

Review of Ecological Assessments for the Hepburn Community Wind Farm, Leonards Hill, Victoria

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Our ref: 10707

1 Introduction

Ecology and Heritage Partners Pty Ltd was commissioned by Hepburn Community Wind Farm to undertake a review of the previous ecological assessments completed for the proposed Hepburn Community Wind Farm, Leonards Hill, Victoria. It is understood that the land parcel ('study area') is being considered for the construction of a solar farm to complement the existing wind farm. Accordingly, the aim of this assessment is to:

- Peer review the previous ecological assessment completed for the proposed development;
- Provide a letter to Hepburn Community Wind Farm that verifies the reports and confirms that the siting of the solar panels is in an existing area that has been previously cleared for agriculture; and
- Provide advice with respect to the Environmental Management Plan that is specific to the proposed solar farm development.
- to identify the ecological values known to, or likely to occur within the study area, and determine the potential regulatory and legislative implications associated with the proposed action.

We understand that a requirement by the Department of Environment, Land, Water and Planning (Taryn Lane, Hepburn Wind Farm, pers comms.) for the approvals process for an additional ground mounted solar system at the wind farm site is for existing ecological reports that supported the permit conditions for 2006/0321, endorsed by VCAT, to be reviewed and verified by a qualified ecologist.

2 Study Area

The study area is located at Hepburn Community Wind Farm, Leonards Hill Victoria, 2038 Ballan Daylesford Road, Leonards Hill, approximately 40 kilometres north east of Ballarat (Figure 1). The site covers approximately 10 hectares and is surrounded by agricultural land. The Wombat State Forest is 600 metres to the east and 300 metres to the south, and the Ballan Daylesford Road is to the west of the study area.

According to the Victorian Department of Environment, Land, Water and Planning (DELWP) NatureKit Map (DELWP 2018a), the study area occurs within the Central Victorian Uplands bioregion. It is located within the jurisdiction of the North Central Catchment Management Authority (CMA) and the Hepburn Shire Council municipality.

3 Methods

3.1 Desktop Assessment

Relevant literature, online-resources and databases were reviewed to provide an assessment of flora and fauna values associated with the study area. The following information sources were reviewed:

- The DELWP NVIM Tool (DELWP 2017a) and Biodiversity Interactive Map (DELWP 2017b) for:
 - Modelled data for location risk, remnant vegetation patches, scattered trees and habitat for rare or threatened species; and,
 - The extent of historic and current EVCs.
- EVC benchmarks (DELWP 2017c) for descriptions of EVCs within the relevant bioregion;
- The Victorian Biodiversity Atlas (VBA) for previously documented flora and fauna records within the project locality (DELWP 2017d);
- The Illustrated Flora Information System of Victoria (IFLISV) (Gullan 2017) for assistance with the distribution and identification of flora species;
- The Commonwealth Department of the Environment (DoEE) Protected Matters Search Tool (PMST) for matters of National Environmental Significance (NES) protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (DoEE 2017);
- Relevant listings under the Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act), including the latest Threatened and Protected Lists (DELWP 2017e; DELWP 2016);
- The Planning Maps Online (DELWP 2017f) and Planning Schemes Online (DELWP 2017g) to ascertain current zoning and environmental overlays in the study area;
- Other relevant environmental legislation and policies as required;
- Aerial photography of the study area; and,
- Previous ecological or other relevant assessments of the study area.

4 Results

4.1 Flora

A search of the VBA has resulted in records of three species listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) within a 10-kilometre radius of the study area (DELWP 2018c, DoEE 2018). The EPBC Act Protected Matters Search Tool (PMST) resulted in another nine species that are identified as having potential to occur with the study area (DoEE 2018). Additionally, there are records of 37 State significant species that have been recorded from the local area (DELWP 2018c). There were no records of significant flora in the study area (DELWP 2018c).

4.2 Fauna

the VBA contains records of five EPBC Act-listed species that have previously been recorded within a 10-kilometre radius of the study area (DELWP 2018c). The EPBC Act PMST resulted in another 16 species that have potential to occur within the study area (DoEE 2018). Additionally, there are records of 18 State significant fauna species and nine species of regional significance that have been recorded from the local area (DELWP 2018c). There have been no documented records of significant fauna species from within the study area (DELWP 2018c).

The study area is located on farmland that has been cleared for agricultural purposes (i.e. currently grazed by sheep). A notable record is Grey-headed Flying -fox *Pteropus poliocephalus*, which is subject to discussion in Hydro Tasmania (2010a), Richards (2011) and Bennett (2012). The reports note the increased usage rates of the local area for this species that has increased its range. The construction of a solar farm is likely to negatively impact this species.

Previous studies in support of planning permit 2006/0321 for the construction of the wind farm did not have any permit conditions relating to native vegetation or significant flora and fauna species and/or communities. The reports that are reviewed were commissioned in response to permit Conditions 8 and 9, which are the only ecological components of the overall permit conditions (HWF 2018). Permit condition 8(c) requires:

‘A procedure for addressing any significant impacts on bird and bat populations under the *Environment Protection and Biodiversity Conservation Act 1999* or the *Flora and Fauna Guarantee Act 1988* caused by the wind energy facility operation’.

This is addressed in Section 6 of Hepburn Community Wind Farm Bird and Bat Monitoring Plan (Hydro Tasmania 2010a).

5 Ecology Report Review

5.1 Hepburn Community Wind Farm Bird and Bat Monitoring Plan (Hydro Tasmania Consulting 2010a)

The BAM Plan outlines survey methods to be executed as well as timing and quantity of surveys pre- and post-construction. The BAM Plan also highlights the trigger for significant impacts on bird and bat communities around the windfarm and concludes that there is little likelihood of significant impacts, due to a lack of suitable habitat within the immediate vicinity of the turbine stands. The survey methods comply with best practice for BAM Plan requirements, and the timeline is outlined in Section 4.1.4 – Duration of Monitoring. Although the duration of the monitoring program is short (12 months), given the site context and the small size of the wind farm (i.e. two-turbine) this is likely to be adequate to determine impacts to avifauna. The BAM Plan has suitable reporting procedures and outlines appropriate mitigation triggers (e.g. Bird and bat collision reporting, Threatened species collision reporting and bird and bat monitoring). Overall, the Plan is not detailed, and could have included more desktop data pertaining to the likely utilisation rates of bat and bird species. However, the Plan sufficiently covers the planning permit conditions by application of appropriate methodology. Overall, the BAM plan is appropriate given the size of the wind farm and the low likelihood of significant impacts to bat and bird species and populations within the local area.

5.2 An Assessment of the bat fauna at the Hepburn Community Wind Farm, Leonards Hill, Victoria. (Richards 2011)

The study was conducted by an experienced bat ecologist with experience assessing wind farms throughout Australia. The anabat surveys detected bat activity, primarily in the adjacent forest and edges. Approximately 1% of calls were detected in the open area, where the turbines are now located. The report addresses the risk regarding the presence of Grey-headed Flying-fox and *Myotis* species. The report is of a suitable standard for the purpose of preliminary investigations of bat activity in the study area.

5.3 Hepburn Wind Farm bird and bat mortality survey interim report (Bennett 2012)

This report provides the results of the use of detector dogs to locate carcasses and appears to adequately cover the permit conditions, as well as thoroughly estimating overall current and future impacts. The survey effort was somewhat curtailed, and the prescribed number of surveys was not achieved. However, the mortality rates were considered low in comparison with other wind farms in Australia and overseas. The authors contend that this is acceptable, although there is a recommendation for further surveys.

5.4 Hepburn Community Wind Farm Environmental Management Plan (Hydro Tasmania Consulting 2010b)

The Construction Environmental Management Plan (CEMP) is tailored to the construction of a wind farm, however the ecological principals remain unchanged for the construction of a ground mounted solar farm. The CEMP contains sections on pre-construction site establishment, construction and post construction phases. The CEMP will be applicable to the new solar farm with regard to roads, site offices and buildings and dust and noise suppression. Any additional roads or buildings will require a planning permit from the local Council. Some key components of the CEMP are the identification of areas that are temporarily and permanently disturbed. Areas that are temporarily disturbed will require remediation to minimise erosion and weed ingress. A Landscape Rehabilitation Plan should be developed to guide reinstatement of temporarily disturbed areas and this is referenced in Sections 2.1.2, 2.2.6, 3 and 6.5.8. Post construction biomass maintenance will be achieved by continued grazing of sheep, which are compatible with the renewable energy infrastructure. The other key aspect of the CEMP is to ensure that all guidance documents and standards that are referenced are contemporary documents. This is identified in Sections 3.3, 4.3, 5 and 6.3 of the CEMP.

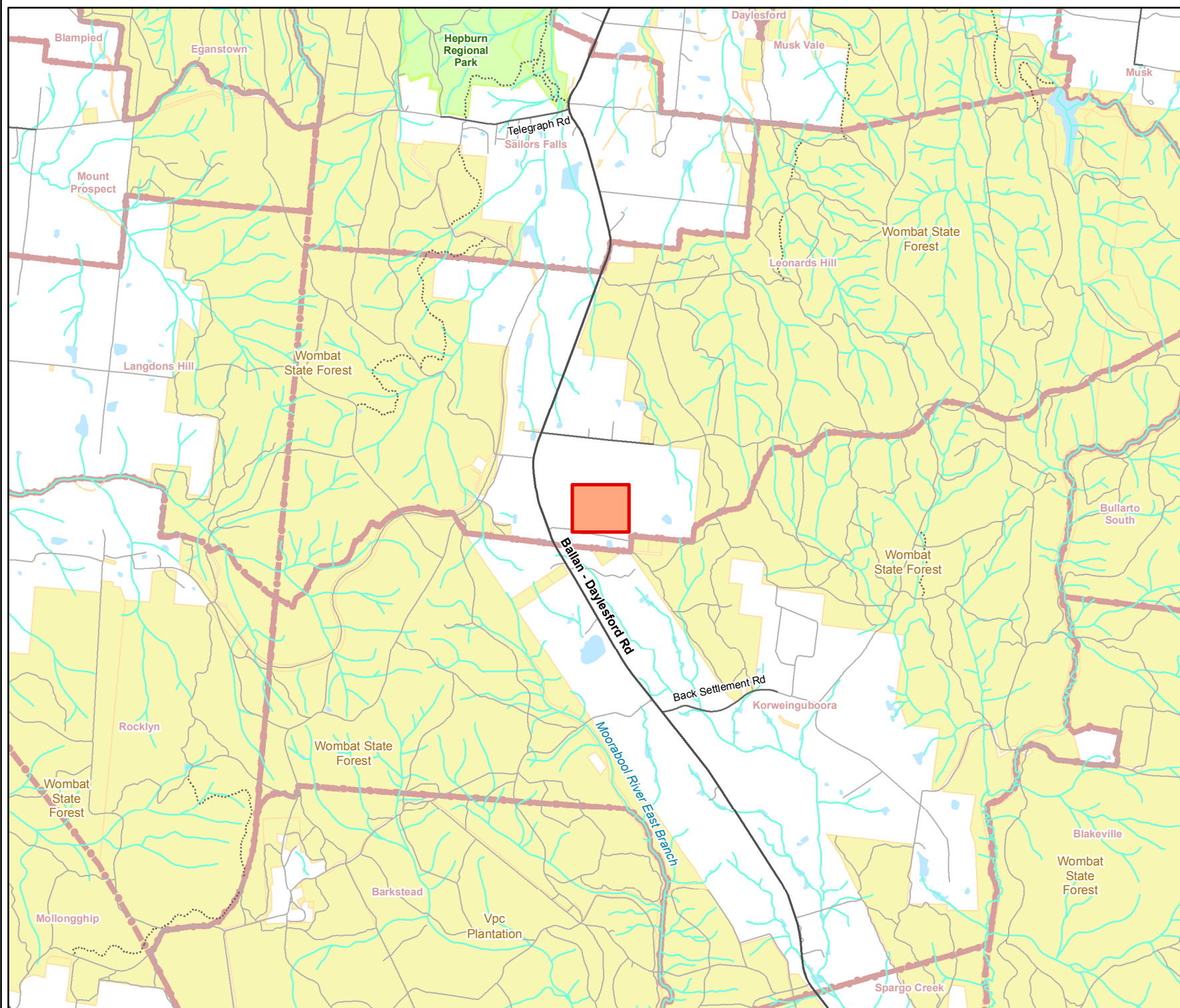
6 Conclusion

Based on a review of ecological assessments for Hepburn Community Wind Farm the previous reports used to support the planning approvals and construction of the wind farm are suitable. It is considered that given the highly modified nature of the study area, no significant impacts to ecological values will occur as a result of the construction of an additional solar farm. The proposed solar farm is proposed to be located in areas that have previously been cleared for agriculture, and no remnant native vegetation or significant flora, fauna and ecological communities are proposed to be impacted by the development. A planning permit to remove native vegetation and an EPBC Act referral for the proposed solar plant is not required.

References

- Bennett, E., 2012. Hepburn Wind Farm bird and bat mortality survey interim report. Unpublished report by Elmoby Ecology for Hepburn Community Wind Park Cooperative Limited
- DELWP 2017a. Biodiversity Interactive Map [WWW Document]. URL <http://mapshare2.dse.vic.gov.au/MapShare2EXT/imf.jsp?site=bim> (accessed 1.4.12). Victorian Department of Environment, Land, Water and Planning.
- DELWP 2015. Native Vegetation Information Management Tool [WWW Document] URL <http://nvim.depi.vic.gov.au/> Victorian Department of Environment and Primary Industries.
- DELWP 2017b. Victorian Biodiversity Atlas. Sourced from GIS layers: "VBA_FLORA25", "VBA_FLORA100", "VBA_FAUNA25", "VBA_FAUNA100", February 2017. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.
- DoEE 2017. Protected Matters Search Tool: Interactive Map [www Document]. URL: <http://www.environment.gov.au/epbc/pmst/>. Commonwealth Department of the Environment and Energy, Canberra, ACT.
- Hepburn Community Wind Farm (HWF) 2018, 2006/0321 Permit Conditions Endorsed, File downloaded from <https://www.hepburnwind.com.au/wp-content/uploads/2014/06/Application-for-Planning-Permit-HW1.pdf>, accessed 2/8/18
- Hydro Tasmania Consulting, 2010a, Hepburn Community Wind Farm Bird and Bat Monitoring Plan, Unpublished report by Hydro Tasmania Consulting for Leonards Hill Wind Operations Pty Ltd
- Hydro Tasmania Consulting 2010b. Hepburn Community Wind Farm Environmental Management Plan. Unpublished report by Hydro Tasmania Consulting for REpower Australia Pty Ltd Systems AG
- Richards, G. C., 2011. An Assessment of the bat fauna at the Hepburn Community Wind Farm, Leonards Hill, Victoria. Unpublished report by Greg Richards and Associates Pty Ltd for Hepburn Wind Park Co-operative Ltd.

Figure 1



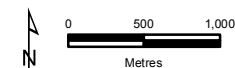
Legend

- Study Area
- Major Road
- Collector Road
- Minor Road
- Walking Track
- Minor Watercourse
- Permanent Waterbody
- Parks and Reserves
- Crown Land
- Localities



Figure 1

Location of the study area
*Biodiversity Assessment for
 the Hepburn Community Wind
 Farm - Solar Expansion*



VicMap Data: The State of Victoria does not warrant the accuracy or completeness of information in this publication and any person using or relying upon such information does so on the basis that the State of Victoria shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

Appendix A 2006/0321 Permit conditions

No.	Permit Condition	Appendix	Ref.	Comment
1	Before the use and/or development starts three copies of revised plans drawn to scale and dimensioned, must be submitted to and approved by the Responsible Authority. When approved the plans will be endorsed and will then form part of the permit. The plans must be generally in accordance with plans submitted with the permit application but modified to show to the satisfaction of the Responsible Authority:	A		
1(a)	(a) At a scale of 1:100 or 1:200:	A	3.1	
1(a)(i)	The exact location of the wind turbines (including dimensions from adjoining property boundaries). No turbine shall be closer to the closest wall of any existing residence based on the measurements contained in the report prepared by Marshall Day Acoustics dated 10 October 2006, Table 1 at page 5.	A	3.2	
1(a)(ii)	If the turbines are re-positioned from the locations identified in the report prepared by Marshall Day Acoustics dated 10 October 2006 Table 1 at page 5: 1. a report must be submitted setting out the results of subsurface testing by a qualified archaeologist that assesses the cultural heritage and archaeological sensitivity of the revised location of the turbines. 2. a revised shadow flicker assessment must be submitted.	A	3.3	
1(a)(iii)	The location, layout and dimensions of all buildings and works, including (but not limited to) the grid connection monitoring and control booth, site office, hard stand areas, footing pads, all roads, tracks, underground cabling, car parking areas, construction lay-down areas and landscaping areas (including landscaping required by this permit).	A	3.4	Also refer to the onsite and offsite screening and landscaping plans for details.
1(a)(iv)	The detailed design of the wind generators (inclusive of nacelles, blades and foundations) including dimensions and elevations.	A	3.5	
1(a)(v)	A detailed schedule of materials, colours and finishes of the wind generators (inclusive of nacelles, blades and foundations) based on the description set out in the planning report accompanying the permit application including at page 26 of 68 "Reflectivity and Colour" unless an alternative is to the satisfaction of the Responsible Authority;	A	3.6	
1(a)(vi)	A detailed schedule of materials, colours and finishes for all other structures, such as the grid connection booth and site office;	A	3.7	

No.	Permit Condition	Appendix	Ref.	Comment
1(a)(vii)	The location of services such as powerlines and gas pipeline;	A	3.8	
1(b)	Details of any signage proposed to be displayed as part of the wind energy facility, which must be limited to:	A	3.9	
1(b)(i)	one site identification sign not exceeding 2 metres by 2 metres, at the entrance to the site;	A	3.9	
1(b)(ii)	a logo or company identification for the wind energy facility operator or wind generator manufacturer displayed on the wind turbines;	A	3.9	
1(b)(iii)	necessary signs relating to site safety issues.	A	3.9	
2	Use and layout not altered The use and development as shown on the endorsed plans must not be altered or modified in any way without the written consent of the Responsible Authority.	-	-	The proposed use and layout has not been altered from the approved plan and as such no further consent under this condition is required.
3	Wind energy facility specifications The wind energy facility must be constructed in accordance with the following specifications to the satisfaction of the Responsible Authority:	A	-	
3(a)	A total of not more than two (2) wind generators in the locations shown on the endorsed plans.	A	3.2	
3(b)	Each wind generator must have an overall height of not more than 110 metres.	A	3.5	
3(c)	The rotor on each wind generator must comprise no more than three (3) blades.	A	3.5	
3(d)	The turbines must be Repower MM82 2MW or another model that is to the satisfaction of the Responsible Authority.	A	3.5	
3(e)	The wind generators must not be artificially illuminated at night except for any safety lighting to warn low flying aircraft.	A	3.5	
3(f)	No external lighting of infrastructure associated with the wind energy facility, other than low level security lighting where appropriate, may be installed or operated.	A	3.4	
3(g)	All new electricity cabling associated with the collector network within the wind energy facility generator cluster must be placed under the ground.	A	3.4	

No.	Permit Condition	Appendix	Ref.	Comment
3(h)	Any transformer associated with each wind generator must be located beside each tower and be pad mounted, or be enclosed within the tower structure.	A	3.4	
3(i)	The access track(s) within the site must be sited to minimise impacts on existing native trees on the site, and be constructed to the minimum standard practicable in order to ensure minimum impacts on the site, including impacts on overland flows.	A	3.4	
4	On-site landscape and visual screening plan Before the use or any development starts, a Landscaping and Visual Screening Plan must be submitted to the satisfaction of the Responsible Authority. When approved, the plan will be endorsed by the Responsible Authority. The Landscaping and Visual Screening Plan must include:	B	-	
4(a)	Visual screening of hard stand areas and the grid control booth from the Ballan - Daylesford Road.	B	2 - 2.2	
4(b)	Planting along the site's perimeter to provide visual screening to dwellings #2, #3, #11, #12 and #19 (dwelling numbers from Map 5 –Neighbouring Residences in the Proposed Hepburn Community Wind Park Landscape and Visual Assessment Study by J Cleary 2006 at page 41).	B	3 - 3.1	
4(c)	Details of species proposed to be used for landscaping including details of the height and size of species at maturity.	B	3.2 - 3.4	
4(d)	Details of fencing to protect new vegetation from stock impacts.	B	4	
4(e)	A maintenance program.	B	4	
4(f)	A timetable for the implementation of landscaping and visual screening works that includes planting being completed prior to any turbine being commissioned.	B	5	
4	The use and development must be carried out in accordance with the endorsed Landscaping and Visual Screening Plan to the satisfaction of the Responsible Authority.	B	-	
5	Off-site landscape and visual screening plan Before the development starts, a program of landscape mitigation works is to be made available to relevant landowners. As part of that program an Off-site Landscape Plan must be prepared and submitted to the satisfaction of the Responsible Authority. When approved, the plan will be endorsed by the Responsible Authority. The Off-site Landscaping Plan may be submitted in	C	-	

No.	Permit Condition	Appendix	Ref.	Comment
	stages to the satisfaction of the Responsible Authority (so that not all stages are completed before the development starts) and must include (but may not be limited to) the following:			
5(a)	A provision for landowners within a one kilometre radius of any wind turbine to have the opportunity to accept the offer to provide visual screen planting at any time up until six (6) months after the commissioning of the last wind generator;	C	1.2 and 1.4	
5(b)	The process by which landowners within a one kilometre radius of any wind turbine will be informed of this offer and the process by which it can be accepted;	C	1.4 – 1.6 and Appendix A	
5(c)	Details of planting or other treatments that will be used to reduce the visual impact of the wind turbines at the dwellings of participating landowners;	C	1.3	
5(d)	Details of species proposed to be used for the landscaping including details of height and size of species at maturity;	C	1.3	
5(e)	A timetable for the implementation of the plan;	C	1.4 and 1.7	
5(f)	A maintenance program.	C	1.7	
5	The use and development must be carried out in accordance with the endorsed Off-site Landscape Plan to the satisfaction of the Responsible Authority.	C	-	
6	Traffic management Before the development starts, a Traffic Management Plan must be prepared to the satisfaction of the Responsible Authority and VicRoads. When approved, the plan will be endorsed by the Responsible Authority. The plan must include (but is not limited to):	D	-	
6(a)	Designation of vehicle access point(s).	D	2.1	
6(b)	Details on whether the access location point to the proposed development meets the safe intersection sight distance requirements specified in Austroads Guide to Traffic Engineering Practice Part 5 – Intersections at Grade and, if not, details of any mitigating works required to meet the sight distance requirements.	D	3.2.3	
6(c)	Details of any roadside pruning, vegetation removal and vegetation restoration.	D	3.3	

No.	Permit Condition	Appendix	Ref.	Comment
6(d)	The designation of appropriate construction and transport vehicle routes to the wind energy facility.	D	2.2	
6(e)	A traffic management plan for the Ballan-Daylesford Road during construction of the development including temporary speed signage and times of operation in accordance with VicRoads Roadworks Signing Code of Practice.	D	5	
6(f)	Details of any works required along the Ballan-Daylesford Road during construction.	D	3.2	
6(g)	The requirements for Over Dimensional Load permits and escorting of long or large loads along roads in the area.	D	3.5	
6(h)	A timetable for implementation of any preconstruction works identified to be undertaken.	D	4.1	
6	The use and development must be carried out in accordance with the endorsed Traffic Management Plan to the satisfaction of the Responsible Authority and VicRoads and the cost of any works including maintenance is to be at the permit holders expense.	D	-	
7	Environmental management Before the development starts, an Environmental Management Plan must be prepared to the satisfaction of the Responsible Authority. When approved, the plan will be endorsed by the Responsible Authority. The Environmental Management Plan must include (but is not limited to):	E	-	
7(a)	A construction and work site management plan. This plan must include:	E	6	
7(a)(i)	Procedures for access, noise and pollution management.	E	6.5.1	
7(a)(ii)	The identification of all potential contaminants, hazardous chemicals, liquids and similar materials to be stored on site.	E	6.5.2	
7(a)(iii)	The identification of all construction and operational processes that could potentially lead to water contamination.	E	6.5.3, 3 and 5	
7(a)(iv)	The identification of appropriate storage, construction and operational and spill control methods to control any identified contamination risks including any arising from the identification processes in Conditions 7(a)(ii) and (iii).	E	6.5.4, 3 and 5	
7(a)(v)	Criteria for the siting of any temporary concrete batching plant associated and procedures for its removal and reinstatement of the site once its use finishes. The establishment and operation of any temporary concrete batching plant	E	6.5.5	

No.	Permit Condition	Appendix	Ref.	Comment
	must be in accordance with the Environment Protection Authority's Environmental Guidelines for the Concrete Batching Industry, Publication No. 628.			
7(a)(vi)	The identification of waste re-use recycling and disposal procedures.	E	6.5.6	
7(a)(vii)	Procedures for the storage of any fuels, lubricants or waste oil to be stored in bunded areas and procedures for managing any spills.	E	6.5.7 and 5	
7(a)(viii)	The removal of works buildings and staging area on completion of construction of the project and for the return of the site to its former condition.	E	6.5.8	
7(b)	A wildfire prevention and response plan.	E	4	
7(c)	A sediment and erosion management plan. This plan must include:	E	3	
7(c)(i)	Procedures to ensure that silt from batters, cut-off drains, table drains and road works is retained on the work site during and after the construction stage of the project. All land disturbances must be confined to a minimum practical working area and to the vicinity of the identified work areas. Soil to be removed must be stockpiled and separate soil horizons must be retained in separate stockpiles and not mixed. Stockpiles must be located away from drainage lines.	E	3.6	
7(c)(ii)	All track construction and maintenance equipment, earth moving equipment and associated machinery, must be made free of soil, seed and plant material before being taken to the works site and again before being removed from the works site on completion of the development.	E	3.6	
7(c)(iii)	All road-making and maintenance material such as rock, gravel and sand required for the project must come from an area free of weeds.	E	3.6	
7(c)(iv)	The installation of geotextile silt fences (with sedimentation basins where appropriate) on all drainage lines from the site which are likely to receive run-off from disturbed areas.	E	3.6	
7(c)(v)	Procedures to contain any contaminated or turbid run-off during and after construction of the wind energy facility.	E	3.6 and 5	
7(c)(vi)	Procedures to suppress dust arising from construction-related activities. Appropriate measures may include water sprays of roads and stockpiles, stabilising surfaces, temporary screening and/or wind fences, modifying construction activities during periods of heightened winds and revegetating exposed areas as soon as practicable.	E	3.6	

No.	Permit Condition	Appendix	Ref.	Comment
7(c)(vii)	Procedures to ensure that steep batters are treated in accordance with Environmental Protection Authority recommendations detailed in the 'Construction Techniques for Sediment Pollution Control' No 275, May 1991.	E	3.6	
7(c)(viii)	Procedures for waste water and discharge management to prevent adverse off-site impacts.	E	3.6	
7	The use and development must be carried out in accordance with the endorsed Environmental Management Plan to the satisfaction of the Responsible Authority.	E	-	
8	Bird, avifauna and bat management Prior to the development commencing, a bird and bat management plan must be prepared to the satisfaction of the Responsible Authority. When approved, the plan will be endorsed by the Responsible Authority. The bird and bat management plan must include (but is not limited to):	F	-	
8(a)	A pre-construction monitoring program to monitor the presence and behaviour of bats on the site. The monitoring program is to be carried out by an independent fauna consultant. The program must specify that the following data be recorded and include provision for reporting of the data to the satisfaction of the Responsible Authority:	F	3	
8(a)(i)	The frequency and height of bat movements across the site;	F	3.2	
8(a)(ii)	Seasonal changes in bat movements;	F	3.2	
8(a)(iii)	The species involved and whether the species is identified as significant or threatened under the Environment Protection and Biodiversity Conservation Act (1999) or the Flora and Fauna Guarantee Act (1988); and	F	3.2	
8(b)	A strategy for managing and mitigating bird and bat strike arising from the wind energy facility operation. The strategy must include:	F	4	
8(b)(i)	The areas required to be inspected.	F	4.1.1	
8(b)(ii)	The frequency of monitoring and inspections.	F	4.1.2	
8(b)(iii)	Scavenger management, for example, regular removal of carcasses likely to attract raptors to areas near generators and other measures to routinely control bird feed and prey.	F	4.1.6	
8(b)(iv)	Recording and reporting requirements to the Responsible Authority.	F	5	

No.	Permit Condition	Appendix	Ref.	Comment
8(c)	A procedure for addressing any significant impacts on bird and bat populations under the Environment Protection and Biodiversity Conservation Act (1999) or the Flora and Fauna Guarantee Act (1988) caused by the wind energy facility operation. This procedure must provide that the operator of the wind energy facility immediately investigates the possible causes of any significant impacts on bird and bat populations, and thereafter must design and implement measures to mitigate those impacts in consultation with the Responsible Authority.	F	6	
8	The use and development must be carried out in accordance with the endorsed bird and bat management plan to the satisfaction of the Responsible Authority.	F	-	
9	Heritage protection and management Prior to the development commencing, a management plan addressing heritage protection must be prepared to the satisfaction of the Responsible Authority. When approved, the plan will be endorsed by the Responsible Authority. The heritage protection management plan must include (but is not limited to):	G	-	
9(a)	A qualified archaeologist must be on-site during initial excavation works to identify any archaeological artefacts, and initiate measures for interim protection and reporting of any such objects or sites.	G	3	
9(b)	Protocols for the control of construction activities, including the activities by contractors, that have been identified to have potential effects on sites of cultural significance.	G	3	
9(c)	Protocols for ongoing consultation with the relevant Aboriginal communities throughout the project, especially those relating to relating to the detailed on-surface and sub-surface archaeological investigations, including maintaining confidentiality (where considered appropriate) of the locations of Aboriginal archaeological sites.	G	3	
9(d)	Prior to disturbing any identified archaeological site, place or object, procedures for seeking and obtaining written consent of any identified Aboriginal local aboriginal community, as nominated for the purposes of Part 11A of the Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth).	G	3	
9(e)	Procedures providing appropriate workshops and training courses with contractors to protect all known sites of Aboriginal cultural heritage value.	G	3	

No.	Permit Condition	Appendix	Ref.	Comment
9(f)	Protocols for protecting and reporting the discovery of any human remains in accordance with the requirements of the Victoria Police, the State Coroners Office and Aboriginal Affairs Victoria.	G	3	
9	The use and development must be carried out in accordance with the endorsed Heritage Protection Management Plan to the satisfaction of the Responsible Authority.	G	-	
10	Commissioning report and noise management The operation of the wind energy facility must comply with the New Zealand Standard 'Acoustics – The Assessment and Measurement of Sound from Wind Turbine Generators' (NZ 6806:1998) (the 'New Zealand Standard'), in relation to any dwelling existing at the date of approval of this permit, to the satisfaction of the Responsible Authority.	-	-	This condition is a post commissioning requirement and will be addressed within two months of the commissioning of any of the turbines.
11	Within two months of the commencement of operation of any turbine(s), an independent post-construction noise monitoring program must be undertaken by the proponent to the satisfaction of the Responsible Authority in accordance with the New Zealand Standard. The program must monitor noise levels at any dwelling within a one kilometre radius of any wind turbine that is not in the same ownership as the subject land. A report summarising the results of the program, and the data collected, must be forwarded to the Responsible Authority within 30 days of the end of the monitoring period. The results must be written in plain English and formatted for reading by lay people. Recommendations to address any non-compliance with NZS6808 must be included in the report and, on agreement by the Responsible Authority, measures to address non-compliance must be immediately implemented to the satisfaction of the Responsible Authority.	-	-	This condition is a post commissioning requirement and will be addressed within two months of the commissioning of any of the turbines.
12	Before the use commences, details of a noise complaint and evaluation process must be submitted to and approved by the Responsible Authority. This evaluation process should include, but not be limited to the following components:	-	-	This condition is a post commissioning requirement and will be addressed within two months of the commissioning of any of the turbines.
12(a)	Details of validity requirements for noise complaints (that is, date, time, noise description and weather conditions at the receptor).	-	-	
12(b)	Response protocol to valid noise complaints.	-	-	
12(c)	A register of complaints, responses and rectifications which may be inspected	-	-	

No.	Permit Condition	Appendix	Ref.	Comment
	by the Responsible Authority.			
12(d)	Provision for review of the complaint and evaluation process, including review of the process 12 months after commencement of the operation of the wind energy facility.	-	-	
12	The use and development must be carried out in accordance with the endorsed process to the satisfaction of the Responsible Authority.	-	-	
13	Blade shadow flicker The operator of the wind energy facility must ensure that no existing dwelling will experience over 30 hours blade shadow flicker per annum or undue blade glint to the satisfaction of the Responsible Authority.	-	-	The proposed layout has not been altered from the approved plan and as such no further shadow flicker assessment is required.
14	Electromagnetic interference Prior to the commencement of the development, a pre-construction qualitative survey of television and radio reception must be offered in writing to the owners and occupiers of all dwellings within a one kilometre radius of the approved turbines.	-	-	The Hepburn Shire Council has sent a letter of offer on behalf of Hepburn Wind.
15	A pre-construction survey of television and radio reception must be undertaken at any premises where the offer for such a survey has been accepted, to the satisfaction of the Responsible Authority.	-	-	Hepburn Wind will undertake a pre-construction television and radio reception survey for all offers that are accepted.
16	If any written complaint is received by the operator or the Responsible Authority as to interference with television or radio reception at residences within a one kilometre radius of the approved turbines who accepted a preconstruction survey, and a request is made for a post-construction survey to be undertaken, the operator of the wind energy facility must undertake a post-construction qualitative survey within three months of a request to do so. If the qualitative survey establishes any detrimental increase in interference to reception, measures must be taken to mitigate the interference to return the affected reception to pre-construction quality at the cost of the wind energy facility operator and to the satisfaction of the Responsible Authority.	-	-	This condition is a post commissioning requirement and will be addressed upon receipt of a complaint as outlined in the condition.
17	Decommissioning The wind energy facility operator must, within one month, notify the Responsible Authority in writing as soon as all wind energy facility generators have permanently ceased to generate electricity. Within 12 months of that date, the wind energy facility operator must undertake the following to the satisfaction of the Responsible Authority:	-	-	This condition is a post commissioning requirement and will be addressed prior to decommissioning of any wind turbine.

No.	Permit Condition	Appendix	Ref.	Comment
17(a)	remove all non-operational or downed equipment, structures and buildings;	-	-	
17(b)	remove and clean up any residual spills;	-	-	
17(c)	clean up and restore all storage, construction and other areas associated with the use, development and decommissioning of the wind energy facility;	-	-	
17(d)	restore all access roads and any other area affected by the project closure or decommissioning, if not otherwise useful to the on-going management of the land;	-	-	
17(e)	submit a post-decommissioning traffic management plan to the Responsible Authority and, when approved by the Responsible Authority, implement that plan; and	-	-	
17(f)	submit a post-decommissioning revegetation management plan to the Responsible Authority and, when approved by the Responsible Authority, implement that plan.	-	-	
18	Following the endorsement of plans under Condition 1 of this Permit, and prior to the erection of any turbine, the operator must meet any requirements of the Civil Aviation Safety Authority including in relation to the reporting of tall structures under the requirements of the Civil Aviation Regulations 1988.	-	-	Following the endorsement of plans under condition 1 of this permit, consultation with the Civil Aviation Safety Authority will commence to ascertain any requirements for the lighting of the structures and notification of tall structures as per the Civil Aviation Regulations 1988.
19	This permit will expire if one of the following circumstances applies:	-	-	
19(a)	The development and use is/are not started within four (4) years of the date of this permit.	-	-	It is anticipated that the proposed development will be commence in November / December 2010 and will comply with the requirement to commence construction by 27 July 2011.
19(b)	The development is not completed within two (2) years of the date of the commencement of the works.	-	-	Development will be completed within two years of the commencement of works.
19	The Responsible Authority may extend the periods referred to if a request is made in writing before the permit expires or within three months afterwards.	-	-	