significance (Australia ICOMOS 1999).

The Burra Charter defines cultural significance as “aesthetic, historic, scientific, social or spiritual value for past, present or future generations” (Australia ICOMOS 1999: Section 1.2). Cultural significance is a concept which helps in estimating the value of places. The Burra Charter Cultural Significance Guidelines definitions of the values implicit in assessing cultural significance are as follows (Australia ICOMOS 1999):

**Aesthetic value:** Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; the smells and sounds associated with its place and use.

**Historic value:** historic value encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all the terms set out in this section.

A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

**Scientific value:** The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information.

**Social value:** Social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group.

### National Historic Themes

It is noted that when assessing historic values that the use of historic themes is of benefit. Historic themes are used by heritage professionals to assist in understanding the meanings and connections that historic places may have in addition to the physical fabric of a place. Themes can help explain how particular elements of a place are significant because of their ability to illustrate important aspects of its history (Australian Heritage Commission 2001). The nine theme groups that are most commonly used nationally are:

Theme 1	Tracing the evolution of the Australian environment
Theme 2	Peopling Australia
Theme 3	Developing Local, Regional and National economies
Theme 4	Building settlements, towns and cities
Theme 5	Working
Theme 6	Educating
Theme 7	Governing
Theme 8	Developing Australia's cultural life
Theme 9	Marking the phases of life

These theme groups are further expanded into more focussed sub-themes which will not be expanded on here. The themes are intended to be non-hierarchical and a historic place may have a number of themes, which reflects how we look at the past, allowing for an integrated, diverse and complex human experience (Australian Heritage Commission 2001).

#### **A4.2. The *Heritage Act 2017* Criteria**

The *Heritage Act 2017* defines eight criteria against which cultural heritage significance can be assessed. These criteria are used to assist in determining whether places of potential State significance should be included in the Heritage Register. They are as follows:

Criterion A	The historical importance, association with or relationship to Victoria's history;
Criterion B	Good design or aesthetic characteristics;
Criterion C	Scientific or technical innovations or achievements;
Criterion D	Social or cultural associations
Criterion E	Potential to educate, illustrate or provide further scientific investigation in relation to Victoria's cultural heritage;
Criterion F	Importance in exhibiting a richness, diversity or unusual integration of features;
Criterion G	Rarity or uniqueness of a place or object; and
Criterion H	The representative nature of a place or object as part of a class or type of places or objects.

In addition, it is appropriate when assessing the significance of a site in Victoria to consider whether it is of Local, Regional or State (or potentially National) significance.

#### **A4.3. Scientific Significance**

Scientific significance of a heritage place (particularly archaeological sites) is also assessed in Victoria using a commonly accepted formula developed by Bowdler (1981) and Sullivan and Bowdler (1984). These are relative estimates of significance based on the current knowledge available about sites or places in a region. The assessment uses three criteria; site contents, site condition and representativeness.

#### **Site Contents Rating**

- 1 No cultural materials remaining.
- 2 Site contains a small number (e.g. 0-10 artefacts) or limited range of cultural materials with no evident stratification.
- 3 Site contains:
  - a. A larger number, but limited range of cultural materials; and/or
  - b. Some intact stratified deposit.
- 4 Site contains:
  - a. A large number and diverse range of cultural materials; and/or
  - b. Largely intact stratified deposit; and/or
  - c. Surface spatial patterning of cultural materials that still reflect the way in which the cultural materials were laid down.

### Site Condition Rating

- 0 Site destroyed.
- 1 Site in a deteriorated condition with a high degree of disturbance but with some cultural materials remaining.
- 2 Site in a fair to good condition, but with some disturbance.
- 3 Site in an excellent condition with little or no disturbance. For surface artefact scatters this may mean that the spatial patterning of cultural material still reflects the way in which the cultural materials were laid.

### Representativeness

Representativeness refers to the regional distribution of a site type. It is assessed on whether the site type is common, occasional or rare within a given region. Current knowledge on the number of and distribution of archaeological sites in a region can change according depending on the extent of previous archaeological investigation.

The assessment of representativeness also takes into account the contents and condition of a particular site. An example is that in any region, there may be a limited number of sites of a particular type, which have been subject to minimal disturbance. These sorts of undisturbed sites (containing in situ deposits) would therefore be given a high significance rating for representativeness.

The **representativeness ratings** used for archaeological sites are:

- 1 Common occurrence
- 2 Occasional occurrences
- 3 Rare occurrences

### Overall Scientific Significance Rating

An overall scientific significance rating is assigned to the site based on a cumulative score from the assessment. This results in one of the following ratings being assigned for scientific significance:

- 1-3 Low
- 4-6 Moderate

7-9      High

## Appendix 3: Glossary

Adapted from Vines (1990a); Paynter (2002: 51), Black and Miller (2017: 101) and Pickard (2009).

Items highlighted in ***bold italics*** in the definition are defined elsewhere in the glossary.

Acronym	Description
Batter	The inward taper of the wall from base to top.
Building stone	The facing stone that forms the outside of the wall; cf. <i>plugging, through stones, coping stones</i> .
Chain	A traditional unit of measurement of 22 yards or about 20 m.
Clearance consumption wall or	A very thick section of wall built primarily to consume stone cleared from the fields.
Cap stone	See <i>coping stones</i> .
Cope/Coping	See <i>coping stones</i> .
Coping stones	Large stones placed along the top of a wall to provide stability to the structure.
Course	Stones that are levelled to make a regular line.
Coverband	A layer of <i>through stones</i> placed on top of the standard wall to anchor it and to sometimes form the base for the <i>coping</i> .
Doubling or double walling	Wall construction with two parallel walls of stone filled with small stone and rubble between ( <i>hearting</i> ); cf. <i>singling</i> .
DoEE	Department of the Environment and Energy. The Commonwealth Government department responsible for management of heritage places on Commonwealth land or listed on the <i>WHL</i> , <i>NHL</i> or <i>CHL</i> .
DELWP	Department of Environment, Land, Water and Planning. The Victorian State Government department, of which HV is a part, responsible for management of natural and historical (non-Aboriginal) heritage in Victoria.
Dropper	A light vertical component supported by the line wires in a post-and wire fence, and not embedded in the ground. They serve several functions: to keep the wires spaced, to provide a visible signal that a fence exists, and to minimise the use of posts, saving costs. Droppers come in various cross-sections and shapes, made of folded sheet metal, formed wire, or wood (either sawn, split or round), and wire twitches (or braces/laces).
Dry stone wall	A stone wall that has been constructed without mortar (or other such binding material between the stones).
End Assemblies	A combination of two or more <i>strainer posts</i> reinforced with horizontal braces and sloping struts, designed to provide a solid anchor for the strain and for gates and corners. These now replace the use of single strainer posts.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
Face	Vertical or <i>battered</i> outside surface of a wall.
Fence	generic term for a barrier including post and rail, wire, and dry stone walls.
Fill	See <i>hearting</i> .
Footings	See <i>foundation</i> .
Foundation	The first layer of stone at the base of the wall, often set in an excavated trench.
Gap	A breach in a dry stone wall due to defect or damage.
Head	The smooth, vertical end of a wall or section of wall.



Hearting	Small stone and rubble used to fill the cavity between the two outside surfaces of <i>double walling</i> .
HO	Heritage Overlay. A list of Heritage Places of local significance with statutory protection under a local government planning scheme.
HV	Heritage Victoria. A division of <i>DTPLI</i> responsible for management of historical heritage in Victoria.
Lintel	A stone slab placed over an opening (e.g. <i>smoot</i> ) to bridge it and support the structure above.
Lunky	See <i>smoot</i> .
Pinning	See <i>plugging</i> .
Plugging	Small stone used to fill the gaps in the outside surface of a wall; sometimes deliberately broken to fit.
Post	A vertical rigid fence component used to support fence wires, rails, woven wire or netting, etc. The essential features are rigidity, verticality, and being firmly embedded in the ground; cf <i>strainer post</i> .
Post-and-Wire Fence	A fence where the dominant horizontal components are wire (either plain or barbed), but not netting or prefabricated/fabricated/woven fencing. The wires may run through holes in the posts or be attached using a range of staples and ties. Commonly referred to as a “wire fence.”
PSP	Precinct Structure Plan. A master plan to guide development in a specified section of one of Melbourne’s growth areas (cf. <i>MPA</i> ).
Running joints	Joints between the stones that run further than two courses without being crossed by another stone.
Singling	A wall having a width of a single rock; i.e. one rock is visible on both sides of the wall and gaps between <i>courses</i> or <i>building stones</i> may be ‘see-through’; cf. <i>Doubling</i> .
Smoot	A hole through a wall for passage of stock, drainage, etc. there are many regional variations for this term.
Star Picket	The most common steel post used in Australia, featuring a 120° separation of the three webs, giving a star-like cross section.
Strainer Post	A large post deeply embedded in the ground to which the wires are anchored. When the fence is trained, most of the tension is taken by the strainer post. Generally replaced with <i>end assemblies</i> in modern fences.
Through stone	A long stone placed through the wall from one side to the other to tie the sides of <i>double walling</i> together.
Top stones	See <i>coping stones</i> .
VHI	Victorian Heritage Inventory. A register of places and objects in Victoria identified as historical archaeological sites, areas or relics, and all private collections of artefacts, maintained by <i>HV</i> . Sites listed on the VHI are not of State significance but are usually of regional or local significance. Listing on the VHR provides statutory protection for that a site, except in the case where a site has been “D-listed”.
VHR	Victorian Heritage Register. A register of the State’s most significant heritage places and objects, maintained by <i>HV</i> . Listing on the VHR provides statutory protection for that a site.
Wall head	Vertical end of a wall created where large stones are alternated into and along the wall to provide stability.

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## **Appendix 4: Dry Stone Wall Management Plan**

Final Report

# Dry Stone Wall Assessment and Management Plan for Willatook Wind Farm, Victoria

Client

Willatook Wind Farm Pty Ltd

04 March 2022



Ecology and Heritage Partners Pty Ltd

Author

Ashton Sinamai



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**Cover Photo:** Dry Stone Wall 2 along Landers Lane

(Photo by Ecology and Heritage Partners Pty Ltd)

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## ABBREVIATIONS

Acronym	Description
The Act	<i>Heritage Act 2017</i>
CHL	Commonwealth Heritage List
CHMP	Cultural Heritage Management Plan
CMA	Catchment Management Authority
DAWE	Department of Agriculture, Water and the Environment (Commonwealth)
DELWP	Department of Environment, Land, Water and Planning (Victoria)
DPC	Department of the Premier and Cabinet (Victoria)
EES	Environment Effects Statement
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EVC	Ecological Vegetation Class
FPSR	First Peoples-State Relations
HA	Heritage Advisor
HHA	Historical Heritage Assessment
HO	Heritage Overlay
HV	Heritage Victoria
MSC	Moyne Shire Council
NES	National Environmental Significance
NHL	National Heritage List
NTR	National Trust Register (Victoria)
PMST	Protected Matters Search Tool
RNE	Register of the National Estate
SLV	State Library of Victoria
VGf	Victorian Geomorphological Framework
VHI	Victorian Heritage Inventory
VHR	Victorian Heritage Register
VWHI	Victorian War Heritage Inventory
WHL	World Heritage List

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# 1 INTRODUCTION

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## 1.1 Background and Scope of Works

Ecology and Heritage Partners Pty Ltd was commissioned by Willatook Wind Farm Pty Ltd. to prepare a Dry Stone Wall Management Plan for dry stone walls at the proposed Willatook Wind Farm, Victoria (Moyne Shire Council) (Map 1).

Willatook Wind Farm Pty Ltd (the proponent) is developing the proposed Willatook Wind Farm (the project) in Moyne Shire, Victoria. The project will harness strong and reliable winds to generate renewable energy through the construction and operation of up to 59 wind turbines generators and would operate for a period of at least 25 years following a two-year construction period. The wind farm would generate more than 1,400 gigawatt hours (GWh) of renewable electricity to the National Electricity Market (NEM) each year.

The project is located approximately 22 km to the north of Port Fairy, 32 km to the northwest of Warrnambool and to the south of the Woolsthorpe–Heywood Road. The project is located within an area of private and public land that is largely used for agriculture, predominantly sheep and cattle grazing.

Approximately 60.4 km of access tracks (both new and existing) would be required to provide access from the public road network to each wind turbine and supporting infrastructure. These access tracks provide access for project construction and maintenance vehicles and can be used by emergency vehicles and by landowners for their farming operations.

Electricity produced by the project will be fed through underground cables to the on-site substation, from where it will be exported to the NEM via the Tarrone Terminal Station and the existing Moorabool to Heywood 500 kilovolt (kV) transmission line.

Other project infrastructure would include:

- an on-site quarry for basalt rock that will be used to provide aggregate for access tracks and hardstand areas
- a battery energy storage system (BESS) located immediately to the west of the substation
- an operations and maintenance (O&M) facility consisting of site offices and amenities.

### Operational Activities

Key operational activities will focus on the effective operation of the wind farm. This will include monitoring (on-site or remotely), maintenance and repairs. This would include routine inspections, servicing and repair of wind turbines, maintenance of access tracks and of the electrical system and buildings and plant, including control systems. The project area is currently used as rural farmland, and this would continue after construction. The proposed development footprint consists of 222.3 ha, which is 5.4% of the study area. Construction of the wind farm is expected to take approximately two years to complete, followed by an operational phase of at least 25 years.

## Decommissioning

Within 12 months of wind turbines permanently ceasing to generate electricity, the wind farm would be decommissioned. This would include removing all above ground equipment; restoration of all areas associated with the wind farm, unless otherwise useful to the ongoing management of the land; and post decommissioning revegetation.

## Study Area

The activity area is located west of Willatook, southwest of Hawkesdale, east of Orford and Broadwater and east and south of Dunmore in southwest Victoria (Moyne Shire Council) (see Map 1). The activity area is approximately 4154 ha in size and is roughly bounded by Woolsthorpe-Heywood Road to the north, Riordans Road to the south, Old Dunmore Road and Macknights Road to the west, and Tarrone North Road and the Moyne River to the east (Map 2). The project area is currently used for residential, agricultural, pastoral and utilities purposes. The dry stone wall subject to this report is located at the side of Landers Lane and continues for another kilometre south of Landers Lane (Map 3)

## 1.2 Desktop Assessment

An up to date review of the relevant cultural heritage databases and literature was be undertaken, including:

- Any relevant available literature (e.g. Council heritage studies) legislation and policies; and
- A desktop assessment, including:
  - Review the previous AHHA report in relation to the study area;
  - Review Council Planning Scheme requirements in relation to DSWs;
  - Review recent aerial photography; and
  - A brief review of the land use of the subject site.

### 1.2.1 Fieldwork and Reporting

A site investigation was conducted by a qualified heritage advisor to visually assess the walls, their condition and integrity, and a basic description of the walls' features. As a minimum the following information will be incorporated:

- Detailed desktop assessment;
- The location, nature and extent of the dry-stone walling;
- Maps or plans will be provided showing:
  - North point and study area boundaries;
  - The location of any unusual features of the wall;
  - Wall sections used for the site condition assessment; and
  - Location where photographs were taken, and the direction from which they were taken.

- Management policies, aligned with the relative cultural significance identified;
- Mitigation measures to be taken during the construction and maintenance phase.

The management plan will include:

- Assessment and documentation of the walls including feature plans which show the extent and height of the walls, openings in the wall and structural condition of the wall;
- Conservation policies for the walls, including guidelines as to how the wall can be appropriately adapted and interpreted for wind farm development; and
- All recommendations designed to meet the needs of the client.

### **1.3 Report Production Team**

This report was prepared by Dr Ashton Sinamai (Archaeologist/Heritage Advisor).

Ashton is an archaeologist with experience in heritage management and museum studies with expertise in heritage identification, preservation and interpretation. He also has experience in cataloguing identification and analysis of artefacts as well as project management. For 14 years, Ashton worked as an archaeologist at Great Zimbabwe and Khami World Heritage sites which are some of the most extensive dry stone walled sites on the World Heritage list. His experience includes the monitoring, assessment, documentation conservation and interpretation of dry stone walls. Prior to his working at Ecology and Heritage Partners, Ashton has worked an archaeologist in Zimbabwe and Namibia for 16 years and was involved in ensuring compliance in development processes. He is an experienced researcher and has worked at the University of York, UK as an Experienced Marie Curie Research Fellow for two years.

Ashton has carried out numerous excavations in both research and testing/salvage condition in Zimbabwe, Namibia, Kenya, Botswana and also carried out documentation work in the Sudan, Tanzania, South Africa as well as France. He has published a book and several papers on dry stone walling sites in southern Africa.

Ashton has a BA (Hons) in Archaeology from the University of Zimbabwe, a Master of Arts in Public History/Heritage (cum laude) from the University of the Western Cape (South Africa) and a PhD in Cultural Heritage and Museum Studies from Deakin University. His PhD thesis focused on the mapping of cultural landscapes around the dry stone walled World Heritage site of Khami in Zimbabwe. He has presented his research in numerous conferences.

His formal qualifications include:

- PhD. Cultural Heritage and Museum Studies, Deakin University 2013
- Masters (Visual and Public History), University of the Western Cape, South Africa 2003
- Bachelor of Arts (Hons)(Archaeology), University of Zimbabwe, 1991
- Bachelor of Arts (History/Archaeology University of Zimbabwe, 1990

The quality assurance review was undertaken by Oona Nicolson (Director/Principal Heritage Advisor). The field work was undertaken by Ashton Sinamai (Archaeologist), Cherrie de Leiuon and Andrew Wilkinson (Archaeologist/Heritage Advisors). Mapping was provided by Monique Elsley (GIS Coordinator).

## 1.4 Report Review and Distribution

Copies of this report will be lodged with the following organisations:

- Willatook Wind Farm Pty Ltd;
- Shire of Moyne; and
- Heritage Victoria.

## 1.5 Heritage Legislation

An overview of the Victorian *Heritage Act 2017*, the *Victorian Planning and Environment Act 1987*, the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*, is included in Appendix 1. This legislation is subordinate to the *Victorian Coroners Act 2008* in relation to the discovery of human remains

## 1.6 Local Council

The study area is located within the Shire of Moyne. Development within Moyne Shire is governed by the Moyne Planning Scheme which sets out policies and provisions for the use, development and protection of land, places and properties. Broad planning controls for dry stone walls are implemented under Clause 52.37 of the Moyne Shire Planning Scheme Particular Provisions.

## 1.7 Cadastral Details

The cadastral details of the activity area are as follows:

**Table 1:** Cadastral Details of the Activity Area

PARCEL_SPI	PARCEL_SPI	PARCEL_SPI	PARCEL_SPI	PARCEL_SPI	PARCEL_SPI
2043\PP2237	6\TP403368	2B~21\PP2835	1A~16\PP2835	1\TP843774	2\PS513764
2044\PP2237	7\TP403368	3~A\PP2835	2~16\PP2835	4\TP843774	1\PS519322
2041\PP2237	4\TP403368	1\TP119974	3B~16\PP2835	5\TP843774	2\PS519322
2040\PP2237	5\TP403368	8~A\PP2835	3A~16\PP2835	4B~8\PP2835	2B~4\PP2835
2039\PP2237	1A1~8\PP2835	5\TP242579	4A~16\PP2835	2\TP396974	1B~4\PP2835
2038\PP2237	1~8\PP2835	1\TP843794	1~15\PP2835	1\TP396974	3\TP843794
2009\PP2835	2~8\PP2835	2\LP98389	1\TP123936	4~10\PP2835	2A~4\PP2835
2049\PP2237	2A~8\PP2835	36A\PP2237	2\TP529477	1\TP242579	1A~4\PP2835
2050\PP2237	3A~8\PP2835	36B\PP2237	3A~15\PP2835	3A~5\PP2835	5A~4\PP2835
2051\PP2237	3B~8\PP2835	35A\PP2237	1\TP529477	3B~5\PP2835	2\TP242579

2015\PP2835	4A~8\PP2835	35B\PP2237	2B~20\PP2835	4B~5\PP2835	3\TP242579
2048\PP2237	9\TP403368	15D\PP2237	1A~21\PP2835	5A~5\PP2835	4B~16\PP2835
2026\PP2835	2\TP826990	15E\PP2237	1B~21\PP2835	5B~5\PP2835	1B~16\PP2835
2025\PP2835	1\LP218923	15A\PP2237	1B1~21\PP2835	3A~4\PP2835	2\PS601753
2\TP843794	2\LP218923	1\TP403368	1B2~21\PP2835	3B~4\PP2835	
4B1~4\PP2835	2045\PP2237	3\TP403368	1B3~21\PP2835	2\TP843774	
4B2~4\PP2835	2010\PP2835	2\TP403368	2C~21\PP2835	3\TP843774	
1~11\PP2835	2043\PP2237	8\TP403368	2A~21\PP2835	4\TP242579	



## 2 BACKGROUND REVIEW

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The section reviews the historical context of the study area and includes an examination of historical and ethnohistorical sources regarding previously recorded dry-stone walls near the study area. This section also briefly reviews the history of dry stone walling as a common fencing type in parts of rural Victoria.

### 2.1 Dry Stone Walling and the Western Districts of Victoria

Stone is one of the most common materials used by humans in building shelter as well as demarcations. In Australia, most stone walls are a later addition to the landscape, and are mostly to mark boundaries, create paddocks or demarcate homesteads. With the abundance of basalt on the Victorian Volcanic Plain, and the need to clear fields for sheep and cattle grazing as well as cropping, it became the most common stone used in demarcating spaces in Victoria when farming began.

Due to their enormous size, most of the land claimed for the early pastoral runs was poorly defined with boundaries often following natural features such as creeks and lakes or were simply marked by plough lines or blazed trees (Paynter et al. 2004: 6), or by wooden hurdle type fencing (McLellan 1989). Boundaries became more defined during the 1850s following survey by the Colonial government.

Initially, settlers employed shepherds to manage their flocks of sheep across the pastoral runs. The shepherds lived in small huts scattered around the properties. Flocks were moved to take advantage of suitable feed and were penned each night (Holdsworth et al. 2011a). Although the runs were not freehold tenure, they were purchased by the squatters and semi-permanent buildings were erected. After a pastoral run had been occupied for five years, a Pre-Emptive Right was granted, giving the squatter 640 acres on which, a residence was usually constructed. These buildings were often the first areas to be fenced off. During the 1850s, the government sought to provide land for smaller farmers and many of the large squatting runs were subdivided and sold off. Much of the pastoral land was purchased by wealthy squatters.

With greater security of tenure for pastoralists, the arrival of the gold rush saw many shepherds leave the land to try their luck on the goldfields and labour for stock management became expensive. This created the need for fencing to manage stock and to form markers to define property boundaries (Holdsworth et al. 2011a). According to Pickard (2007) the transition from managing sheep with shepherds to allowing flocks to roam in fenced paddocks is one of the most important technological revolutions in Australian pastoral development. The introduction of fencing was a result of the increase in labour expense; capital outlay on fencing was more cost-effective and pastoralists realised that the new fencing technology could give them higher profits (Pickard 2008). Under the *Land Act 1862*, which allowed for the selection of blocks for purchase, there was a requirement to 'improve' the land by cultivation, establishment of a residence or by fencing. An 1873 article in the *Australasian* concluded that:

In the abstract, stone walls may be considered model fences for a country that is subject to bush-fires, and where stone everywhere obtainable we would feel no hesitation in declaring in favour of its application to such purposes. Breaches are easily repaired, for the material is always there. The first cost is greater than of wood, when the latter is at hand, but for permanence and durability stone has

no peer; moreover, it takes nothing from the soil; the grass at the foot of the wall is as sweet and nutritious as that in any other portion of the field.

In nineteenth century rural Victoria, the most common forms of fencing included dry stone walls, post and rail, hedges, ditches or combinations of the above. The use of wire became more widespread in later years due to its low cost and perceived aesthetics, due to it being largely invisible (Paynter et al. 2004). The use of wire rose exponentially during the 'boom' years between 1861 and the 1890s, especially after the mid-1880s when wire imports increased resulting in lower costs (Pickard 2010).

In regions where there was a plentiful supply of stone, as in much of the Western District, dry stone walls were erected. Western Victoria is characterised by extensive volcanic plains covering an area from western Melbourne to Millicent in South Australia. The landforms of the Victorian Volcanic Plains are characterised by stony rises and extensive screes of surface volcanic rock. Costs for erecting these walls were comparable to other fencing technologies. In addition to the primary function of stock separation and/or boundary definition, dry stone walling provided a secondary benefit of allowing for the removal of stone from paddocks and providing a convenient and useful way of storing the collected stone.

Dry stone construction is found in several other parts of the State - in the goldfields area around Maldon, Castlemaine, Chewton and Walhalla where walls and some buildings were constructed from sandstone. These structures were mainly built by Swiss, Italian and German immigrants and were different in the type of stone and in the style of construction from those built in the Western District. This was because of the difference of local available stone types. The Swiss, Italians and Germans whose dry stone skills had come from the fact that their homeland stone was of a similar nature to the stone where they were settling – coursed flat bedded stone.

The Depression brought an end to the stone mason's craft in the 1930s. By the 1960s, more than 100 years after the first stone walls were built in Western Victoria, dry stone walling was considered a dying art. Many of the stone masons who had constructed walls in the first half of the 20th century had reached retirement age without passing on the skills and expertise to the next generation, as technological advancement was changing the landscape forever.

## 1.8 Fencing Specifications

The *Fences Statute 1874* provided specifications for the construction of dry stone walls (*Bendigo Advertiser* 4 February 1874). In Victoria, a standard dry stone field fence, traditionally known as a 'five-quarter', stood 3' 9" (1.143 m) to the top course, upon which cope stones were often laid. The specifications required cope stones to only extend a further 12" (300 mm), giving a total wall height to 4' 9" (1.448 m). The specifications also required that the wall should be 2' 0" (610 mm) wide at the base and 15" (381 mm) wide at the top course.

Sometimes added height was required to provide more functionality depending on the purpose of the fence (e.g. changing stocking patterns from sheep to cattle requiring higher fencing). In areas where stone was less abundant, post and wire or post and rails were added to the top of the wall in place of cope stones. In later years, posts and wire netting was added to fences for greater efficiency, particularly in containing rabbits. In some areas, trenches were dug, and the walls commenced below ground level to hinder rabbits burrowing (Paynter et al. 2004: 7). McLellan (1989) describes the walling in the following terms:

*The craftsmen or 'cowans' as they were sometimes known, would lay two rows of stone about three feet apart, filling the centre with smaller stones and rubble. Courses were added, the two single walls tapering inwards towards the top where the width would be one foot to eighteen inches. Large stones were laid across the top of the wall to bind the two sides together and to provide weight to settle the stones. Top stones laid flat were called capping stones or coping stones. Each stone was handled once only, 'there being a place for every stone'. Breaking or chipping stones to make them fit was seriously frowned upon, although each stone is given a judicious tap with a small hammer to make it settle. The rate of progress varied between half-a-chain to a chain a day, depending on the style of wall and whether ground trenching was required by the owner.*

Dry stone walls can be either a 'single wall' or a 'double wall'. Single walls are constructed to the width of a single rock (known as 'building stones') so that the same rock is visible on both sides of the wall. Double walls are constructed using two single walls (known as 'doubling'), tapering towards each other at the top, with the void between packed with smaller rocks and rubble (known as 'hearting'). Smaller gaps between building stones, particularly in doubling, is filled using smaller stones (known as 'plugging') to create a neat, aesthetic and more stable wall face.

Marshal et al. (2004) summarises the characteristics of Victorian dry stone walls as follows:

- They are constructed through the careful placement of rocks without using any cementing or other binding substances;
- They are invariably built from local sources of stone, either quarried or unquarried;
- Unquarried sources of stone are generally located in the surrounding area as basalt floaters on the surfaces of paddocks;
- Walls generally taper in shape and have wide bases;
- Walls can vary in terms of style, structure and technique of construction; and
- Walls can include a combination of other materials or additions which can either be added on after the construction of the wall or be contemporaneous to the time of construction.

## 1.9 Historical Context

The section reviews the historical context of the study area and includes an examination of historical sources, previously recorded historical archaeological site types and locations in the geographic region of the study area, previous Council heritage studies and previous archaeological studies undertaken in the area. Together, these sources of information can be used to formulate a predictive site statement concerning what types of sites are most likely to occur in the study area, and where these are most likely to occur.

### 1.9.1 Regional History

Nicolas Baudin, a French explorer sailed from Cape Otway to Cape Northumberland in 1802. By the time that Major Mitchell arrived in Portland in 1836 of the so-called 'Australia Felix' he was surprised that a significant number of people were already living in the region. In the late 1700s the coastal areas along the Bass Strait were renowned for extensive seal colonies and schools of whales (Eslick, 1983: 17). By the 1800s over 200

sealers were known to frequent the region especially around the Lady Julia Percy Island and Lawrence Rocks (Sayer 1981: 9). Two graves found by a fisherman in 1842 on Lady Julia Percy Island are believed to be those of early sealers (Wiltshire 1981: 11, 13).

In Port Fairy whaling also became established in the 1830s. James Wishart named the port and stayed in the areas later called 'Belfast'. John and Charles Mills established a sealing camp at Griffiths Island. John Griffiths also moved his whaling operation from Portland Bay to the island in 1836 and established himself there permanently the following year (Carroll 1989: 152-153). By 1836 there were approximately 100 whalers operating out of Portland Bay and Port Fairy and at peak, seven whaling stations were operating in Portland alone (Wiltshire 1981: 22). The whaling season was variable, determined by the winter arrival of Southern Right Whales in the bays of south-western Victoria but the industry was kept busy year-round employing blacksmiths, coopers, shipwrights and general hands for building and repairing (Learmonth 1983: 50-53). However, by the mid-1830s, the major industrial focus had changed from whaling, which had caused whale numbers to rapidly recede, to pastoralism.

### **Squatter Settlements**

Long-term European occupation commenced with the Hentys moving to Portland Bay in 1834 and the arrival of members of the 'Port Phillip Association' at Port Phillip Bay the following year. In both cases people and livestock came from Tasmania. Settlers moved quickly into the Port Fairy area and hinterland from Geelong as well across the Murray River, in response to explorer Thomas Mitchell's descriptions of his discovery of a "veritable 'Australia Felix'" offering extensive grasslands and open savannah landscapes for immediate use by land-hungry pastoralists (Powell 1996:79). Many of the first squatters were from Scotland, made possible by the passage of an Act in 1833. Their occupation was legitimized in 1836 with the ascension of a further Act and a payment of 10 pound yearly licence fee. Though the licence did not permit the erection of any buildings, most squatters did build temporary buildings for use on the run and to protect their land from other squatters.

Most settlers became pastoralists and today the land is used mostly for sheep and cattle grazing. By 1843 much of the area in the western volcanic plains was taken up and used for grazing. With the development of agriculture labour was also required and mostly ex-convicts were engaged. It was mostly males in this harsh environment; women and children were not so welcome in the harsh and crude conditions of early settlement. In many cases the wives, sisters and daughters of the settlers were either left behind in Tasmania or England.

During this period Aboriginal women were often mistreated by the squatters and station hands. European women first appeared in the district around 1840. Makeshift huts were the first buildings erected on a run, as tenure was not secure, and many pastoral ventures were purely speculative. Bark huts were common, with bark walls and roof, and a stamped earthen floor. Huts were also built of split stringy bark slabs, and in the study area some sod huts were constructed from blocks of rich black earth and topped by thatched roofs. Elsewhere pise (rammed earth) huts, or wattle and daub huts, went up and were also covered in thatch (LCC 1996:36-7). Shortly after the first buildings were erected on runs, other structures began to cluster around the huts of the early head stations. These included kitchen and gardens, a store, stables, men's huts, yards and pens, barn, blacksmith's shop, woolshed and dairy.

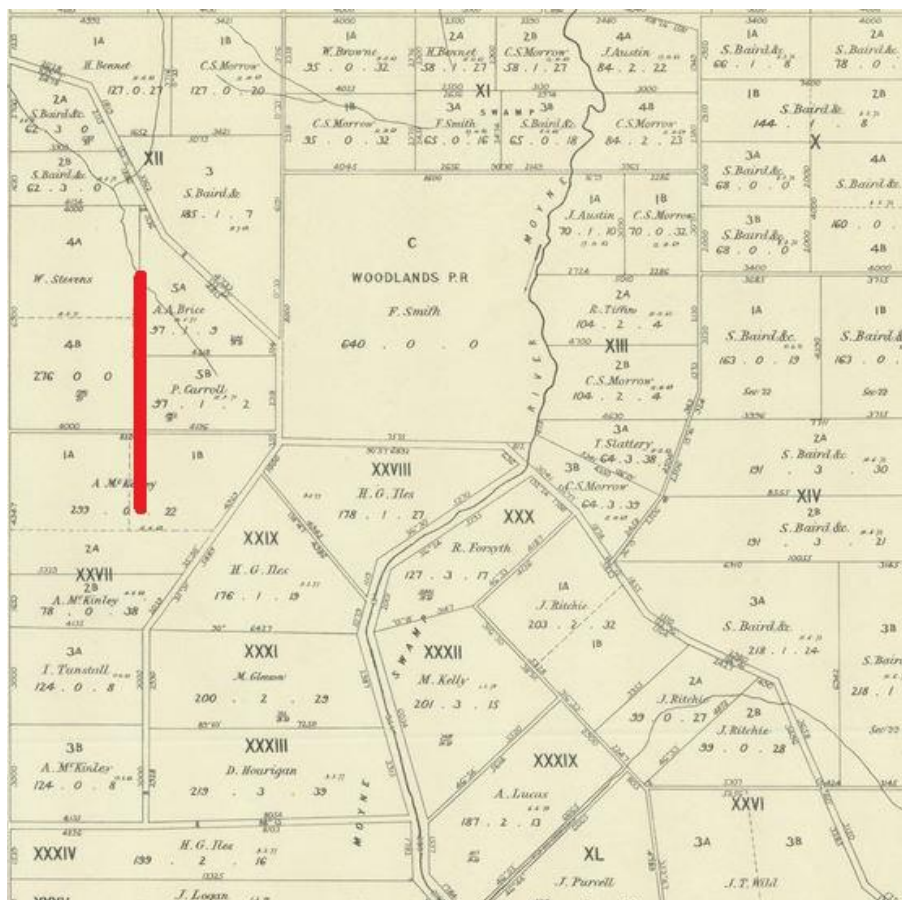
With the acquisition of freehold land, principally homesteads were constructed on properties. The new buildings were sturdy and functional, often constructed of brick or local stone (bluestone and other basalts). As with the earlier buildings, these homes were often surrounded by a variety of outbuildings. With the introduction of women into the squatting districts, improvements to the interior of early structures quickly followed. As wealth grew in the district, the size and style of homesteads on stations changed. Large homesteads based on English country houses first appeared in district in the 1870s. In the late 1950s pastoral activity in the district experienced a second boom following a major government-sponsored Soldier-Settler scheme which resulted in the clearing of 400 square kilometres of the Heytesbury Forest (LCC:1996). Dry stone walls demarcating property were also constructed at this time. Not many remain in the Shire but one of the most substantial dry stone walls is along Landers Lane. With the availability of timber, many of the fences were made of wooden posts with rough stone walling; later, however, stone walls were constructed in some areas though they were not as extensive as those in the Corangamite region. Later, soldiers from the 1<sup>st</sup> and 2<sup>nd</sup> World Wars were also settled in the region.

### **The Activity Area**

Europeans began to permanently settle in the Melbourne region in 1835, and by 1840s small townships had expanded to the Willatook area, approximately 280 km west of Melbourne. The activity area and the surrounding land were first occupied by European people, particularly Irish settlers, in the mid-1830s and early 1840s. The area has been used for pastoral and agricultural purposes since that time, especially the running of sheep and dairy cattle, and the growing of potatoes, onions, oats and hay (LCC 1996: 41). The pastoral runs and farms were often delineated by kilometres of dry stone walls which can be seen in the surrounding area today. Three prominent stations near the activity area were Tarrone Station, owned by Dr Kilgour, located in the east of the activity area (Clark 1990: 53), Dunmore Station, owned by William Campbell on the Shaw River, and Kangatong Station, owned by James Dawson (Clark 1990: 69; SLV 2017).

To the north-eastern end of the activity area, the Hawkesdale Inn was opened in 1855 and a school was opened in 1866. Catholic, Presbyterian and Methodist denominations also operated church services in the area by this time. In 1871 parts of Hawkesdale were removed from the Shire of Belfast and renamed Minhamite Shire. With these developments, the population grew around the study area and in 1890 a railway was established from Koroit to Hamilton, which also serviced Hawkesdale. A hospital was established in nearby Macarthur in the mid-1900s, and a high school opened in Hawkesdale in 1963. In 1994 the Moyne Shire Council was established and absorbed the Shires of Belfast, Mortlake, Minhamite and Port Fairy, the former Borough of Port Fairy and small sections of other nearby areas (Moyne Shire Council 2017). More recently, utilities such as overhead powerlines and underground optical fibre cable routes, gas and water pipelines have been installed within the study area. An electrical terminal station is also present near the intersection of Riordans Road and Landers Lane.





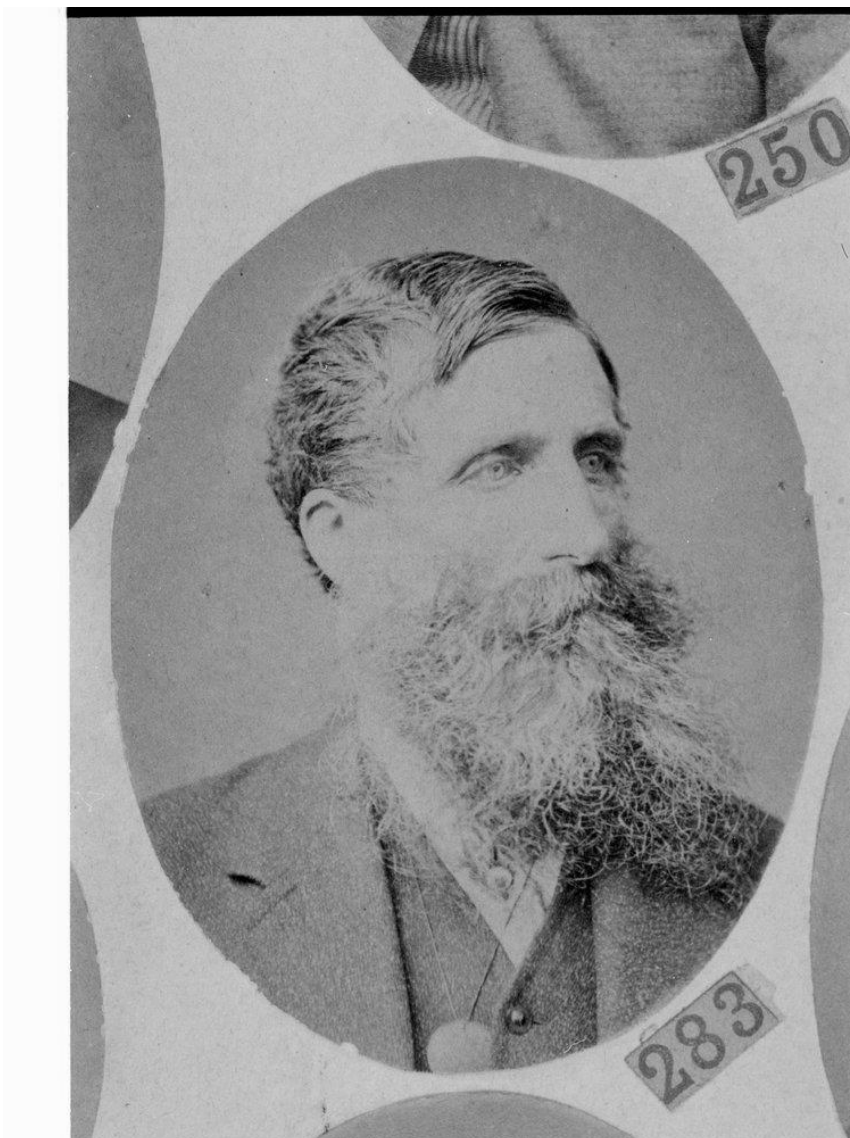
**Figure 1:** Parish map of Willatook area dated 1928 showing dry stone wall Landers Lane within the Activity Area (Source: SLV No. 2079001).

### 1.9.2 Local History

The Landers Lane Dry Stone Wall is within the historic 'Dunmore' Run. Dunmore was 47,228 acres and in 1849, was recorded as holding 1200 cattle and 55 horses. This run was divided into Dunmore and Dunmore West in 1863 which were both cancelled in July 1876. One of the early co-owners of Dunmore, Charles Hamilton Macknight, was said to have "won repute for just dealing and gained the confidence of the Aborigines" in the area after previously being "a member of punitive expeditions" in response to the maimed stock and stolen station stores. After Dunmore was divided, Macknight stayed and became a specialist in breeding Short-horned cattle. He also bred racehorses on the property and, later, pure merinos. His many years of sheep breeding established Macknight as "the greatest authority" on the subject. Along with "three substantial slab huts with great chimneys and a pise dairy with a large milking shed", Macknight also constructed dams on the property. The property however became infested with rabbits and the swampy areas were left undrained. The new owner who took the farm in 1895 improved it. This region was a scene of extreme violence against the Aborigines by cattle and sheep farmers.

The wall was once listed on the Victoria Heritage Inventory and has now been delisted (D7321-0040).

Charles Hamilton Macknight (1819-1873) came from Edinburgh and became a pastoralist in the Port Fairy area. He arrived in Port Phillip in 1841 and quickly joined forces to take up land that became the Strathloddan Run and Bough Yards near Castlemaine; however, he left the region with his partners in 1842 after acquiring land between Macarthur and Port Fairy in the Western District. They drove their 600 head of cattle and horses from their old stations to the new run, which they called Dunmore. Here, their settlement was slowed down by Aboriginal people who tried to drive settlers out by maiming their livestock and breaking into stores. Punitive raids into Aboriginal communities resulted in some of the worst massacres of Aboriginal people. Macknight was determined to develop the run, even pondering the possibilities of emu oil. Dunmore was soon regarded as the most improved homestead in the district. It had three substantial slab huts with great stone chimneys and a *pisé* dairy with a large milking shed. Macknight also constructed dams on the property.



**Figure 2:** Charles Hamilton Macknight (1819-1873) of the Dunmore Run. (SLV Image No. H5056/283)



In 1863 Dunmore was divided into two properties. Macknight and his partner Irvine retained one portion while Dunmore West was acquired by the Trust and Agency Co. Irvine continued as Macknight's partner till the early 1870s. At Dunmore, the Macknights specialized in the breeding of Shorthorn cattle and created one of the finest herds in the region. Macknight also bred race-horses but later his greatest interest became the breeding of pure merino sheep. He later decided that sheep could not thrive at Dunmore and sold them all, but not before he had established himself as one of the greatest authorities on sheep breeding. He believed in inbreeding and wrote many long argumentative letters to the Melbourne *Economist*, the *Australasian* and other papers. He wrote a book on sheep breeding with a Dr Henry Madden (*On the True Principles of Breeding*) which was published in Melbourne in 1865. By the time he died in 1873 Dunmore Run had become one of the most important farms in the region.

## **1.10 Air Photo Interpretation**

Examination of recent aerial photos corroborates documentary evidence that the area has been used for pastoral and agricultural purposes, with a number of residential dwellings. It is known that much of this area was used for dairy farming until recently. Aerial photos also show the characteristics of this agricultural landscape with stone walls being some of the most prominent. Currently the area is mostly used for pastoral agriculture.

## 2 DATABASE SEARCHES

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A review of the various relevant databases was conducted, including the Victorian Heritage Register (VHR), Victorian Heritage Inventory (VHI) and Heritage Overlay to the Moyne Planning Scheme (HO). The following section provides an overview of the relevant registrations

### 2.1 Victorian Heritage Register

The Victorian Heritage Register (VHR) lists the places, objects and shipwrecks of State significance which are protected under the *Heritage Act 2017*.

No part of the Landers Lane dry stone wall is included in the VHR.

### 2.2 Victorian Heritage Inventory

The *Heritage Act 2017* also protects all non-Aboriginal (historical) archaeological sites in the State. If an archaeological site is not of State significance but has archaeological value, it is usually listed on the Victorian Heritage Inventory (VHI). The Landers Lane dry stone walls were listed under the VHI but were de-listed (D7321-0040) with all other dry stone walls. The protection of these dry stone walls was moved to councils

### 2.3 Moyne Planning Scheme

#### ***Moyne Planning Scheme***

The Moyne Shire's Heritage Clause 15.03-15 outlines the strategies for conserving heritage:

- Identification, assessment and documentation of places of natural and cultural heritage significance as a basis for their inclusion in the planning scheme.
- Provide for the protection of natural heritage sites and man-made resources. Provide for the conservation and enhancement of those places that are of aesthetic, archaeological, architectural, cultural, scientific or social significance.
- Encourage appropriate development that respects places with identified heritage values. Retain those elements that contribute to the importance of the heritage place.
- Encourage the conservation and restoration of contributory elements of a heritage place.
- Ensure an appropriate setting and context for heritage places is maintained or enhanced. Support adaptive reuse of heritage buildings where their use has become redundant.
- Consider whether it is appropriate to require the restoration or reconstruction of a heritage building in a Heritage Overlay that has been unlawfully or unintentionally demolished in order to retain or interpret the cultural heritage significance of the building, streetscape or area.

It also gives the policy guidelines that are considered relevant in conservation of heritage:



- The findings and recommendations of the Victorian Heritage Council.
- The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013.

It also under Clause 52.33 of the Moyne Planning Scheme requires developers to seek permission before demolishing, removing or altering a dry stone wall constructed before 1940 on land specified in the schedule to this provision.

A review of the HO Schedule for the Moyne Shire shows that there are no places listed in or near the study area. Dry stone walls are however protected by Moyne Planning Scheme Clause 52.33 which protects all dry stone walls and post boxes.

### ***Particular Provisions***

Planning controls for all dry stone walls in the LGA is administered under Clause 52.33 of the Moyne Planning Scheme (Particular Provisions). The current terms of Clause 52.33 states that a permit is required to demolish, remove or alter a dry stone wall constructed before 1940 on land specified in the Schedule to this provision- other than to install a gate or to reconstruct damaged or collapsed walls using the same specifications and materials as the existing walls. A permit is therefore required from Moyne Shire pursuant to Clause 52.33 to damage or demolish dry stone walls in the study area.

## 3 FIELD ASSESSMENT AND RESULTS

This section discusses the methodology used to record the dry stone walls, the result of the recording and the limitations of the recording. The investigation included an inspection of all of the existing dry stone walls within the study area.

The dry stone walls within the study area were inspected on the 12<sup>th</sup> – 14<sup>th</sup> of February 2020 by Ashton Sinamai (Archaeologist) Andrew Wilkinson and Cherrie de Leiuen (Archaeologist/Heritage Advisors).

### 3.1 Aims and Objectives

The aim of the survey was to:

- To identify and record all dry stone walls which could be impacted by the proposed development; and/or
- To assess the condition of the dry stone walls in the study area.
- To assess the cultural heritage significance of the dry stone walls identified in the survey and create a management plan for them.

### 3.2 Methodology of the Survey

All of the dry stone walls within the study area were identified as part of the field assessment.

The wall construction type for each wall was recorded using the nomenclature adapted from terminology used in Vines (1990) and Pickard (2009). Photographs were taken at 5 m intervals of each wall, and notes were made on existing condition of the wall as well as impacts to the surviving walls.

#### 3.2.1 Construction Technique

Notes were taken regarding the general appearance and the techniques used to construct the wall ('refinedness'). The criteria used by Vines (1990) were used to assess this aspect (Table 2).

**Table 2:** Dry Stone Wall Assessment Criteria (Vines 1990)

Technique	Description
Unrefined	The wall is simply a piling of stones intended to act as a supplement to other fencing material, but which does not show evidence of skilful construction. Throughstones are absent, coping is irregular or non-existent, there is no plugging and often no evidence of double walling, hearting, courses of sorted stone. These walls have probably been built by farmers untrained in wall building techniques.

Technique	Description
Technically Competent	The walls demonstrate basic aspects of dry stone wall construction but do not have the refinements of the better walls. Double walling with hearting and coping with throughs in the taller walls are always evident, but appearance was a secondary consideration. Therefore, an uneven batter prevails, and plugging is restricted to eliminating larger gaps and securing stones which may not be seated evenly. Professional wallers were almost certainly employed and, as they would have been required to work speedily, the lack of refinement could be explained in terms of economic construction.
Refined Technique	The basic construction techniques are combined with refinements to produce a wall that is decorative as well as functional. Coping stones are more carefully selected to create an even and more balanced effect. Plugging may be extensive depending on the available material but, where small stone is lacking, refinement is evident in more careful placement of stone to minimize gaps in the wall. These walls tend to be higher and associated with homesteads or other dwellings. They must have been built by skilled professional wallers and it is possible that stone masons versed in house construction were responsible for some walls.
Specialist Technique	Demonstrates specialist or unusual construction techniques designed for a particular function or aesthetic effect. For example, the split paling cope of the Western District walls or the sloping courses of "Greystones".

For each wall within the study area, notes were taken on the degree of preservation (condition) using criteria adapted from Vines (1990). Those criteria are shown in Table 3. As part of that assessment, the number of extant stone courses in each dry stone wall was recorded, noting that these were varied across the length of a number of the walls. It was also noted whether the wall appears to be original or a reconstruction. Original walls usually have consistent colouring created by weathering and a layer of moss or lichen growth; rebuilt walls usually lack a moss or lichen coating (Vines 1990: 32). The walls were recorded every 5m through still photography as well as drone footage. Though the latter was not part of the scope of this project, the footage is available at cost if required by the sponsor.

**Table 3: Criteria Used for Preservation Assessment**

Intactness	Meaning
Intact	The wall appears to be intact with little sign of stone loss/collapse. For a double wall, the wall is structurally sound with ample evidence of hearting, plugging and coping stones. Its associated fence (if relevant) is intact with the posts and wires in good condition; whilst some decay may be evident, the fence is still strong, upright and not broken.
Largely Intact	The majority of the wall (>75%) appears to be intact (as above) with little sign of stone loss/collapse and/or damage/decay to the fence to the fence. Small sections (<25%) may have suffered some damage, collapse or theft of stone. The associated fence is generally still functional.

Intactness	Meaning
Partially Intact	Approximately 25-75% of the wall appears to be intact (as above), but large sections have suffered damage, collapse or theft. There may only be 1-2 courses of stone remaining. The associated fence may still be upright but is showing marked decay and wires are generally highly rusted or broken.
Mostly Collapsed / Highly Impacted	There is very little (<25%) of the wall left intact; there may be only a single course of stone remaining or stone may be scattered nearby. The associated fence (if applicable) is highly decayed and/or broken.
Not Extant / Destroyed	There is no longer any evidence of the dry stone wall in place.

### 3.2.2 Impacts or Potential Impacts

The presence of potentially harmful influences, e.g. the presence of existing drainage ditches, trenching for utilities (e.g. electrical/services cabling) and vegetation growth, which have potential to impact the wall, were recorded.

## 3.3 Limitations of the Survey

Recording was limited to walls falling within the activity area. Representative sub-sections of each dry stone wall were recorded and detailed recording, (though not part of this report) was carried out with drone technology. The documentation thus includes aerial photography and other formats that can be used to create photogrammetric views of the walls as well as archival records.

Each dry stone wall within the study area was recorded “as is, where is” and no attempt was made to uncover any section of the walls where covered by either soil or vegetation. Scaled drawings of the walls were not taken.

### 3.3.1 Survey – Summary of Results and Conclusions

Five walls were identified and documented within the activity area. Three of the walls are all stone free standing walls while the other two were composite walls with fences. DSW1 -3 were refined and largely in good condition with cope stones still in place. DSW 4 and 5 were composite, one course walls supporting the bases of fences. All walls are in fairly good condition and display expert craftsmanship and all walls appear to be pre-1940.

## 4 DRY STONE WALLS

The activity area has several walls that are, in reality, a single wall running along Landers Lane. The wall was divided into 5 walls (DSW-1-5) with division being based on breaks such as gates or where the wall has disappeared or been intersected by a road. The total length of the wall is about 5km. The walls are in various states of conservation and are also built in various techniques. All walls are on a North-South alignment.

### 4.1 DSW-1

DSW-1 is two walls that form a corner at the northern end of Landers Lane. The wall is only 37m long. It is an all-stone wall and still has cope stones at the top. The wall is well built and shows a specialist technique in its workmanship. It is well preserved even though the East-West wall is progressively collapsing on the eastern side.

<b>Wall</b>	<b>1</b>							
<b>Wall Type</b>	All stone							
<b>Construction</b>	Specialist technique							
<b>Condition</b>	Excellent							
<b>Intactness</b>	Intact except for progressive collapse on the E/W wall							
<b>Wall Dimensions:</b>	<b>Length</b>	37m	<b>Base</b>	1000mm	<b>Cope</b>	800mm	<b>Height</b>	1600mm
<b>Courses</b>	about 5							
<b>Stone Grading</b>	Excellent							
<b>Plugging</b>	Present							
<b>Hearting</b>	Present							
<b>Cope Stones</b>	Present							
<b>Through Stones</b>	Present							
<b>Foundations</b>	Wall is built on firm ground and on a Stoney Rise							
<b>Posts</b>	No posts							
<b>Wires</b>	No barbed wire							





**Plate 1:** Corner of DSW-1 facing east (A. Wilkinson 2020).



**Plate 2:** General aerial view DSW-1 showing the two walls, facing south (A. Wilkinson 2020).



**Plate 3:** DSW-1 showing collapse at the corner where walls meet facing east (A. Wilkinson 2020).



**Plate 4:** The East-West aligned part of DSW-1 showing poor bonding (A. Wilkinson 2020).



**Plate 5:** North face of DSW-1 facing south (A. Wilkinson 2020).



**Plate 6:** West wall showing refined technique of walling facing east (A. Wilkinson 2020).

## 4.2 DSW-2

DSW-2 begins at a gate that is between this wall and DSW-1. It is a freestanding all stone wall which is, like DSW-1, very well preserved. Its condition is assisted by the workmanship that is displayed. It is built in specialist technique and shows very few collapses, mostly of cope stones toppling from the top of the wall. The stones used are rather large and the joints are seamless making it very stable. It has a total length of 218m. Some sections are being impacted by vegetation growing near or within the wall. Other attributes of the wall are listed in the table below.

<b>Wall</b>	2						
<b>Wall Type</b>	All stone						
<b>Construction</b>	Specialist technique						
<b>Condition</b>	Excellent						
<b>Intactness</b>	Intact except for progressive collapse on the E/W wall						
<b>Wall Dimensions:</b>	<b>Length</b>	218m	<b>Base</b>	1000mm	<b>Cope</b>	900mm	<b>Height</b> 1800mm
<b>Courses</b>	about 6 courses						
<b>Stone Grading</b>	Excellent						
<b>Plugging</b>	Present						
<b>Hearting</b>	Present						
<b>Cope Stones</b>	Present						
<b>Through Stones</b>	Present						
<b>Foundations</b>	Wall is built on firm ground and passes through several stoney rises						
<b>Posts</b>	No posts						
<b>Wires</b>	No barbed wire						





**Plate 7:** DSW-2 at the northern end of the wall facing east (A. Wilkinson 2020).



**Plate 8:** View of DSW-2 showing toppling of cope stones (A. Wilkinson 2020).



**Plate 9:** General view of DSW-2 facing south (A. Wilkinson 2020).



**Plate 10:** The middle section of DSW-2 showing collapse (A. Wilkinson 2020).



**Plate 11:** Southern end of DSW-2 showing cope stones (A. Wilkinson 2020).



**Plate 12:** Southern end of DSW-2 showing well-constructed section of wall. (A. Wilkinson 2020).

### 4.3 DSW-3

DSW-3 is 487 m in length and is a continuation of wall 2 after a gate. The wall displays refined technique. The wall is constructed in a specialist technique and has a maximum height of about 1.8m. Like DSW-1 and 2 the wall also still has copestones. Cope stones have, however, toppled from several sections of the wall, probably as a result of branches falling on the wall or contact with farm animals. There is vegetation impacting on it.

<b>Wall</b>	<b>3</b>						
<b>Wall Type</b>	All stone						
<b>Construction</b>	Specialist technique						
<b>Condition</b>	Excellent						
<b>Intactness</b>	Intact except for sections with toppled cope stones						
<b>Wall Dimensions:</b>	<b>Length</b>	487m	<b>Base</b>	1200mm	<b>Cope</b>	800mm	<b>Height</b> 1800mm
<b>Courses</b>	about 6						
<b>Stone Grading</b>	Excellent						
<b>Plugging</b>	Present						
<b>Hearting</b>	Present						
<b>Cope Stones</b>	Present						
<b>Through Stones</b>	Present						
<b>Foundations</b>	Wall is built on firm ground and on a Stoney Rise						
<b>Posts</b>	No posts						
<b>Wires</b>	No barbed wire						





**Plate 13:** Beginning of DSW-3 at gate, facing east (A. Wilkinson 2020).



**Plate 14:** First 30m of DSW-3 showing cope stones in place facing east (A. Wilkinson 2020).



**Plate 15:** DSW-3 showing well-constructed section of wall facing east (A. Wilkinson 2020).



**Plate 16:** View of section of DSW showing vegetation growth on walls (A. Wilkinson 2020).



**Plate 17:** Last 20m of DSW-3 (A. Wilkinson 2020).



**Plate 18:** Southern end of DSW-3 (A. Wilkinson 2020).



#### 4.4 DSW-4

DSW-4 is, for most of its length, a low one-course wall that is more of a foundation for the fence. Though there is more vegetation in this section, the wall has not been affected. The wall ends at Riordans Road where for 3m to a new line it is a multi-coursed wall and has a height of about 1.2m. The wall is composite and has a cyclone mesh fence. Much of the wall was covered with grass and vegetation and photography was impossible from the side and occasionally from above. All photographs are aerial due to poor visibility at ground level.

<b>Wall</b>	<b>4</b>							
<b>Wall Type</b>	Composite with a small section of 3m all stone at the southern end							
<b>Construction</b>	Technically competent							
<b>Condition</b>	Good							
<b>Intactness</b>	Intact							
<b>Wall Dimensions:</b>	<b>Length</b>	874m	<b>Base</b>	1000mm	<b>Cope</b>	900mm	<b>Height</b>	600mm
<b>Courses</b>	1 course and 5 courses at the southern end for 3m							
<b>Stone Grading</b>	Good							
<b>Plugging</b>	Present							
<b>Hearting</b>	Absent in the 1 course section present in the 3m section of all stone wall							
<b>Cope Stones</b>	Absent							
<b>Through Stones</b>	Absent							
<b>Foundations</b>	On firm ground and Stoney rises							
<b>Posts</b>	Star pickets and wood							
<b>Wires</b>	Cyclone mesh							



**Plate 19:** Aerial view of DSW-4 beginning of wall (A. Wilkinson 2020).



**Plate 20:** Aerial view DSW-4 (A. Wilkinson 2020).



**Plate 21:** Segment 17 (240-255 m) general view of the DSW<sub>1</sub> largely collapsed (A. Wilkinson 2020).



**Plate 22:** View of DSW-4 from the west side where it is covered by grass and trees (A. Wilkinson 2020).



**Plate 23:** End of DSW-4 south-end at Riordans Road (A. Wilkinson 2020).



**Plate 24:** Aerial view of DSW-4 at South end (A. Wilkinson 2020).

## 4.5 DSW-5

DSW-5 is a low wall composed of only one course of large stones that act as a foundation to the fence. The wall is composite and is also stable due to lack of courses. The wall begins at the intersection of Landers Lane and Riordans Road. From Riordans Road the wall is has a length of about 3m which is all stone and stands to a height of about 1.4m but drops off to 600mm for the rest of its length of 873m. There are few bushes growing on it, but it is generally in good condition.

<b>Wall</b>	<b>5</b>							
<b>Wall Type</b>	All stone and composite							
<b>Construction</b>	Technically competent							
<b>Condition</b>	good							
<b>Intactness</b>	Intact except for a section crossing a creek							
<b>Wall Dimensions:</b>	<b>Length</b>	873m	<b>Base</b>	1000mm	<b>Cope</b>	900mm	<b>Height</b>	600mm
<b>Courses</b>	1							
<b>Stone Grading</b>	Not observed as the wall only has one course							
<b>Plugging</b>	Absent							
<b>Hearting</b>	Absent							
<b>Cope Stones</b>	Absent							
<b>Through Stones</b>	Absent							
<b>Foundations</b>	Wall is built on firm ground and on a Stony Rise except sections wetlands and creeks							
<b>Posts</b>	Star pickets and wood							
<b>Wires</b>	Cyclone mesh							





**Plate 25:** Beginning of DSW-5 at Riordans Road, aerial view (A. Wilkinson 2020).



**Plate 26:** Beginning of DSW-5 at Riordans Rd disturbed by electricity post facing west (A. Wilkinson 2020).



**Plate 27:** Segment of DSW-5- aerial view (A. Wilkinson 2020).



**Plate 28:** General view of segment 18 (260-270 m) showing sections of the wall still standing (A. Wilkinson 2020).



**Plate 29:** Aerial profile of section of DSW-5 (A. Wilkinson 2020).



**Plate 30:** End of DSW-5 (A. Wilkinson 2020).

## Conclusions

The walls are within what was the Dunmore Run, a historic property that was run by Charles Macknight, a prominent personality in the Willatook/Port Fairy area. These were probably constructed after 1840 as the area was first settled by squatters around 1842. The walls may have been commissioned by Macknight himself. Generally, the walls are in a very good state of conservation. DSW 1-3 are well-constructed free-standing walls with cope stones still in place and DSW 4 and 5 are composite walls with both stone and fences. DSW 4 and 5 are very low walls with only a single course with maximum height of about 60 cm. Documenting these two walls through photography was difficult as they were covered by grass and bushes. Some sections between DSW 3 and 4 are missing, either not having been built or cleared later. The total length of free standing all-stone walls in good condition about is 642m.



## 5 SIGNIFICANCE ASSESSMENT

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### 5.1 Previous Significance

Scientific significance of a heritage place (particularly archaeological sites) is also assessed in Victoria using a commonly accepted formula developed by Bowdler (1981) and Sullivan and Bowdler (1984). These are relative estimates of significance based on the current knowledge available about sites or places in a region. The assessment criteria used to assess the scientific significance of historical places in Victoria are presented in Appendix 2. The same three main categories apply to historical places: *site contents* (cultural material, organic remains and site structure), *site condition* (degree of disturbance of a site), and *'representativeness'* (the regional distribution of a particular site type).

#### 5.1.1 Historical Cultural Significance

Heritage Victoria administers the *Heritage Act 2017* and has provided formal criteria for assessing cultural heritage significance. Applying these criteria will determine if a heritage place should be considered for addition to the Victorian Heritage Register or other statutory lists.

On the basis of these criteria, heritage places are generally given a significance ranking of State, Local or none. Historical archaeological sites, as with other heritage places, can be considered for addition to the Victorian Heritage Register if they have State significance.

However, all historical archaeological sites are included on the Victorian Heritage Inventory and are given statutory protection, irrespective of their level of significance. Sites that are considered to be of local historical interest but are not considered to be of specific archaeological significance are allocated 'D'-list numbers (e.g. D7822-0099). 'D'-listed sites are not protected by legislation. The Landers Lane dry stone walls were listed under the VHI but were de-listed (D7321-0040).

#### 5.1.2 Significance Criteria

The following criteria, which are drawn out of the Burra Charter, are used for the assessment of the heritage value of heritage places. These criteria have been broadly adopted by heritage jurisdictions across Australia and can be used for the assessment of places of local and State significance. The significance criteria include walls along Landers Lane and south of Riordans Road. 'Local' significance includes places that are important to a particular community or locality/region (VPP Practice Note *Applying the Heritage Overlay*, July 2015: 1-2).

***Criterion A: Importance to the course or pattern of our cultural or natural history (historical significance).***

Dry stone walls may be associated with historical persons or properties. With construction of walls often occurring in the 1850s and 1860s, they were often constructed by squatters during the early pastoral era or are representative of Closer Settlement land patterning following the introduction of the various Lands Acts during the mid-19<sup>th</sup> century. They are representative of both continuity and change in farming practices over a period of more than 160 years. The walls are usually built in areas of basaltic flow where stone is located close to the surface.

The walls within the study area provide evidence of early land use – including farming as well as fencing practices whereby the material for fencing was accumulated from the land within proximity to the surviving walls. They also provide a visual reference to early subdivision in the municipality. Criterion A is met.

***Criterion B: Possession of uncommon rare or endangered aspects of our cultural or natural history (rarity).***

Dry stone walls are common throughout the rural Victoria in areas where, in the mid-nineteenth century, ‘a proliferation of stone in the geological landscape necessitated a clearing of the land’ (Dry Stone Wall Association of Australia Inc.). As an economic form of fencing, dry stone walls are common throughout a number of municipalities in Victoria, including Moyne Shire. Walls 1, 2 and 3 are excellent examples of well-built walls which still have cope stones. Though copestones were common in the western districts many walls have lost these through toppling. Criterion B is met.

***Criterion C: Potential to yield information that will contribute to an understanding of our cultural or natural history (research potential).***

This criterion typically relates to archaeological potential. Although dry stone walls are an expression of ‘material culture’ using the broader definition of archaeology, Heritage Victoria no longer considers dry stone walls to be archaeological features as they rarely contain subsurface archaeological deposits. Walls that were previously listed on the Victorian Heritage Inventory have, almost without exception, been delisted. Criterion C is not met.

***Criterion D: Importance in demonstrating the principal characteristics of a class of cultural or natural places or environments (representativeness).***

Criterion D relates to representativeness and places which meet Criterion D would typically have a high level of intactness. DSW 1, 2 and 3 are intact and are good representative examples of early dry-stone wall construction in Moyne Shire. The three walls seem to have been constructed by an expert stone mason as they are of refined nature. They represent some of the best walls which still have cope stones in place in Moyne Shire. Criterion D is met.

***Criterion E: Importance in exhibiting particular aesthetic characteristics (aesthetic significance).***

Dry stone walls are often iconic features of the landscape, particularly walls that have high levels of structural integrity and/or technical competence or refinement. They often accentuate changes in local elevation and provide a point of focus in a broader rural landscape. The ongoing aging and patination of the walls, together with lichen growth and the provision of wildlife habitat also adds aesthetic appeal. Three walls on Landers Lane (DSW 1, 2 and 3) meet Criterion E.

***Criterion F: Importance in demonstrating a high degree of creative or technical achievement at a particular period (technical significance).***

The scientific or research potential of dry stone walls will depend on the relative quality, rarity or representativeness, and the degree to which they may contribute further substantial information (Australia ICOMOS 1999). Criterion F is not met.

***Criterion G: Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons. This includes the significance of a place to Indigenous peoples as part of their continuing and developing cultural traditions (social significance).***

Dry stone walls may hold some value to the people of the Moyne Shire as a tangible link with the area's rural past. However, the extent of social significance cannot be determined at this stage and is beyond the scope of this report.

***Criterion H: Special association with the life or works of a person, or group of persons, of importance in our history (associative significance).***

As outlined at Criterion A (above), dry stone walls may be associated with historical persons, typically squatters during the early pastoral era or notable landowners. The walls in the study area are part of the famous Dunmore Run where significant events happened in terms of relationships between Aboriginal communities and Europeans settlers as well as livestock breeding history in Victoria. It also associated with a historical figure, Charles Hamilton Macknight (1819-1873). Macknight was a prominent figure in the Port Fairy area and became a prominent cattle, sheep and horse breeder in the Willatook area, as well as a magistrate, regional government councillor and agricultural writer. Criterion H is met.

## 6 IMPACT ASSESSMENT

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The walls within the study area are likely pre-1840 and were part of the historic Dunmore Run. The five walls are in various states of conservation. DSW 1, 2 and 3 are all stone walls which were expertly constructed and stand between 1.6-1.8m in height. The fact that they are still standing shows the quality of the workmanship of the original stone mason. There are very few areas which show reconstructions and also collapses which seem to have been caused by falling branches. Walls 4 and 5 are low one-course walls which are part of composite fences. There are no previous studies on these walls, so it is not possible to historically examine their condition over time. The condition assessment of the walls is therefore based on what was observed during fieldwork.

All wind turbines will be located at a distance greater than 50 m from Landers Lane. Access roads to the turbines will also be constructed. Four of these will directly impact DSW-4 as there two turbines which are near the alignment of the wall; a road leading to these turbines is expected to breach the wall. One access track and cable route will likely impact DSW-2 and DSW-3 as they will pass through the gate between these walls; this may result in indirect impacts through vibration emanating from construction and construction traffic. Indirect impacts for DSW-1 to 4 will include increased heavy traffic as roads are constructed as well as when turbine parts are moved into the construction zones, although Landers Lane itself will not be used for construction traffic.

A turbine will be constructed near the southern extent of DSW-5 (which is not included within the current extent of the listing in the VHI). A cable will run parallel with the wall and cross it at one point, which may result in indirect impacts. Existing gates in the wall may be used in some instances but there may be a need to create wider access points which will have the potential to impact the wall.

### 6.1 Potential Impacts

It is envisaged that there are two principal agents of negative impact that may occur, namely, direct impact and indirect impact:

- Direct impact to walls or wall sections in the study area from either machine or personnel (e.g. wall collapse resulting from the excavator arm/bucket inadvertently striking the wall, or collapse as a result of construction personnel climbing on the stone wall or leaning against unstable fence posts); and
- Vibration impact to walls resulting from mechanical excavation in close proximity to the wall or increased heavy vehicle traffic causing toppling of loose stones.
- Vibration impacts may normally be reduced by maintaining a minimum distance of 5 m from the wall as a buffer.

However, as the heritage significance of the wall is largely aesthetic and not structural, any rebuilding of the wall should aim to improve its stability, but still following the basic construction guidelines. The Moyne Planning Scheme does not provide specific guidelines for rebuilding of stone walls but the guidelines of other

councils in Victoria (e.g. Corangamite, Wyndham and Melton) may be useful in carrying out reconstructions. Table 4 reviews the perceived impacts of the layout of the wind farm on DSW-1 to 5.

**Table 4: Summary of Potential Impacts to DSW-1 to 5**

Wall #	DSW Likely Impacts
DSW-1	A large section of DSW-1 is located outside of the Project area and will not be directly impacted by the development of the wind turbines. The portion of the wall within the project area may be affected by indirect impacts resulting from the vibration of machinery used in construction.
DSW-2	DSW-2 will have an access track and cable trench constructed across it, which will likely pass through a gate between DSW2 and DSW-3. A turbine will be constructed to the east of the wall. This may not have negative impact on the DSW; however, the construction of the access track will indirectly impact on the wall.
DSW-3	DSW-3 will be indirectly impacted by the construction of the access track and internal transmission line that will pass between DSW-2 and DSW-3. A turbine will be constructed approximately 50m away from the wall.
DSW-4	DSW-4 will be partly directly impacted by the construction of the transmission lines and access tracks which will breach the wall in four places. Efforts have been made to locate access tracks and cables so that they pass near or through existing breaks in the wall. Two turbines are expected to be constructed approximately 50 m east of the wall; this has the potential to impact the wall. Turbine will be constructed more than 50m to the west, but these are not expected to impact the wall.
DSW-5	Four turbines will be constructed along the length of DSW-5; however, these will be located at a distance of 50 m or more away from the wall and will not have a direct impact on it. There are, however, two points at the northern and southern extent of the wall that will be impacted by the construction of an access track; in addition, there will be subsurface transmission cabling installed at the northern extent of the wall, near its intersection with DSW-4.



## 7 MANAGEMENT PRINCIPLES

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Management policies and aligned conservation strategies are determined by the types of potential impact to the walls.

### 7.1 Management Recommendations

The Landers Lane Dry Stone Wall was previously listed in the Victorian Heritage Inventory but was delisted. There is only one dry stone wall listed on the Moyne Shire Heritage Overlay under the Stone Cottage, Dry Stone Walls and Trees at 122 Toolong Road, Port Fairy. However, Clause 52.33 of the Moyne Planning Scheme states that:

- *A permit is required to demolish, remove or alter a dry stone wall constructed before 1940 on land specified in the schedule to this provision.*
- *This does not apply to:*
  - *Dry stone structures other than walls and fences.*
  - *The demolition or removal of a section of a dry stone wall to install a gate.*
  - *The reconstruction of damaged or collapsing walls which are undertaken to the same specifications and using the same materials as the existing walls.*

The following management recommendations are made:

- All work along Landers Lane should not negatively impact on the dry stone walls;
- The walls along Landers Lane were constructed before 1940 and a permit will be required if any part of the walls is to be removed.
- Demolition of a wall to create a road and gate however is permitted;
- In developing access roads, it is recommended that the landscape character is maintained, and existing gates are used rather than opening new sections on the dry stone walls to access assets;
- Should negative impacts be inadvertently caused to a wall, or section of a wall, in line with the Burra Charter's guiding principle regarding management of heritage places, the general management principle is to 'make good', that is, to rebuild the wall to its current construction standard, as best as possible, to its current configuration of height and general integrity.
- Consultation and negotiation with Council must be undertaken before any wall is removed. It is envisaged that there are three principal agents of negative impact that may occur:
  - Direct impact to the walls and wall sections to be removed, to accommodate access road building of transmission line and substations;

- Direct impact to walls from either machine or personnel (e.g. wall collapse resulting from the excavator arm/bucket inadvertently striking the wall, or collapse as a result of construction personnel climbing on the stone wall or leaning against unstable fence posts); and
- Walls can also be directly impacted during the decommissioning of the turbines
- As the landscape changes to accommodate the wind farm the dry-stone walls can also lose meaning if efforts are not made to preserve them in the new environment. To this end, if any stones are removed from any of the walls, they should be stockpiled in a suitable location nearby and fenced to prevent stone theft. These stones should be used to consolidate any wall heads or to repair any sections damaged during construction (if necessary).
- DSW-1, 2 and 3 are particularly well-constructed and reflect not only skills that have disappeared, but also reflects the Victorian agricultural landscape. Any dismantling or reconstruction on DSW-1, 2 and 3 should be carried out by an experienced stone mason.

## 7.2 Working Close to the Retained Wall

Depending on the structural integrity of the wall, dry stone walls may be inadvertently subject to either direct or indirect impacts. Positive action should be taken to avoid or minimise the potential for impact.

Actions that may be taken include:

- Conducting a pre-construction briefing on the importance of dry stone walls to all construction personnel and the need for care operating in proximity to the wall.
- Where the buffer between works by machinery is less than 2 m, it may be considered necessary to erect a temporary fence on both sides of the wall to limit direct impact.
- Where a temporary safety fence is not erected, briefing all workers especially not to operate machinery closer than 1.5 m to the dry stone wall.
- Briefing all construction personnel not to stand, sit or lean on any of the wall components during the activity.

## 7.3 Other Issues

Other issues in the management of the wall involve safety and standards of construction.

Working in close proximity to the walls, there is potential for safety issues for construction personnel. This is likely to be from two sources:

- *Tripping hazard*: in some areas the wall has partially collapsed, and stones may be lying on the ground on the outer (road) side of the wall. In many areas long grass and weeds may obscure these stones and construction personnel may inadvertently trip over the stones causing injury.
- *Vibration* from mechanical trenching and/or backfilling works may dislodge loose stones from the wall and strike construction personnel standing in proximity.

Construction in the vicinity of the walls should be conducted so that potential injury to construction personnel is minimised. It is recommended that construction personnel do not enter the space within 5 m of a wall, where possible.

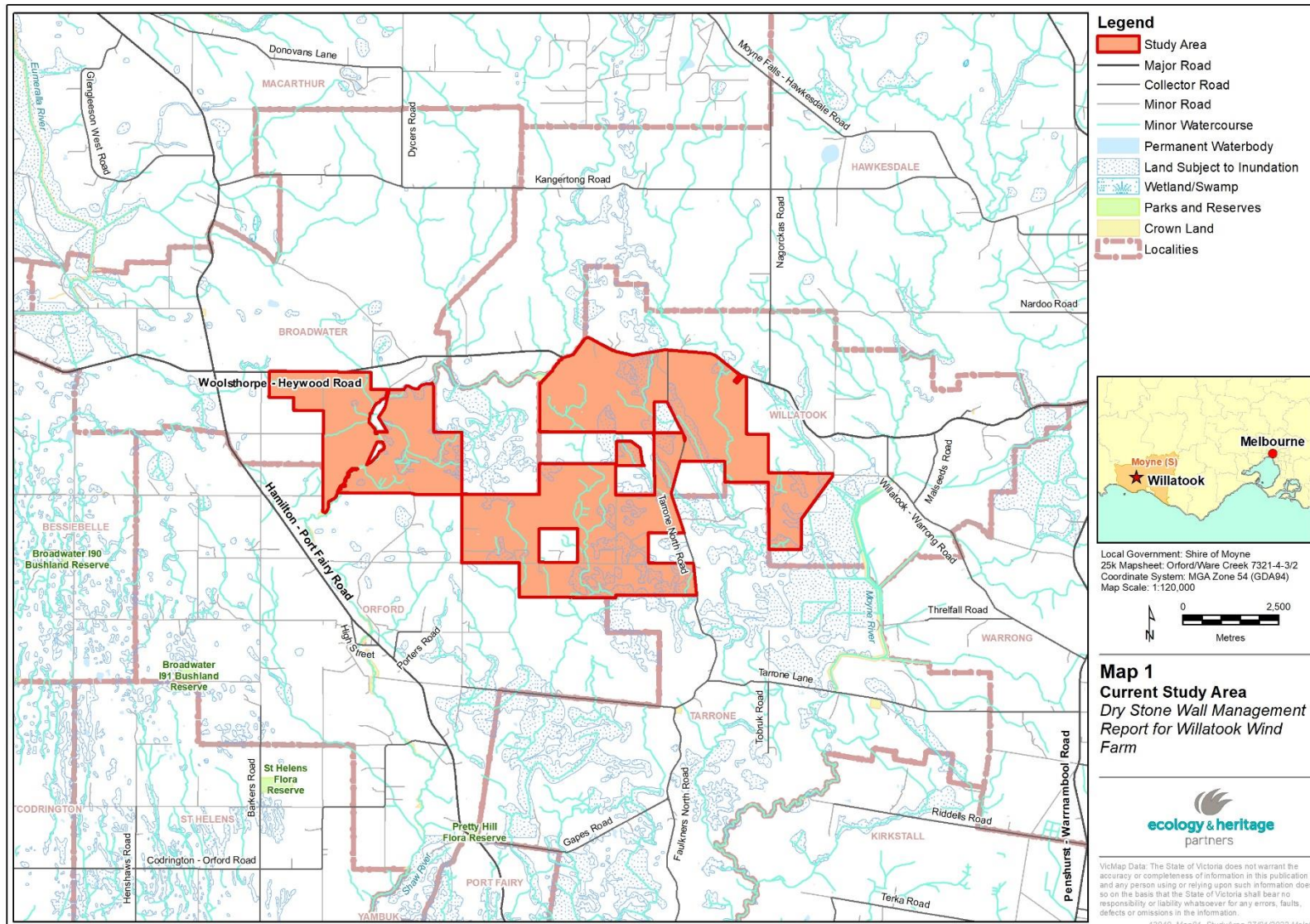
## **7.4 Standard of Construction**

The walls are generally of very refined and in specialist technique and also have a course of cope stones.

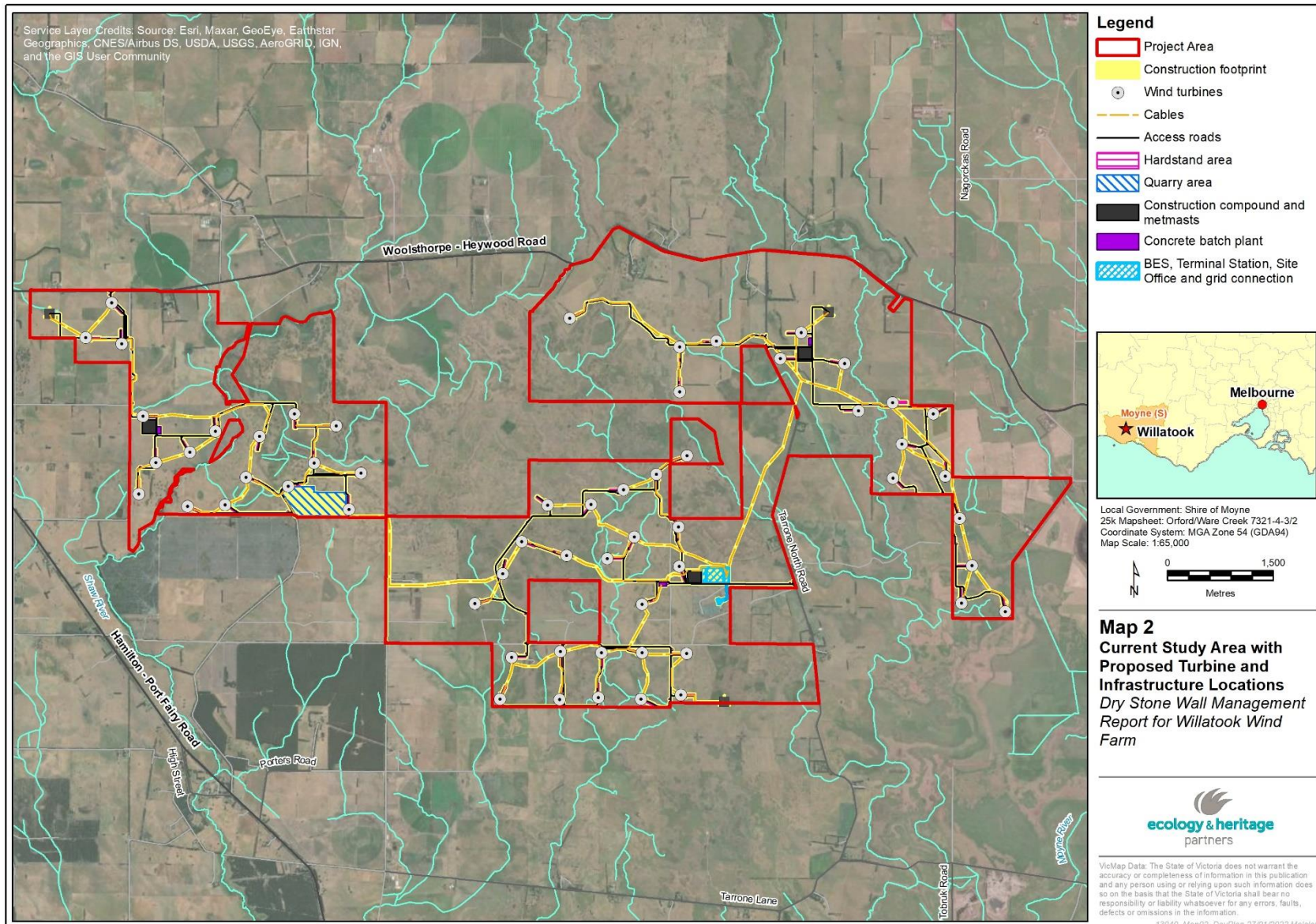
If for any reasons that any of the walls is affected by current development and requires reconstruction, the reconstruction should respect the techniques initially used in the construction of the walls and be undertaken by an appropriately experienced dry stone waller.

## MAPS

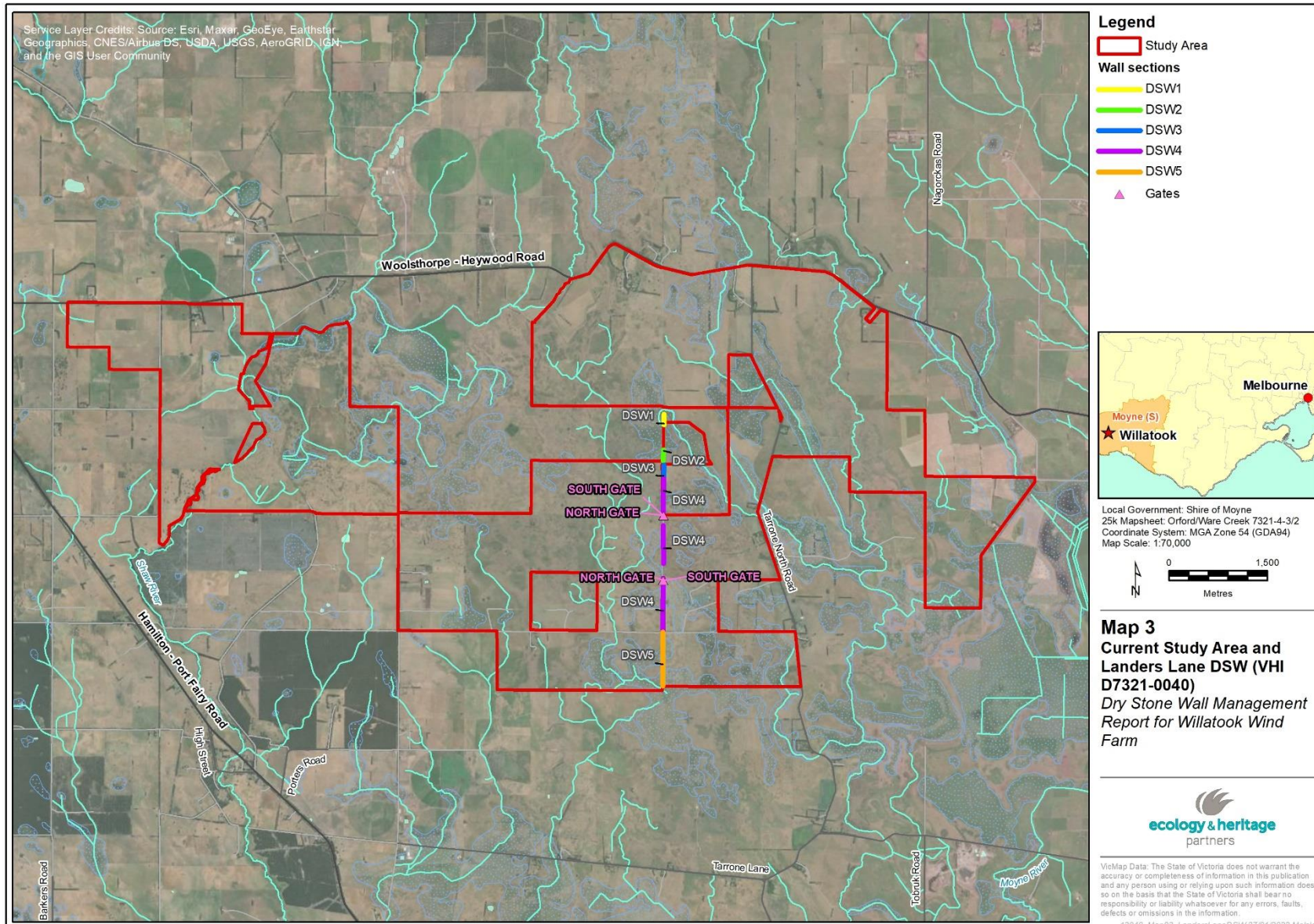
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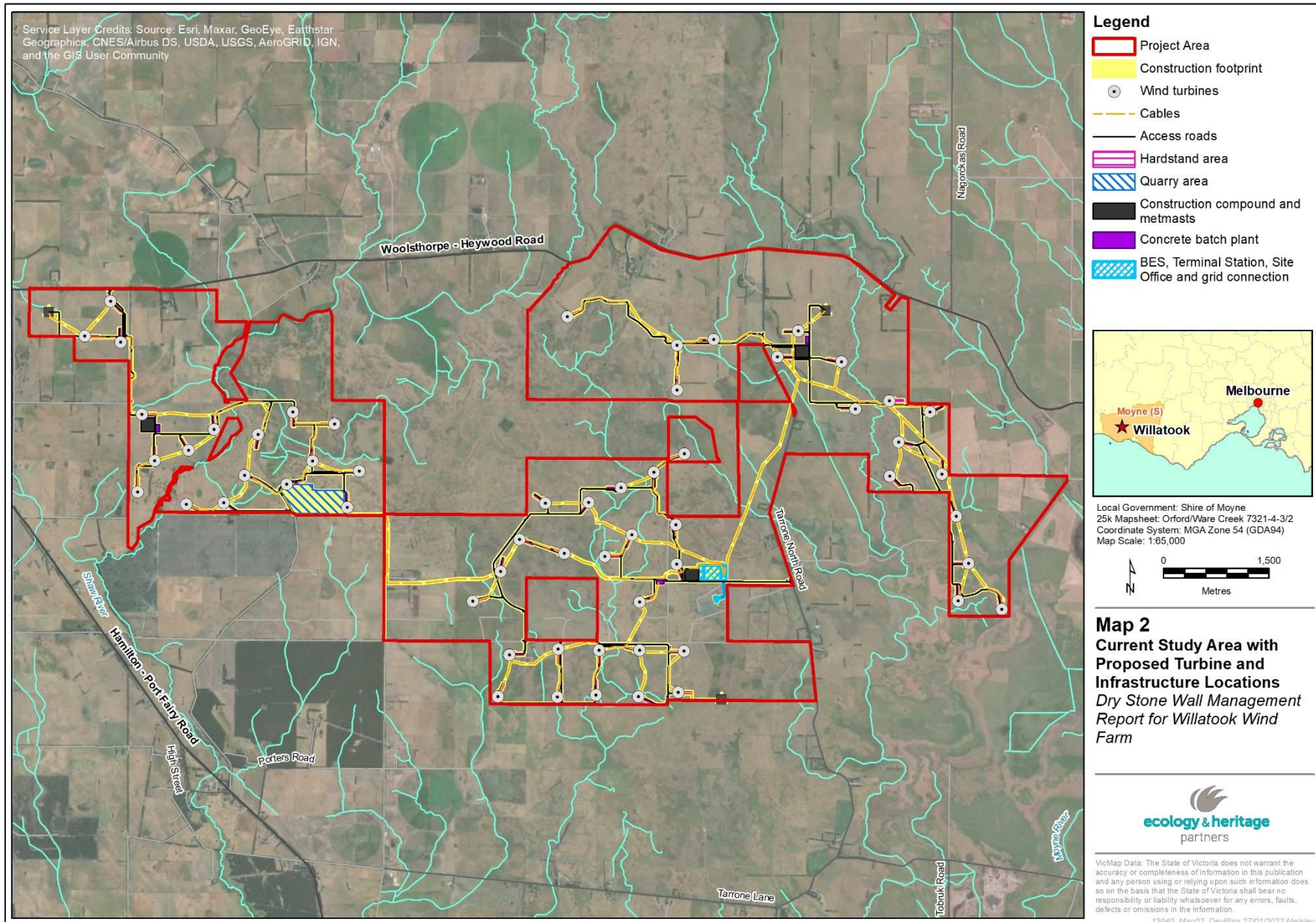




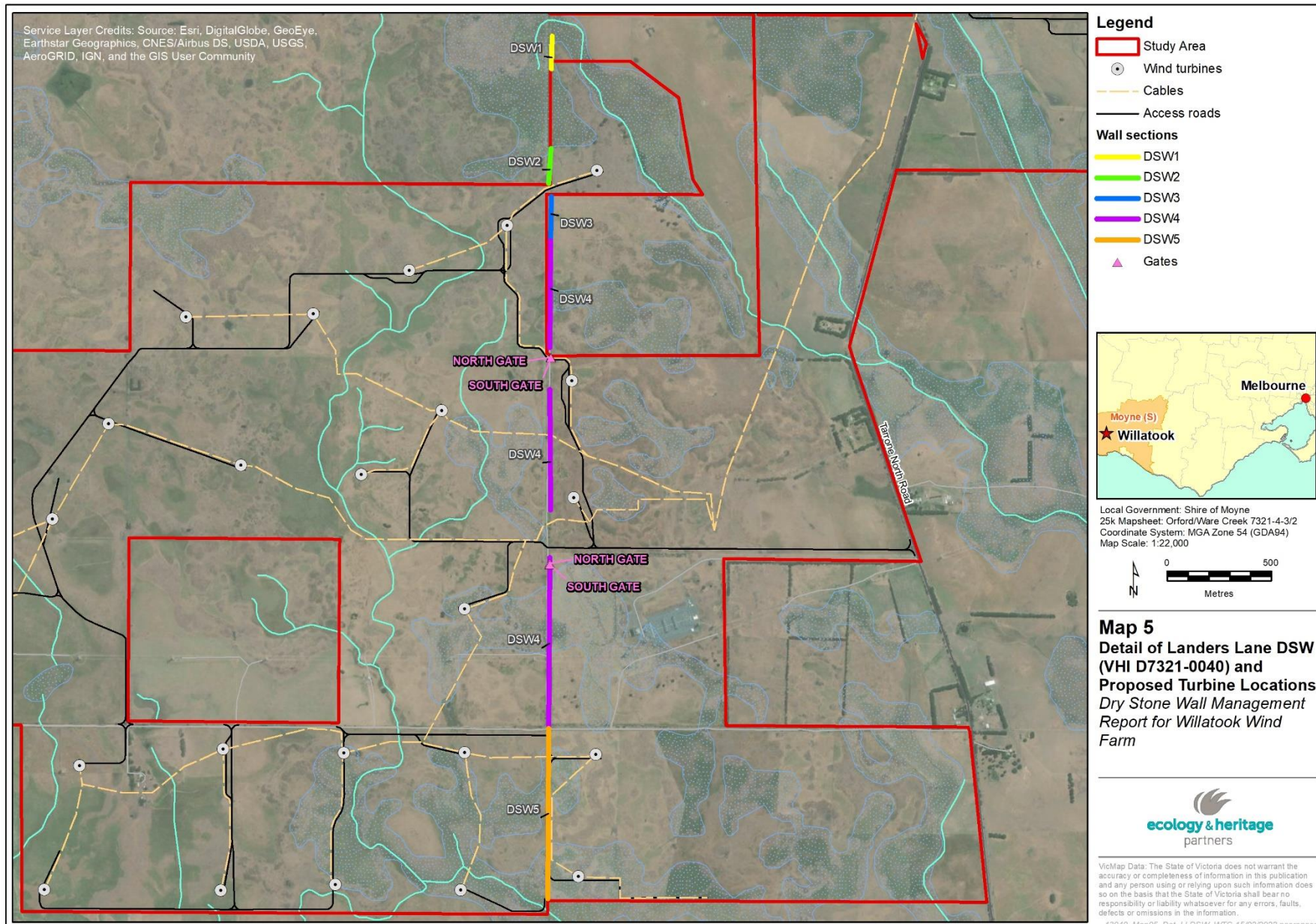












## APPENDICES

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## Appendix 1: Heritage Legislation

### A2.1 *Heritage Act 2017 (State)*

The Victorian *Heritage Act 2017* (the Act) is administered by Heritage Victoria (HV) and is the Victorian Government's key piece of historical heritage legislation.

The Act identifies and protects heritage places and objects that are of significance to the State of Victoria including:

- Historic archaeological sites and artefacts;
- Historic buildings, structures and precincts;
- Gardens, trees and cemeteries;
- Cultural landscapes;
- Shipwrecks and relics; and
- Significant objects.

#### *The Victorian Heritage Register*

The Victorian Heritage Register (VHR) lists the State's most significant heritage places and objects. These can be searched on the Victorian Heritage Database.

The Heritage Council determines what places and objects are included and only those places and objects of outstanding significance are added. The process for adding a place or object is a considered one.

A place or object cannot be added to the Register before the Heritage Council seeks the views of the owner. If a heritage place or object is recommended to the Register, then owners are given a report that includes a statement of cultural heritage significance, a proposed extent of registration, and any proposed activities that may not require a permit.

A heritage object can include furniture, shipwreck relics, archaeological artefacts, equipment, transport vehicles, and articles of everyday use that contribute to an understanding of Victoria's history. Objects can be registered in association with heritage places, or in their own right.

#### *The Victorian Heritage Inventory*

Under Section 121 of the *Heritage Act 2017*, the Victorian Heritage Inventory (VHI) records all places or objects identified as historic archaeological sites, areas or relics, all known areas where archaeological relics are located, all known occurrences of archaeological relics and all persons known to be holding private collections of artefacts.

Under Section 127 of the *Heritage Act 2017* it is an offence to damage or disturb an archaeological site or relic, irrespective of whether it is listed on the Heritage Inventory or Heritage Register.

Under Section 129 of the *Heritage Act 2017* a Consent from Heritage Victoria is required if a person wishes to:

- a) Uncover or expose an archaeological relic;
- b) Excavate any land for the purpose of discovering, uncovering or moving an archaeological relic; or

- c) Deface or damage or otherwise interfere with an archaeological relic or carry out an act likely to endanger an archaeological relic; or
- d) Possess an archaeological relic for the purposes of sale; or
- e) To buy or sell an archaeological relic.

Any application for a consent to the Executive Director must be accompanied by the prescribed fee. Various classes of works apply to the application fees. The Heritage Council may waive the fees if it is satisfied that the activities to which the application relates:

- a) Are for the purposes of conservation or protection of the archaeological relic; or
- b) Are to assist in relevant anthropological, archaeological, ethnographic; historical or scientific research; or
- c) Are to educate the public as to the cultural heritage significance of the archaeological relic in its context; or
- d) Are for the safety of the public; or
- e) Are the same, or primarily the same, as those for which a consent has previously been issued to an applicant in relation to that registered place or registered object.

Up until late 2009, Heritage Victoria had a 'D' classification for places that are considered to have low historical or scientific significance. These sites are listed on the Victorian Heritage Inventory but are not subject to statutory protection, therefore there is no requirement to obtain a Consent to Disturb or destroy these sites. Heritage Victoria has requested that a letter be sent to them informing them if 'D' listed sites or places are destroyed to maintain records of these destroyed sites.

## **A2.2 *Planning and Environment Act 1987 (State)***

All municipalities in Victoria are covered by land use planning controls which are prepared and administered by State and local government authorities. The legislation governing such controls is the *Planning and Environment Act 1987*. Places of significance to a locality can be listed on a local planning scheme and protected by a Heritage Overlay (or other overlay where appropriate). Places of Aboriginal cultural heritage significance are not often included on local government planning schemes.

## **A2.3 *Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)***

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a national framework for the protection of heritage and the environment and the conservation of biodiversity. The EPBC Act is administered by the Australian Government Department of Environment and Energy (DAWE). The Australian Heritage Council assesses whether or not a nominated place is appropriate for listing on either the National or Commonwealth Heritage Lists and makes a recommendation to the Minister on that basis. The Minister for the Environment, Water, Heritage and the Arts makes the final decision on listing. DAWE also administers the Register of the National Estate.

The objectives of the EPBC Act are:

- To provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance;
- To promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources;
- To promote the conservation of biodiversity;
- To provide for the protection and conservation of heritage;
- To promote a cooperative approach to the protection and management of the environment involving governments, the community, land-holders and indigenous peoples;
- To assist in the cooperative implementation of Australia's international environmental responsibilities;
- To recognise the role of indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity; and
- To promote the use of indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.

#### **A2.5 Coroners Act 2008 (State)**

The Victorian *Coroners Act 2008* requires the reporting of certain deaths and the investigation of certain deaths and fires in Victoria by coroners to contribute to the reduction of preventable deaths. Of most relevance to heritage is the requirement for any "reportable death" to be reported to the police (s. 12[1]). The *Coroners Act 2008* requires that the discovery of human remains in Victoria (s. 4[1]) of a person whose identity is unknown (s. 4[g]) must be reported to the police.

## Appendix 2: Significance Assessment

### A4.1. The ICOMOS Burra Charter

The standard for determining significance of places is derived from an international formula developed by ICOMOS (International Council on Monuments and Sites). In Australia, the Burra Charter has been developed by ICOMOS which is a Charter for the Conservation of Cultural Significance (Australia ICOMOS 1999).

The Burra Charter defines cultural significance as “aesthetic, historic, scientific, social or spiritual value for past, present or future generations” (Australia ICOMOS 1999: Section 1.2). Cultural significance is a concept which helps in estimating the value of places. The Burra Charter Cultural Significance Guidelines definitions of the values implicit in assessing cultural significance are as follows (Australia ICOMOS 1999):

**Aesthetic value:** Aesthetic value includes aspects of sensory perception for which criteria can and should be stated. Such criteria may include consideration of the form, scale, colour, texture and material of the fabric; the smells and sounds associated with its place and use.

**Historic value:** historic value encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all the terms set out in this section.

A place may have historic value because it has influenced, or has been influenced by, an historic figure, event, phase or activity. It may also have historic value as the site of an important event. For any given place the significance will be greater where evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of subsequent treatment.

**Scientific value:** The scientific or research value of a place will depend upon the importance of the data involved, on its rarity, quality or representativeness, and on the degree to which the place may contribute further substantial information.

**Social value:** Social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiment to a majority or minority group.

### National Historic Themes

It is noted that when assessing historic values that the use of historic themes is of benefit. Historic themes are used by heritage professionals to assist in understanding the meanings and connections that historic places may have in addition to the physical fabric of a place. Themes can help explain how particular elements of a place are significant because of their ability to illustrate important aspects of its history (Australian Heritage Commission 2001). The nine theme groups that are most commonly used nationally are:

Theme 1	Tracing the evolution of the Australian environment
Theme 2	Peopling Australia
Theme 3	Developing Local, Regional and National economies
Theme 4	Building settlements, towns and cities
Theme 5	Working
Theme 6	Educating
Theme 7	Governing
Theme 8	Developing Australia's cultural life
Theme 9	Marking the phases of life

These theme groups are further expanded into more focussed sub-themes which will not be expanded on here. The themes are intended to be non-hierarchical and a historic place may have a number of themes, which reflects how we look at the past, allowing for an integrated, diverse and complex human experience (Australian Heritage Commission 2001).

#### **A4.2. The *Heritage Act 2017* Criteria**

The *Heritage Act 2017* defines eight criteria against which cultural heritage significance can be assessed. These criteria are used to assist in determining whether places of potential State significance should be included in the Heritage Register. They are as follows:

Criterion A	The historical importance, association with or relationship to Victoria's history;
Criterion B	Good design or aesthetic characteristics;
Criterion C	Scientific or technical innovations or achievements;
Criterion D	Social or cultural associations
Criterion E	Potential to educate, illustrate or provide further scientific investigation in relation to Victoria's cultural heritage;
Criterion F	Importance in exhibiting a richness, diversity or unusual integration of features;
Criterion G	Rarity or uniqueness of a place or object; and
Criterion H	The representative nature of a place or object as part of a class or type of places or objects.

In addition, it is appropriate when assessing the significance of a site in Victoria to consider whether it is of Local, Regional or State (or potentially National) significance.

#### **A4.3. Scientific Significance**

Scientific significance of a heritage place (particularly archaeological sites) is also assessed in Victoria using a commonly accepted formula developed by Bowdler (1981) and Sullivan and Bowdler (1984). These are relative estimates of significance based on the current knowledge available about sites or places in a region. The assessment uses three criteria; site contents, site condition and representativeness.

#### **Site Contents Rating**



- 1 No cultural materials remaining.
- 2 Site contains a small number (e.g. 0-10 artefacts) or limited range of cultural materials with no evident stratification.
- 3 Site contains:
  - a. A larger number, but limited range of cultural materials; and/or
  - b. Some intact stratified deposit.
- 4 Site contains:
  - a. A large number and diverse range of cultural materials; and/or
  - b. Largely intact stratified deposit; and/or
  - c. Surface spatial patterning of cultural materials that still reflect the way in which the cultural materials were laid down.

### Site Condition Rating

- 0 Site destroyed.
- 1 Site in a deteriorated condition with a high degree of disturbance but with some cultural materials remaining.
- 2 Site in a fair to good condition, but with some disturbance.
- 3 Site in an excellent condition with little or no disturbance. For surface artefact scatters this may mean that the spatial patterning of cultural material still reflects the way in which the cultural materials were laid.

### Representativeness

Representativeness refers to the regional distribution of a site type. It is assessed on whether the site type is common, occasional or rare within a given region. Current knowledge on the number of and distribution of archaeological sites in a region can change according depending on the extent of previous archaeological investigation.

The assessment of representativeness also takes into account the contents and condition of a particular site. An example is that in any region, there may be a limited number of sites of a particular type, which have been subject to minimal disturbance. These sorts of undisturbed sites (containing in situ deposits) would therefore be given a high significance rating for representativeness.

The **representativeness ratings** used for archaeological sites are:

- 1 Common occurrence
- 2 Occasional occurrences
- 3 Rare occurrences

### Overall Scientific Significance Rating

An overall scientific significance rating is assigned to the site based on a cumulative score from the assessment. This results in one of the following ratings being assigned for scientific significance:

- 1-3 Low
- 4-6 Moderate

7-9      High

## Appendix 3: Glossary

Adapted from Vines (1990a); Paynter (2002: 51), Black and Miller (2017: 101) and Pickard (2009).

Items highlighted in ***bold italics*** in the definition are defined elsewhere in the glossary.

Acronym	Description
Batter	The inward taper of the wall from base to top.
Building stone	The facing stone that forms the outside of the wall; cf. <i>plugging, through stones, coping stones</i> .
Chain	A traditional unit of measurement of 22 yards or about 20 m.
Clearance consumption wall or	A very thick section of wall built primarily to consume stone cleared from the fields.
Cap stone	See <i>coping stones</i> .
Cope/Coping	See <i>coping stones</i> .
Coping stones	Large stones placed along the top of a wall to provide stability to the structure.
Course	Stones that are levelled to make a regular line.
Coverband	A layer of <i>through stones</i> placed on top of the standard wall to anchor it and to sometimes form the base for the <i>coping</i> .
Doubling or double walling	Wall construction with two parallel walls of stone filled with small stone and rubble between ( <i>hearting</i> ); cf. <i>singling</i> .
DoEE	Department of the Environment and Energy. The Commonwealth Government department responsible for management of heritage places on Commonwealth land or listed on the <i>WHL</i> , <i>NHL</i> or <i>CHL</i> .
DELWP	Department of Environment, Land, Water and Planning. The Victorian State Government department, of which HV is a part, responsible for management of natural and historical (non-Aboriginal) heritage in Victoria.
Dropper	A light vertical component supported by the line wires in a post-and wire fence, and not embedded in the ground. They serve several functions: to keep the wires spaced, to provide a visible signal that a fence exists, and to minimise the use of posts, saving costs. Droppers come in various cross-sections and shapes, made of folded sheet metal, formed wire, or wood (either sawn, split or round), and wire twitches (or braces/laces).
Dry stone wall	A stone wall that has been constructed without mortar (or other such binding material between the stones).
End Assemblies	A combination of two or more <i>strainer posts</i> reinforced with horizontal braces and sloping struts, designed to provide a solid anchor for the strain and for gates and corners. These now replace the use of single strainer posts.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
Face	Vertical or <i>battered</i> outside surface of a wall.
Fence	generic term for a barrier including post and rail, wire, and dry stone walls.
Fill	See <i>hearting</i> .
Footings	See <i>foundation</i> .
Foundation	The first layer of stone at the base of the wall, often set in an excavated trench.
Gap	A breach in a dry stone wall due to defect or damage.
Head	The smooth, vertical end of a wall or section of wall.

Hearting	Small stone and rubble used to fill the cavity between the two outside surfaces of <i>double walling</i> .
HO	Heritage Overlay. A list of Heritage Places of local significance with statutory protection under a local government planning scheme.
HV	Heritage Victoria. A division of <i>DTPLI</i> responsible for management of historical heritage in Victoria.
Lintel	A stone slab placed over an opening (e.g. <i>smoot</i> ) to bridge it and support the structure above.
Lunky	See <i>smoot</i> .
Pinning	See <i>plugging</i> .
Plugging	Small stone used to fill the gaps in the outside surface of a wall; sometimes deliberately broken to fit.
Post	A vertical rigid fence component used to support fence wires, rails, woven wire or netting, etc. The essential features are rigidity, verticality, and being firmly embedded in the ground; cf <i>strainer post</i> .
Post-and-Wire Fence	A fence where the dominant horizontal components are wire (either plain or barbed), but not netting or prefabricated/fabricated/woven fencing. The wires may run through holes in the posts or be attached using a range of staples and ties. Commonly referred to as a “wire fence.”
PSP	Precinct Structure Plan. A master plan to guide development in a specified section of one of Melbourne’s growth areas (cf. <i>MPA</i> ).
Running joints	Joints between the stones that run further than two courses without being crossed by another stone.
Singling	A wall having a width of a single rock; i.e. one rock is visible on both sides of the wall and gaps between <i>courses</i> or <i>building stones</i> may be ‘see-through’; cf. <i>Doubling</i> .
Smoot	A hole through a wall for passage of stock, drainage, etc. there are many regional variations for this term.
Star Picket	The most common steel post used in Australia, featuring a 120° separation of the three webs, giving a star-like cross section.
Strainer Post	A large post deeply embedded in the ground to which the wires are anchored. When the fence is trained, most of the tension is taken by the strainer post. Generally replaced with <i>end assemblies</i> in modern fences.
Through stone	A long stone placed through the wall from one side to the other to tie the sides of <i>double walling</i> together.
Top stones	See <i>coping stones</i> .
VHI	Victorian Heritage Inventory. A register of places and objects in Victoria identified as historical archaeological sites, areas or relics, and all private collections of artefacts, maintained by <i>HV</i> . Sites listed on the VHI are not of State significance but are usually of regional or local significance. Listing on the VHR provides statutory protection for that a site, except in the case where a site has been “D-listed”.
VHR	Victorian Heritage Register. A register of the State’s most significant heritage places and objects, maintained by <i>HV</i> . Listing on the VHR provides statutory protection for that a site.
Wall head	Vertical end of a wall created where large stones are alternated into and along the wall to provide stability.

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