



Murra Warra Wind Farm
Quarry Management Plan
Final

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PLANNING AND ENVIRONMENT ACT	
YARRIAMBICK PLANNING SCHEME	
PERMIT NO. PA1600128	
ENDORSED PLAN	
SHEET 1	OF 15
SIGNED 	FOR
MINISTER FOR PLANNING	
DATE: 15/8/17	

ENDORSED TO COMPLY WITH CONDITION 50 OF PLANNING PERMIT PA1600128

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Revision History

Issue	Date	Author	Nature And Location Of Change
01	30 Mar 2017	Kevin Garthwaite	First Created

The drawings and/or site plans included in this plan are based on layouts submitted by MWWF as part of its planning application for the Murra Warra Wind Farm project. The wind farm permits, (HRCC: PA1600127, YSC: PA1600128 and YSC PA1600129) allow actual locations of wind turbines to be subject to final micro siting up to 100 m and/or minor changes to access track locations and associated plant, equipment and construction facilities, within the boundary of existing constraints and as defined by the permits. The development can also be constructed in stages.

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Contents

1	INTRODUCTION	4
1.1	Objectives	4
2	POLICY AND STATUTORY CONTEXT	6
2.1	State legislation	6
2.2	Relevant standards and guidelines	6
2.3	Licenses, approvals and permits	6
2.4	Liaison with key stakeholders	6
3	ENVIRONMENTAL OBJECTIVES	6
3.1	Erosion and sedimentation	6
3.2	Hazardous waste	7
3.3	Noise	7
3.4	Dust	7
4	EXISTING CONDITIONS AT THE SITE.....	7
4.1	Existing environment	7
5	RISKS AND POTENTIAL IMPACTS	8
5.1	Erosion and sedimentation	8
5.2	Flora and fauna	8
5.3	Air Quality	8
5.4	Noise and vibration	8
5.5	Land and groundwater	8
5.6	Waste management	8
5.7	Storage and handling of fuels and chemicals	9
5.8	Neighbourhood management and communication	9
6	MANAGEMENT MEASURES	9
6.1	General	9
6.2	Erosion control	9
6.3	Flora and fauna protection	9
6.4	Air Quality	10
6.4.1	Dust	10
6.5	Noise and vibration	10
6.5.1	Noise from quarry operations	10
6.5.2	Vibration from blasting	10
6.6	Land and groundwater contamination management	11
6.7	Waste management and minimisation	11
6.7.1	Effluents	11
6.7.2	Hazardous waste	11

6.8	<i>Storage and handling of fuels and chemicals</i>	12
6.9	<i>Neighbourhood management and communication</i>	12
6.10	<i>Visual amenity</i>	12
7	MONITORING, REPORTING AND AUDIT PROGRAM	12
7.1	<i>Monitoring and reporting</i>	12
7.1.1	<i>Erosion and sedimentation</i>	12
7.1.2	<i>Hazardous waste</i>	12
7.1.3	<i>Dust</i>	12
7.1.4	<i>Noise</i>	13
7.2	<i>Audit program</i>	13
8	GLOSSARY AND ABBREVIATIONS.....	14
9	REFERENCES	14

1 INTRODUCTION

The Quarry Management Plan has been prepared for the Murra Warra Wind Farm (MWWF) as part of the overall Environmental Management Plan (EMP in response to planning permit conditions issued by the Minster for Planning, PA1600128.

In accordance with the planning permit condition 50, the EMP must include a Quarry Management Plan, which must be submitted to and approved by the Responsible Authority.

The requirements for this Quarry Management Plan are set out in the planning conditions presented in Table 1, which also includes references to sections in this plan.

Table 1: Relevant planning permit conditions from PA1600129 (YSC).

Condition Number	Abbreviated condition details	Plan Section/s
50.a.	Overall environmental objectives for the operation of the use and techniques for their achievement.	3
50.b.	Procedures to ensure that no significant adverse environmental impacts occur as a result of the development and use.	6
50.c.	Identification of possible risks of operational failure and response measures to be implemented including: <ul style="list-style-type: none"> i. Erosion Control ii. Flora and Fauna Protection iii. Air Quality iv. Noise and Vibration v. Land and Groundwater Contamination Management vi. Waste Management and Minimisation vii. Storage and Handling of Fuels and Chemicals viii. Neighbourhood Management and Communication 	5 & 6
50.d.	Day to day management requirements for the use.	6.1
50.e.	An annual review or audit to the satisfaction of the Responsible Authority, with any consequential changes to the Environmental Management Plan submitted to the Responsible Authority for endorsement.	7.2

1.1 Objectives

The objectives of this Quarry Management Plan are to:

- Stipulate management guidelines to be employed on site
- Identification of risks and potential impacts
- Describe the management measures and procedures to be implemented
- Outline monitoring, reporting and audit requirements.

2 POLICY AND STATUTORY CONTEXT

2.1 State legislation

This management plan has been developed in accordance with the following legislation:

- *Environmental Protection Act 1970* (Vic)
 - State Environment Protection Policy (Ambient Air Quality) (SEPP AAQ)
 - SEPP (Air Quality Management) (SEPP AQM)
 - SEPP (Prevention and Management of Contamination of Land)
 - SEPP (Groundwaters of Victoria)
 - SEPP (Control of Noise from Commerce, Industry and Trade)
 - SEPP (Waters of Victoria).

2.2 Relevant standards and guidelines

There are several guidelines that are used in Victoria to assist in determining the level of management necessary to meet SEPP requirements. These include:

- Department of Primary Industries, 2010, Extractive Industry Work Plan Guideline
- EPA Victoria, 1996, Environmental Guidelines for Major Construction Sites, Publication 480.

2.3 Licenses, approvals and permits

- Yarriambiack Shire Permit No: PA 1600128

2.4 Liaison with key stakeholders

Relevant agencies and stakeholders have been consulted with regard to any specific approval requirements in relation to this plan.

3 ENVIRONMENTAL OBJECTIVES

The environmental objectives for the Quarry Management Plan are outlined below. Techniques for the achievement of these objectives are outlined in Section 7.

3.1 Erosion and sedimentation

Manage impacts in accordance with the following legislation:

- *Environmental Protection Act 1970* (Vic)
 - SEPP (Waters of Victoria).

3.2 Hazardous waste

Manage impacts in accordance with the following legislation:

- *Planning and Environment Act 1987* (Vic)
 - SEPP (Prevention and Management of Contamination of Land)
 - SEPP (Groundwaters of Victoria).

3.3 Noise

Manage impacts in accordance with the following legislation:

- *Environmental Protection Act 1970* (Vic)
 - Guidelines - Noise from Industry in Regional Victoria (EPA Victoria 2011).

3.4 Dust

Manage impacts in accordance with the following legislation:

- *Environmental Protection Act 1970* (Vic)
 - SEPP AAQ
 - SEPP AQM.

4 EXISTING CONDITIONS AT THE SITE

4.1 Existing environment

The project site is located on the Wimmera Plains to the north of Horsham.

The project site is generally very flat with broad acre cropping land. Native vegetation has been mostly removed from the landscape, and is now limited to road reserves, scattered paddock trees and small remnant patches.

There are no designated waterways within the site. The groundwater table is in the order of 30 m below the existing ground surface.

Existing infrastructure across the site includes a main 220 kV electricity grid line which bisects the site from north to south and forms part of the main Victorian 220 kV grid infrastructure.

There is one former rehabilitated quarry located in the north of the site close to the site of the proposed new quarry and terminal station.

The road network comprises one sealed road, the Dimboola-Minyip Road which bisects the site east to west. This road intersects with the C321 Blue Ribbon Road to the west of the site and the B200 Henty Highway to the east. The regularly shaped paddocks are accessed by a network of unpaved and largely unformed roads.

5 RISKS AND POTENTIAL IMPACTS

5.1 Erosion and sedimentation

Hazard	Source	Receptor
Erosion and sedimentation	Overburden mounds and topsoil stockpiles	Surface water Biodiversity Private property

5.2 Flora and fauna

Hazard	Source	Receptor
Removal of native vegetation	Excavation	Biodiversity

5.3 Air Quality

Hazard	Source	Receptor
Dust/Air emission	Processing plant Trucks Extraction equipment	Amenity

5.4 Noise and vibration

Hazard	Source	Receptor
Noise	Processing plant Trucks Extraction equipment	Amenity

5.5 Land and groundwater

There are no designated waterways within the site.

Given the approx. 31m depth of the groundwater at the site, ground water will not be intercepted by the quarry excavations.

5.6 Waste management

Hazard	Source	Receptor
Hazardous waste	Plant & equipment Fuel / additive storage	Groundwater Surface water

5.7 Storage and handling of fuels and chemicals

Hazard	Source	Receptor
Hydrocarbon and hazardous substance	Plant & equipment Fuel / additive storage	Groundwater Surface water

5.8 Neighbourhood management and communication

Hazard	Source	Receptor
Noise Dust	Processing plant Trucks Extraction equipment	Amenity

6 MANAGEMENT MEASURES

6.1 General

The following day to day management requirements will implemented at the quarry:

- Daily visual inspections
- Minimisation of vehicle movements and speed within work site
- Water spraying as necessary.

6.2 Erosion control

Erosion and sediment control methods to be adopted in the quarry will be:

- Temporary overburden mounds and topsoil stockpiles are to be protected from erosion by contouring to minimize water runoff velocity
- Topsoil mounds are to be seeded as soon as possible
- Construction of water diversion drains around undisturbed areas
- Temporary sediment traps and silt fences are required
(Given the high evaporation rates and low rain fall it is not expected that there will be a need to discharge water from the site)
- Overburden Dumps restricted to work area boundaries away from Native Vegetation areas.

6.3 Flora and fauna protection

No native vegetation will be removed as part of the extraction process. The quarry works shall not extend within a 15m setback of all native vegetation.

There is no known fauna of any significance on or adjoining the subject land.

6.4 Air Quality

6.4.1 *Dust*

Dust will be primarily controlled in and around the quarry and processing plant by using water. Water sprays will operate in the plant on screens, crushers, internal direction change points and conveyor discharge points as required. A water cart will be in operation around the processing area.

Unsealed roads will be watered to control dust.

Speed limits on all site roads will be enforced to further control dust.

Seeding of exposed surfaces which will be unused for some time will be undertaken to reduce windblown dust.

If weather conditions, such as strong winds, are causing visible dust to be discharged beyond the site boundaries, water spraying activities will be increased. If water spraying is unable to control dust leaving site, quarrying activities will cease until calmer wind conditions.

6.5 Noise and vibration

6.5.1 *Noise from quarry operations*

Operational noise within the quarry will comply with the requirements of Noise from Industry in Regional Victoria (EPA Victoria, 2011) and outlined in *Murra Warra Wind Farm Construction Noise Management Plan (Sonus March 2017)* which forms part of the Environmental Management Plan.

All engine powered equipment will be fitted with mufflers and spark arresters and the equipment maintained to be fully effective at all times. The main sources of noise are expected to be from the processing plant, trucks and extraction equipment. All heavy machinery will be fitted with mufflers and will be maintained to be operating efficiently at all times.

Noise from the quarrying operations can be monitored at the direction of the Department of Primary Industries (DPI) to ensure that the site complies with the limits prescribed in the policy. Operational noise will be monitored at specific locations around the quarry to ensure noise levels are within Occupational Health and Safety limits.

6.5.2 *Vibration from blasting*

No blasting is expected to be required for the sandstone materials.

6.6 Land and groundwater contamination management

Given the approx. 31m depth of the groundwater at the site, groundwater will not be intercepted by the quarry excavations.

All surface water from within the disturbed area of the excavation area will be directed to a sump on the quarry floor, and is expected to soak away and evaporate over time. Given the high evaporation rates and low rain fall it is not expected that there will be a need to discharge water from the site.

In the event that the storage capacity of the sump is reached, management will implement a contingency plan for the removal of the accumulated water to the adjacent channel and surrounding land, via a constructed sediment basin.

Cut off drains will be placed on site, if and when required, to direct any other surface water away from the extraction area.

6.7 Waste management and minimisation

6.7.1 *Effluents*

All waste products from the quarry operations are to be disposed of in an appropriate manner:

- Silt removed from silt traps and settling dams will be incorporated into product stockpiles or soil and overburden materials for use in rehabilitation
- Waste from the amenities building will be contained in an approved septic tank system which will be regularly inspected and cleaned out
- Non-industrial waste will be collected in designated bins and be regularly removed by a contractor
- Scrap metal from maintenance works performed on the plant and equipment will be deposited into a designated skip and removed for recycling to a nearby scrap yard
- Waste oil will be stored on the site and removed by an EPA Victoria accredited contractor who will also remove all oil drums, oil filters, grease cartridges and oily rags as required
- All old redundant tyres will be removed by the supplier of replacement tyres and disposed of appropriately.

6.7.2 *Hazardous waste*

- All fuel and plant additive (e.g. oils) storage will be outside work area, located within the Construction Compound of the wind farm, adjacent to quarry
- All re-fuelling of mobile plant will occur outside work area within Construction Compound
- Fix plant will be fuelled with mobile fuel truck.

6.8 Storage and handling of fuels and chemicals

The storage, usage and handling of Hydrocarbon and Hazardous Substances (HHS) will be managed according to AS1940:2004 and AS3833:2007. HHS brought onto site will have a known classification and incompatible materials will be segregated for storage.

HHS will be labelled according to signage designated by the Globally Harmonised System of Classification and Labelling of Chemicals.

6.9 Neighbourhood management and communication

Stakeholders will be communicated with on a regular basis.

Any complaints received will be managed through procedures outlined in the approved Complaint Management and Response Plan (CMRP).

6.10 Visual amenity

The quarry will be generally hidden from nearby dwellings and roads due to the flat local topography and existing vegetation (to be protected) surrounding the quarry. The small size and the short estimated life of the quarry, and the distance to any potential affected dwelling or road will help mitigate any perceived visual impacts.

7 MONITORING, REPORTING AND AUDIT PROGRAM

7.1 Monitoring and reporting

7.1.1 *Erosion and sedimentation*

- Weekly inspections of overburden and topsoil stockpiles
- Weekly inspections of sediment controls
- Event based inspections immediately following any significant rainfall event.

7.1.2 *Hazardous waste*

- Weekly inspections of fuel and chemical storage area
- Reporting any leak or spill through incident reporting procedure.

7.1.3 *Dust*

- Daily inspections of quarry site.
- The monitoring program (as required) could include one or more of the following:
 - dust deposition gauges
 - high volume air samplers
 - fixed location continuous ambient monitors

- occupation dust monitoring
- meteorological monitoring.

7.1.4 *Noise*

- Daily inspections of quarry site
- As specified in the *Mura Warra Wind Farm Construction Noise Management Plan (Sonus March 2017)* which form part of the Environmental Management Plan

7.2 Audit program

An annual audit will be undertaken and the findings will be reported to the Responsible Authority, with any consequential changes to the EMP submitted to the Responsible Authority for endorsement.

8 GLOSSARY AND ABBREVIATIONS

AS	Australian Standard
CMRP	Complaint Investigation and Response Plan
DPI	Department of Primary Industries
EMP	Environmental Management Plan
HHS	Hydrocarbon and Hazardous Substances
MWWF	Murra Warra Wind Farm
SEPP	State Environment Protection Policy
AAQ	Ambient Air Quality
AQM	Air Quality Management
YSC	Yarriambiack Shire Council

9 REFERENCES

Department of Primary Industries, 2010, Extractive Industry Work Plan Guideline

EPA Victoria, 1996, Environmental Guidelines for Major Construction Sites, Publication 480

EPA Victoria, 2011, Noise from Industry in Regional Victoria, Publication 1411