



Murra Warra Wind Farm
Construction Work Site Management Plan
Final

Author: Kevin Garthwaite

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Ref: 02418-006353

PLANNING AND ENVIRONMENT ACT	
<u>VARRIAMBIE</u>	PLANNING SCHEME
PERMIT NO. <u>PA160028</u>	
ENDORSED PLAN	
SHEET <u>1</u>	OF <u>13</u>
SIGNED <u>[Signature]</u>	FOR
MINISTER FOR PLANNING	
DATE: <u>15/8/17</u>	

PLANNING AND ENVIRONMENT ACT	
<u>HORSHAM</u>	PLANNING SCHEME
PERMIT NO. <u>PA160027</u>	
ENDORSED PLAN	
SHEET <u>1</u>	OF <u>13</u>
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ENDORSED TO COMPLY WITH CONDITION <u>41</u> OF PLANNING PERMIT <u>PA160027 + PA160028</u>

Revision History

Issue	Date	Author	Nature And Location Of Change
01	28 Mar 2017	Kevin Garthwaite	Final

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 could also be constructed in stages.

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Contents

1	INTRODUCTION	1
	1.1 Objectives	3
2	CONSTRUCTION AND WORKSITE MANAGEMENT	3
	2.1 Pollution Management	3
	2.1.1 Access to site	3
	2.1.2 Noise	3
	2.1.3 Dust emissions	4
	2.1.4 Spills and leaks	4
	2.1.5 Potential contaminants and hazardous materials	5
	2.1.6 Water contamination and storm water management	6
	2.1.7 Waste management procedures	6
	2.1.8 Recycling	6
	2.1.9 Concrete batching plant	7
	2.1.10 Sanitary facilities	8
	2.1.11 Construction timetable to account for seasonal conditions and impacts	8
	2.1.12 Access routes/haul roads	8
	2.1.13 Covering of trenches	9
	2.1.14 Site rehabilitation	9
3	CONCLUSION	10
4	GLOSSARY AND ABBREVIATIONS	10
5	REFERENCES	10

1 INTRODUCTION

The Construction and Work Site Management Plan (CWSMP) 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 PA1600127, PA1600128 and PA1600129.

The requirements for the CWSMP that are set out in the planning permit conditions are presented in Table 1.

Table 1: Relevant planning permit conditions from Permit No. PA1600127 (Horsham Rural City Council) and PA160129 (Yarriambiack Shire Council).

Condition Number	Abbreviated condition details	Plan Section/s
41.a.	The identification of fuels, other hazardous materials and all other potential contaminants stored or used on site during the construction phase of the wind energy facility, and appropriate storage, construction and operational methods to control any identified contamination risks.	2.1.5
41.b.	Procedures for managing potential spills and leaks and pollution incidents, including incorporation of appropriate pollution control measures outlined in EPA Publication 480 Environmental Guidelines for Major Construction Sites.	2.1.4
41.c.	Procedures to suppress dust emissions from construction -related activities. Appropriate measures may include water spraying of roads and stockpiles, stabilising surfaces, temporary screening and wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable.	2.1.3
41.d.	Procedures for managing noise emissions from construction-related activities.	2.1.2

41.e.	Criteria for the siting of any temporary concrete batching plant associated with the development of the wind energy facility and the procedure for its removal and reinstatement of the site once its use finishes. The establishment and operation of any temporary concrete batching plant must be designed and operated in accordance with EPA Publication 628 Environmental Guidelines for the Concrete Batching Industry.	2.1.9
41.f.	Appropriate sanitary facilities to be provided for construction and maintenance staff, which must be designed and operated in accordance with EPA Publication 891.2 Code of Practice - Onsite wastewater management (December 2008).	2.1.10
41.g.	Procedures to capture storm water runoff within the development site.	2.1.6
41.h.	Procedures to retain the identification of waste re-use, recycling and disposal procedures.	2.1.8
41.i.	A timetable, where practicable, for the construction of turbine bases, access tracks and power cabling during warmer months, to minimise impacts on ephemeral wetlands, local fauna and sediment mobilization.	2.1.11
41.j.	Procedures to ensure that construction vehicles and equipment use designated tracks and works areas to avoid impacts on native vegetation.	2.1.12
41.k.	Procedures to provide a buffer to protect any site of Aboriginal Cultural Heritage.	3.1.12
41.l.	Procedures for covering trenches and holes at night, and filling trenches as soon as practical after excavation, to protect native fauna.	3.1.13

41.m.	The removal of works, buildings and staging areas on completion of the construction phase of the project.	2.1.14
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In meeting the requirements of this plan it is taken that the requirements of Condition 16 of PA1600129 have also been met.

1.1 Objectives

This CWSMP aims to:

- mitigate risk of injury or illness to personnel working on site and members of the public and visitors to the site during construction
- provide guidance on environmental protection measures to be implemented on works undertaken within the work areas during construction.

2 CONSTRUCTION AND WORKSITE MANAGEMENT

2.1 Pollution Management

2.1.1 Access to site

The works shall be undertaken within the site boundary identified on the approved site plans. Areas outside of this approved area and the designated access roads shall be considered “no go” areas. Access to site will be limited to agreed site access points via approach routes as per the Traffic Management Plan. Clear signage will be displayed at access points to direct site personnel and visitors around site as required. All visitors will be required to report to the site offices and comply with the relevant induction prior to entering the greater site. Further, “no go” areas will be delineated to control access. This will include marking off areas of ecological and cultural significance.

Reference to other documentation

- Native Vegetation Management Plan
- Voluntary Cultural Heritage Management Plan
- Biosecurity Management Plan

2.1.2 Noise

Construction noise will be managed by following the Construction Noise Management Plan. This includes adhering to the construction noise limits and monitoring noise.

Reference to other documentation

- Construction Noise Management Plan

2.1.3 *Dust emissions*

Dust generation is likely to occur on site through vehicle movements, handling of soils (excavation and transport), batching plant, blasting operations (if required) as well as static soil heaps. Proactive measures will be implemented to prevent the generation of dust and where dust is generated controls implemented.

In order to minimise the generation of dust the following measures will be implemented:

- construction traffic speeds will be controlled to reduce dust generation.
- batching plants are to be supplied with and use dust curtains as practicable.
- a water cart will be used on site to manage the generation of dust during adverse weather.
- public roads will be kept free of site based materials.
- vehicle cleaning stations including wheel washes or rumble strips as deemed necessary will be used on site to minimise the spread of dirt and generation of dust from these vehicles.
- stockpiles that will remain bare for more than 28 days are to be stabilised using approved soil binders, by covering with mulch, anchored geotextiled fabrics, or seeding with sterile grass/hydroseed as approved by the Project Manager (as per the Sediment, Erosion and Water Quality Management Plan).

Dust spread during the construction phase shall be visually monitored on an ongoing basis. Where dust generation does occur, dust will be controlled by either watering down of exposed surfaces (including roads, temporary stockpiles and excavation sites etc.) or erection of a physical screen. Recycled water will be used where possible on exposed surfaces or the application of an approved suppression agent.

Reference to other documentation

- Dust Management Plan
- Sediment, Erosion and water Quality Management Plan

2.1.4 *Spills and leaks*

Handling of fuels and hazardous substances will be managed in accordance with the Hydrocarbon and Hazardous Substances Management Plan and the respective Material Safety Data Sheet (MSDS).

The management of spills and leaks will incorporate measures from EPA Victoria (1996) Publication 480 including Section 8.1 Emergency procedures and Section 8.4 Storage of chemicals and fuels.

In the event of any spills and leaks the MSDS and Hydrocarbon and Hazardous Substances Plan are to be followed.

Spill kits of sufficient type and quantity are to be available at appropriate locations across the site and personnel are to be trained in the use of these kits.

Reference to other documentation

- MSDS
- Hydrocarbon and Hazardous Substances Plan

2.1.5 *Potential contaminants and hazardous materials*

A register of all potential contaminants and hazardous materials imported to site for storage will be compiled and maintained throughout the construction and operational phases in line with the Hydrocarbon and Hazardous Substances Management Plan. This register will as a minimum identify:

- Description of material
- Storage location
- Verification exterior labelling in place
- Emergency waste management procedures
- Specialist clean up contractor contact details.

All hazardous materials shall be handled and stored in a manner which mitigates risk of spillage and accidental contamination of drainage routes. Hazardous materials will be disposed as prescribed industrial waste (PIW) and managed by an EPA Victoria accredited waste management contractor.

The procedure for guarding against potential weed contamination due to vehicle movements as outlined in the Biosecurity Management Plan will be implemented including regular surveys and remedial action.

Material shall not be stockpiled along the border of any water course or drainage line so as to prevent erosion and run off during rainy periods in line with the Sediment, Erosion and Water Quality Management Plan.

Reference to other documentation

- Hydrocarbon and Hazardous Substances Management Plan
- Sediment, Erosion and Water Quality Management Plan
- Biosecurity Management Plan

2.1.6 *Water contamination and storm water management*

A register of potential sources of contamination of the surrounding environment associated with construction and operation of the wind farm facility shall be developed and maintained along with industry standard risk mitigation techniques for each. As a minimum the list shall include the following potential pollutants:

- petrochemical fuels (diesel, petrol)
- hydraulic oils
- concrete batching components (cements, lime)
- paints
- adhesives
- soaps and detergents
- wastewater
- soil wash outs on site from excavations / spoil storage areas.

Procedures to capture storm water runoff within the site are outlined in the Sediment, Erosion and Water Quality Management Plan, in particular for the concrete batching plant and construction phase.

Reference to other documentation

- Sediment, Erosion and Water Quality Management Plan

2.1.7 *Waste management procedures*

The worksite shall be maintained in a tidy and organised manner with regard to minimising environmental impact on the site and neighbouring properties.

Waste disposal areas shall be secured in a way which guards against material dispersion, particularly in high wind conditions.

Solid waste shall not be buried or burned on site.

Solid waste shall only be disposed after considering recycling potential and only be in registered landfill facilities.

2.1.8 *Recycling*

Construction activities shall be undertaken to promote the most efficient use of resources, including resource recovery and avoids unnecessary consumption by following the hierarchy of actions below Table 2.

Table 2: Waste Management Hierarchy

Waste Management Hierarchy	Action or response
Reduce	Adopt methodologies which minimise waste production. Avoid use of disposable materials and products, in particular containers and packaging.
Reuse	Identify , separate and store or remove from site reusable packaging, construction materials and products for future use. Identify possible ways of selling waste to other organisations for their production processes. Store materials in a manner which will maintain their utility.
Recycle	Identify, separate and store materials which may be able to be reused with minor remedial treatment or be reconstituted.
Dispose	Use only approved transfer stations or landfill sites. Separate and dispose of hazardous materials in only designated facilities

Construction compounds will be set up in a way that facilitates separation of recyclable materials from the construction waste stream and induction procedures will promote the use of these by all site personnel.

2.1.9 Concrete batching plant

The siting criteria and management practices for the concrete batching plant have been developed in line with EPA Victoria (1998) Publication 628.

Key location considerations include:

- batching plant should be sited on land that is not flood prone
- vehicle access routes to the plant location must utilise established tracks
- the batching plant should be located at least 100 m from any sensitive receptors such as domestic houses, sensitive flora and fauna or other noise, dust or emission sensitive areas.

Key management considerations include:

- collection pit and recycle tank
- monitoring offsite discharges
- fuel and chemical storage.

2.1.10 *Sanitary facilities*

The appropriate number of toilets and ablution facilities shall be provided for construction and maintenance staff in accordance with the WorkSafe Victoria (2008) 'Compliance Code - Workplace amenities and work environment'. This will require an ongoing update on the actual workforce on site at any time and ensuring appropriate ratios of ablution facilities to workers are maintained.

Ablution facilities shall be established well clear of drainage routes.

Temporary/ portable toilets shall be secured to the ground to guard against movement in high wind conditions.

2.1.11 *Construction timetable to account for seasonal conditions and impacts*

Peak works on site are expected to occur when the following construction phases coincide:

- construction of internal access roads and hardstands
- laying of foundations
- electrical construction activities.

No ephemeral wetlands have been identified on the site and no special conditions have been imposed on the development with respect to protected flora and fauna. Where practical the construction program shall be refined or modified in order to minimise possible impacts on local fauna where these have been identified and sediment mobilisation that may be associated with particular construction activities under prevailing seasonal weather conditions. This may include but not be limited to:

- potential erosion due to traffic and excavation activities
- additional risk of watercourse contamination in extremely wet conditions (in particular batching plant activities)
- spread of dust in high wind conditions
- wash out from excavated materials.

2.1.12 *Access routes/haul roads*

It is proposed to construct 50 site entrances for vehicles to access the site and approximately 75 km of new on-site tracks will be constructed between the access points, wind turbines, construction compounds and substation areas.

"No go" areas will be delineated to control access. This will include areas of Cultural Heritage sensitivity as well as areas of significant native vegetation.

“No go” areas will be delineated to control access to vulnerable areas including that of native vegetation. These areas will be specified in the Cultural Heritage and Native Vegetation Management Plans.

Traffic movements on site, the contractor’s responsibilities will include, but not be limited to:

- managing on site traffic movements in a manner which mitigates risk of damage to personnel and the environment
- induction of all drivers entering the site
- traffic control and direction, particularly at times of major load movements
- ongoing maintenance of the condition of access roads
- rehabilitation with the aid of a revegetation specialist of any unauthorised damage caused to native vegetation.

Reference to other documentation

- Native Vegetation Management Plan
- Traffic Management Plan
- Voluntary Cultural Heritage Management Plan

2.1.13 *Covering of trenches*

All trenches, excavations and holes will be dug in a way that enables the egress of fauna and to avoid accidental damage and wildlife.

Trenches will be inspected at the commencement of each day and prior to backfilling to check that native fauna has not been entrapped.

The program for trenching and underground cabling activities will be staged in a way that helps minimise time open ground trenches and excavations are left exposed including scheduling of weekend work.

2.1.14 *Site rehabilitation*

At the completion of project construction, the site will be returned as close as practical to its preconstruction condition. Deviations from the preconstruction condition is to be considered in consultation with the landholders. This includes but is not limited to:

- construction plant and equipment being removed from site
- temporary facilities being removed from site and footprints rehabilitated
- construction traffic signage being removed
- construction barriers and markers being removed as soon as safe to do so
- construction waste being removed from site.

- Reinstatement of fences and existing landholder infrastructure in consultation with stakeholders

Vegetation rehabilitation will be conducted for those parts of the site that have been impacted by temporary activities, in particular:

- batching plants
- construction compounds
- temporary site offices and ablutions
- materials and spoil stockpile areas.
- Consideration will be given to reuse of facilities where requested by landholders and practical in accordance with the planning permit.

Reference to other documentation

- Native Vegetation Management plan
- Biosecurity Management Plan

3 CONCLUSION

Numerous recommendations have been proposed as part of this document with reference to many other project documents. Reference must be made to other relevant documentation to ensure most up-to-date procedures are followed.

4 GLOSSARY AND ABBREVIATIONS

CWSMP	Construction and Work Site Management Plan
EPA	Environmental Protection Authority
MSDS	Material Safety Data Sheet

5 REFERENCES

EPA Victoria (1996) 'Environmental Guidelines for Major Construction Sites'. Publication 480.

EPA Victoria (1998) 'Environmental Guidelines for the Concrete Batching Industry'. Publication 628.

EPA Victoria (2008) 'Code of Practice - Onsite wastewater management'. Publication 891.2.

WorkSafe Victoria (2008) 'Compliance Code - Workplace amenities and work environment'.