

Planning Secretary's Environmental Assessment Requirements

Section 4.12(8) of the Environmental Planning and Assessment Act 1979
Schedule 2 of the Environmental Planning and Assessment Regulation 2000

Application Number	SSD 10315
Development	<p>Bowmans Creek Wind Farm which includes:</p> <p>The construction, operation and decommissioning of a wind farm with:</p> <ul style="list-style-type: none"> • a maximum of 80 turbines and maximum height of 220 metres (to blade tip) and approximately 400 megawatts; and • ancillary infrastructure including access tracks, road upgrades, battery storage, underground and overhead electricity cabling, substations and grid connection to either the TransGrid or Ausgrid transmission network.
Location	Albano Road, Bowmans Creek
Applicant	Epuron Projects Pty Ltd
Date of Issue	23 July 2019
General Requirements	<p>The Environmental Impact Statement (EIS) for the development must comply with the requirements in Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>In particular, the EIS must include:</p> <ul style="list-style-type: none"> • a stand-alone executive summary; • a full description of the development, including: <ul style="list-style-type: none"> – details of construction, operation and decommissioning, including any proposed staging of the development or refurbishing of turbines over time; – all infrastructure and facilities, such as substations, transmission lines, construction compounds, concrete batching plants, internal access roads, and road upgrades (including any infrastructure that would be required for the development, but the subject of a separate approvals process); – plans for any buildings; – site plans and maps at an adequate scale with dimensions showing: <ul style="list-style-type: none"> ○ the location and dimensions of all project components including coordinates in latitude / longitude and maximum AHD heights of the turbines; ○ existing infrastructure, land use, and environmental features in the vicinity of the development, including nearby residences and approved residential developments or subdivisions within 4 km of a proposed turbine and coordinates in latitude / longitude, and any other existing, approved or proposed wind farms in the region; and ○ the development corridor that has been assessed, including any allowance for micro-siting of turbines and identification of the key environmental constraints that have been considered in the design of the development; – details of the progressive rehabilitation of the site; • a list of any approvals that must be obtained before the development may commence; • the terms of any proposed voluntary planning agreement with the relevant local council;

- an assessment of the likely impacts of the development on the environment, focusing on the specific issues identified below, including:
 - a description of the existing environment likely to be affected by the development using sufficient baseline data;
 - an assessment of the likely impacts of all stages of the development, taking into consideration any relevant legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice and including the *NSW Wind Energy Guideline for State Significant Wind Energy Development* (2016);
 - a description of the measures that would be implemented to avoid, mitigate and/or offset residual impacts of the development and the likely effectiveness of these measures, including details of consultation with any affected non-associated landowners in relation to the development of mitigation measures, and any negotiated agreements with these landowners; and
 - a description of the measures that would be implemented to monitor and report on the environmental performance of the development, including adaptive management strategies and contingency measures to address residual impacts;
- a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS; and
- the reasons why the development should be approved having regard to:
 - relevant matters for consideration under the *Environmental Planning and Assessment Act 1979*, including the objects of the Act, evaluation of the merits of the project as a whole and how the principles of ecologically sustainable development have been incorporated in the design, construction and ongoing operations of the development;
 - an evaluation of the merits of the project having regard to the requirements in Section 4.15 of the *Environmental Planning and Assessment Act 1979*; and
 - the environmental, economic and social costs and benefits of the development, having regard to the predicted electricity demand in NSW and the National Electricity Market, the Commonwealth's Renewable Energy Target Scheme, and the greenhouse gas savings of the development;
 - a detailed consideration of the capability of the project to the security and reliability of the electricity system in the National Electricity Market, having regard to local system conditions and the Department's guidance on the matter;
 - the suitability of the site with respect to potential land use conflicts with existing and future surrounding land uses, including rural villages, rural dwellings, subdivisions, land of high scenic value, conservation areas (including National Parks / Reserves), strategic agricultural land, state forests, mineral resources, triangulation stations, tourism facilities, existing or proposed wind farms, and the capacity of the existing electricity transmission network to accommodate the development; and
 - feasible alternatives to the development (and its key components), including the consequences of not carrying out the development.

While not exhaustive, Attachment 1 contains a list of some of the environmental planning instruments, guidelines, policies, and plans that may be relevant to the environmental assessment of this development.

In addition to the matters set out in Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*, the development application must be accompanied by a signed report from a suitably qualified person that includes an accurate

	estimate of the capital investment value of the development (as defined in Clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>).
Key issues	<p>The EIS must address the following specific matters for both the wind farm and associated infrastructure:</p> <p>Landscape and Visual – the EIS must include a detailed assessment of the visual impacts of all components of the project (including turbines, transmission lines, substations, lighting and any other ancillary infrastructure) in accordance with the <i>Wind Energy: Visual Assessment Bulletin</i> (DPE, 2016);</p> <p>Noise and Vibration – the EIS must:</p> <ul style="list-style-type: none"> • assess wind turbine noise in accordance with the NSW Wind Energy: Noise Assessment Bulletin (EPA/DPE, 2016); • assess noise generated by ancillary infrastructure in accordance with the NSW Noise Policy for Industry (EPA, 2017); • assess construction noise under the Interim Construction Noise Guideline (DECC, 2009); • assess traffic noise under the NSW Road Noise Policy (DECCW, 2011); and • assess vibration under the Assessing Vibration: A Technical Guideline (DECC, 2006); <p>Biodiversity – the EIS must:</p> <ul style="list-style-type: none"> • assess biodiversity values and the likely biodiversity impacts of the development including impacts associated with transport route road upgrades in accordance with the <i>Biodiversity Conservation Act 2016</i> (NSW), including a detailed description of the proposed regime for minimising, managing and reporting on the biodiversity impacts of the development over time, and a strategy to offset any residual impacts of the development in accordance with the <i>Biodiversity Conservation Act 2016</i> (NSW); • assess the impact of the development on the National Estate in accordance with the <i>Guidelines for Development Adjoining Land and Water Managed by DECCW</i> (OEH 2010); • assess the impact of the project on birds and bats from blade strikes, low air pressure zones at the blade tips (barotrauma), and alteration to movement patterns resulting from the turbines and considering cumulative effects of other wind farms in the vicinity; <p>Traffic and Transport – the EIS must:</p> <ul style="list-style-type: none"> • assess the construction, operational and decommissioning traffic impacts of the development; • provide details of traffic volumes (both light and heavy vehicles) and transport and haulage routes during construction, operation and decommissioning, including traffic associated with sourcing raw materials (water, sand and gravel); • assess the potential traffic impacts of the project on road network function including intersection performance, site access arrangements, site access and haulage routes and road safety, including school bus routes and school zones; • assess the capacity of the existing road network to accommodate the type and volume of traffic generated by the project (including over-mass / over-dimensional traffic haulage routes from port) during construction, operation and decommissioning; • an assessment of the likely transport impacts to the site access and haulage routes, site access point, any rail safety issues, any Crown land, particularly in relation to the capacity and conditions of the roads; • provide details of measures to mitigate and / or manage potential impacts

including a schedule of all required road upgrades (including resulting from over mass / over dimensional traffic haulage routes), road maintenance contributions, and any other traffic control measures, developed in consultation with the relevant road authority;

Hazard / Risks – the EIS must include an assessment of the following:

- *Aviation Safety*:
 - assess the impact of the development under the *National Airports Safeguarding Framework Guideline D: Managing Wind Turbine Risk to Aircraft*,
 - provide associated height and co-ordinates for each turbine assessed;
 - assess potential impacts on aviation safety, including cumulative effects of wind farms in the vicinity, potential wake / turbulence issues, the need for aviation hazard lighting, considering, defined air traffic routes, aircraft operating heights, approach/departure procedures, radar interference, communication systems, navigation aids;
 - identify aerodromes within 30 km of the turbines and consider the impact to nearby aerodromes and aircraft landing areas;
 - address impacts on obstacle limitation surfaces, and
 - assess the impact of the turbines on the safe and efficient aerial application of agricultural fertilisers and pesticides in the vicinity of the turbines and transmission line;
- *Telecommunications* – identify possible effects on telecommunications systems, assess impacts and mitigation measures including undertaking a detailed assessment to examine the potential impacts as well as analysis and agreement on the implementation of suitable options to avoid potential disruptions to radio communication services; which may include the installation and maintenance of alternative sites;
- *Health* – consider and document any health issues having regard to the latest advice of the National Health and Medical Research Council, and identify potential hazards and risks associated with electric and magnetic fields (EMF) and demonstrate the application of the principles of prudent avoidance;
- *Bushfire* – identify potential hazards and risks associated with bushfires / use of bushfire prone land, including the risks that a wind farm would cause bush fire and any potential impacts on the aerial fighting of bush fires and demonstrate compliance with *Planning for Bush Fire Protection 2006* (if located on bushfire prone land); and
- *Blade Throw* – assess blade throw risks;
- *Battery Storage* – including a preliminary risk screening in accordance with *State Environmental Planning Policy No.33 – Hazardous and Offensive Development and Applying SEPP 33* (DoP, 2011), and if the preliminary risk screening indicates the development is “potentially hazardous”, a Preliminary Hazard Analysis (PHA) must be prepared in accordance with *Hazard Industry Planning Advisory Paper No.6 – Guidelines for Hazard Analysis* (DoP, 2011) and *Multi-Level Risk Assessment* (DoP, 2011).

Heritage – the EIS must:

- assess the impact to Aboriginal cultural heritage impact under the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011) and the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010);
- provide evidence of consultation with Aboriginal communities in determining and assessing impacts, developing options and selecting options and mitigation measures (including the final proposed measures), having regard to the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010); and

	<ul style="list-style-type: none"> • assess the impact to historic heritage items under the <i>NSW Heritage Manual</i>. <p>Water & Soils – the EIS must:</p> <ul style="list-style-type: none"> • quantify water demand, identify water sources (surface and groundwater), including any licensing requirements, and determine whether an adequate and secure water supply is available for the development; • assess potential impacts on the quantity and quality of surface and groundwater resources, including impacts on other water users and watercourses; • where the project involves works within 40 metres of the high bank of any river, lake or wetlands (collectively waterfront land), identify likely impacts to the waterfront land, and how the activities are to be designed and implemented in accordance with the <i>DPI Water Guidelines for Controlled Activities</i> (DPI, 2012) and (if necessary) <i>Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings</i> (DPI, 2003); and • describe the measures to minimise surface and groundwater impacts, including how works on steep gradient land or erodible soil types would be managed and any contingency requirements to address residual impacts. <p>Waste – the EIS must:</p> <ul style="list-style-type: none"> • identify, quantify and classify the likely waste streams to be generated during construction and operation, and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. <p>Social & Economic – the EIS must include an assessment of the social and economic impacts and benefits of the project for the region and the State as a whole, including consideration of any increase in demand for community infrastructure services.</p>
Consultation	<p>During the preparation of the EIS, you must consult with relevant local, State and Commonwealth Government authorities, service providers, community groups and affected landowners.</p> <p>However, you must:</p> <ul style="list-style-type: none"> • establish a Community Consultative Committee for the project in accordance with the <i>Community Consultative Committee Guidelines for State Significant Projects</i>, and consult with the committee during the preparation of the EIS; and • Carry out detailed consultation with the following: <ul style="list-style-type: none"> – Muswellbrook Shire Council; – Upper Hunter Shire Council; – Singleton Council – Office of Environment and Heritage; – Environment Protection Authority; – Division of Resources and Geoscience; – Department of Industry – Roads and Maritime Services; – TransGrid – Department of Finance, Services and Innovation – Telco Authority; – Local Land Services; – NSW Rural Fire Service; – Department of Defence; – Civil Aviation Safety Authority; and – Airservices Australia. <p>The EIS must include a description of what consultation was carried out during the preparation of the EIS, identify the issues raised during this consultation, and</p>

	explain how these issues have been addressed in the EIS.
Further consultation after 2 years	If you do not lodge a Development Application and EIS for the development within 2 years of the issue date of these SEARs, you must consult further with the Secretary in relation to the preparation of the EIS.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, the following attachment contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this proposal.

ATTACHMENT 1

Environmental Planning Instruments, Policies, Guidelines & Plans	
Consultation	
	Community Consultative Committee Guidelines for State Significant Projects (DPE)
Landscape and Visual	
	NSW Wind Energy: Visual Assessment Bulletin (DPE)
Noise and Vibration	
	NSW Wind Energy: Noise Assessment Bulletin (EPA/DPE)
	NSW Noise Policy for Industry (EPA)
	Interim Construction Noise Guidelines (EPA)
	NSW Road Noise Policy (EPA)
	Assessing Vibration: A Technical Guideline (EPA)
	Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZEC)
Biodiversity	
	Biodiversity Assessment Method 2017 (OEH)
	Threatened Species Assessment Guidelines – Assessment of Significance (OEH)
	Biosecurity Act 2015
	Fisheries Management Act 1994
	Guidelines for Developments Adjoining Land and Water Managed by DECCW (OEH)
	Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (DPI)
	Policy and Guidelines for Fish Habitat Conservation and Management (DPI)
	NSW State Groundwater Dependent Ecosystem Policy (DPI Water)
	Risk Assessment Guidelines for Groundwater Dependent Ecosystems (DPI Water)
Transport	
	Guide to Traffic Generating Developments (RMS)
	Austrroads Guide to Road Design & relevant Austrroads Standards
	Austrroads Guide to Traffic Management Part 12: Traffic Impacts of Development
Hazard/Risks	
	National Airports Safeguarding Framework Guideline D: Managing Wind Turbine Risk to Aircraft (NASAG)
	Aviation Assessments for Wind Farm Developments (Airservices Australia)
	Guidelines for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields (ICNIRP)
	Planning for Bushfire Protection (NSW RFS)
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DPE)
	Multi-Level Risk Assessment (DPE)
	Work Health and Safety (WHS) Act 2011
Heritage	

	Aboriginal Cultural Heritage Consultation Requirements for Proponents (OEH)
	Code of Practice for Archaeological Investigations of Objects in NSW (OEH)
	Guide to investigating, assessing and reporting on aboriginal cultural heritage in NSW (OEH)
	NSW Heritage Manual (OEH)
Soils	
	Soil and Landscape Issues in Environmental Impact Assessment (OEH)
	Landslide Risk Management Guidelines (AGS)
	Site Investigations for Urban Salinity (OEH)
	Land Use Conflict Risk Assessment Guide (DPI)
	The Land and Soil Capability Assessment Scheme (OEH)
	Australian Soil and Land Survey Handbook (CSIRO)
	Guidelines for Surveying Soil and Land Resources (CSIRO)
Water	
	Managing Urban Stormwater: Soils & Construction (Landcom)
	Floodplain Development Manual (OEH)
	Floodplain Management Plan (DPI Water)
	Guidelines for Controlled Activities on Waterfront Land 2018 (DPI Water)
	Water Sharing Plans (DPI Water)
	Guidelines for Watercourse Crossings on Waterfront Land (DPI Water)
Waste	
	Waste Classification Guidelines (EPA)
Electromagnetic Interference	
	ICNIRP Guidelines for limiting exposure to Time-varying Electric, Magnetic and Electromagnetic Fields