

Flyers Creek

WIND FARM

Environmental Assessment

APPENDIX B

Correspondence

- B1 - Department of Water and Energy
- B2 - Department of Environment and Conservation
- B3 - Department of the Environment, Water, Heritage and the Arts
- B4 - Forests NSW – Macquarie Region
- B5 - Aerial Agricultural Association of Australia Ltd
- B6 - Department of Sustainability, Environment, Water, Population and Communities
- B7 - Roads and Traffic Authority
- B8 - Department of Defence
- B9 - TransGrid
- B10 - Land and Property Management Authority
- B11 - Airservices Australia
- B12 - NSW Department of Primary Industries
- B13 - NSW Rural Fire Service
- B14 - APA Group



NSW Government
Department of Water & Energy



Dinuka McKenzie
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Contact: Tim Baker
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Fax: (02) 6884 0096
Email: Tim.Baker@dnr.nsw.gov.au
File: DWEDGRsFlyersCkWindFarm

Attention: Keiran Thomas

19 December 2008

Dear Mr Thomas

Subject: FLYERS CREEK WINDFARM – DIRECTOR GENERAL REQUIREMENTS

I refer to your letter requesting DWE input to Director-General's Requirements for the abovementioned project. The Department of Water and Energy (DWE) provides the following advice for inclusion in the response to the proponent.

Key Issues

DWE requires the Environmental Assessment (EA) for the proposal to demonstrate the following:

1. Identification of site water demands in terms of both volume and timing for life of project.
2. Adequate and secure water supply is available for life of project.
3. Existing and proposed water licensing requirements are in accordance with the *Water Act 1912*, *Water Management Act 2000* and NSW Inland Groundwater Water Shortages Zone Order No. 2, 2008.
4. An assessment of impact of tower construction due to blasting, road and crossing construction, and underground cable installation on adjacent licensed water users, basic landholder rights, and groundwater-dependent ecosystems.
5. Watercourse crossing construction is consistent with the NSW Rivers and Estuaries Policy and DWE guidelines for controlled activity approvals
http://naturalresources.nsw.gov.au/water/controlled_activity.shtml
6. A description and assessment of any potential requirement to intercept groundwater, including predicted dewatering volumes, zone of drawdown and associated impact, water quality and disposal methods.
7. Adequate mitigating and monitoring requirements to address surface and groundwater impacts.

DWE has not gained a clear understanding from the preliminary environmental assessment of how the project may address the above. The information provided in the background paper did not adequately identify the water requirements for the proposal and the potential licensing and associated environmental assessment issues under the *Water Act 1912/ Water Management Act 2000*. An expanded list of the key issues to be addressed in the environmental assessment is provided in Attachment 1.

DWE advises the project site is located within the Lachlan Fold Belt Groundwater Management Area 011 which is covered by the NSW Inland Groundwater Shortage Zones Order No. 2 2008 (copy in Attachment 2) under the *Water Act 1912*. This embargo places restrictions on groundwater interception and exemptions for groundwater access which will need to be considered in the EA. DWE would encourage the proponent to contact DWE staff to determine the necessary licensing requirements for the proposed operations due to the implications of the embargo.

State Government Technical and Policy Documents

The proposal must address the NSW State Government natural resource management policies, as applicable. Policies to include but not to be limited to:

Relevant Policy

NSW Inland Groundwater Shortage Zones Order No. 2 (2008)
 NSW State Groundwater Policy Framework Document (1997)
 NSW State Groundwater Quantity Management Policy (1998)
 NSW State Groundwater Quality Protection Policy (1998)
 NSW State Groundwater Dependent Ecosystems Policy (2002)
 Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)
 Australian and New Zealand Guidelines for Water Quality Monitoring and Reporting (2000)
 Guidelines for the Assessment and Management of Groundwater Contamination (2007)
 Guidelines for Groundwater Protection in Australia (1995)
 MDBC Guidelines on Groundwater Model Development

The Department has provided this information to assist in the development of a comprehensive environmental assessment of the proposed development. For specific information relating to the groundwater embargo please contact Madhwan Keshwan on 6841 7411. For general enquiries please do not hesitate to contact myself on (02) 6841 7403.

Yours sincerely



Tim Baker
 Planning Coordinator - Central

ATTACHMENT 1 – Assessment Requirements

General Environmental Risk Analysis – the EA must include the following for all water-related aspects of the proposal:

- an environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation);
- proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures; and
- where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of these additional key environmental impacts must be included in the EA.

Key issue: Water supply and water balance

The EA must include assessment of water supply and/or water interception and extraction against any Water Sharing Plan in force affecting the site or potential water supply to the proposal. A full description of water supply to all stages of the proposal must be included, which includes:

- water source(s) which may be used to supply water to the proposal, additional water requirements, and a checklist against any regulatory water sharing or other ministerial plans or other instruments applying to that water source
- explanation of any embargoes or full commitment declarations for the proposal, and any identified means to source water supply for the proposal
- examination of reliability of water supply to the proposal, including alternatives to site rainfall runoff harvesting in the event of drought
- explanation of water circuitry and means to segregate contaminated, sediment-laden and clean water volumes within the proposal and proposal site. This would require development of surface water management plan.

Key Issue: Groundwater Resource Protection

• **Groundwater** – the EA must include demonstration that the project is consistent with the principles of the NSW State Groundwater Policy Framework Document, the NSW State Groundwater Quality Protection Policy, the NSW State Groundwater Dependent Ecosystems Policy and the Draft NSW State Groundwater Quantity Management Policy. This must include, for the pre-, during, and post- development phases of the project the following:

- identification of surrounding water users and any groundwater dependent ecosystems;
- detailed explanation of potential groundwater volume which may be intercepted, piezometric level, water table heights and the direction of flow and quality, through project life and projections into the post development period, and any identified connected water sources impacted by extraction
- detailed explanation of groundwater drawdown or other impacts upon connected groundwaters.
- explanation of the site water balance for the proposal, including any changes to water balance inputs from rainfall runoff and/or groundwater seepage;
- detailed description of any proposed water supply system utilising groundwater as a source, and identification of licensing requirements;
- detailed analysis of any proposed dewatering if required for the project, identifying the magnitude and duration of pumping, the areal extent of water level drawdown, the likely

quality of extracted groundwater, alterations to site water balance, and the monitoring and reporting protocols to be adopted to meet licensing requirements;

- measures to prevent contamination of the groundwater.
- identification of potential and likely groundwater-dependent ecosystems, and any impact upon these ecosystems which may result from the proposal; this must include
 - Terrestrial vegetation with seasonal or episodic reliance on groundwater, and
 - Aquatic and riparian ecosystems in, or adjacent to, streams or rivers dependent upon the input of groundwater to minimum base flows

Key Issue: Watercourse Protection

The EA must include an assessment of the impact of the proposal on the watercourses and associated riparian vegetation within the site and provide the following:

- Identify the sources of surface water
- Details of stream order (using the Strahler System).
- Details of any proposed surface water extraction, including purpose, location of existing pumps, dams, diversions, cuttings and levees
- Detailed description of any proposed development or diversion works including all construction, clearing, draining, excavation and filling
- An evaluation of the proposed methods of excavation, construction and material placement
- A detailed description of all potential environmental impacts of any proposed development in terms of vegetation, sediment movement, channel stability, water quality and hydraulic regime.
- A description of the design features and measures to be incorporated into any proposed development to guard against long term actual and potential environmental disturbances, particularly in respect of maintaining the natural hydrological regime and sediment movement patterns and the identification of riparian buffers.
- Details of the impact on water quality and remedial measures proposed to address any possible adverse effects.

Key Issue: Landform Rehabilitation

Rehabilitation, Final Landform Management – the EA must include:

- justification of the proposed final landform with regard to its impact on local and regional groundwater systems and surface water systems;
- a detailed description of how the site would be progressively rehabilitated and integrated into the surrounding landscape;
- detailed modelling of potential groundwater volume, flow and quality impacts of the presence of an inundated final void on identified receptors specifically considering those environmental systems that are likely to be groundwater dependent;
- a detailed description of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation; and
- the measures that would be established for the long-term protection of local and regional aquifer and surface water systems and for the ongoing management of the site following the cessation of the project.

ATTACHMENT 2

4 July 2008

SPECIAL SUPPLEMENT

6851

WATER ACT 1912

Order under section 113A

Embargo on any further applications for Part 5 Water Licences

New South Wales Inland Groundwater Shortage Zones Order No. 2 2008

PURSUANT to section 113A of the Water Act 1912, I, David Harriss, having delegated authority from the Water Administration Ministerial Corporation, upon being satisfied that the Water Shortage Zones as shown in Schedule 1, are unlikely to have more water available than is sufficient to meet the other possible requirements from the Water Shortage Zones determined by the Ministerial Corporation, now declare that no further applications for a licence within those Water Shortage Zones (shown in Schedule 1) may be made under Part 5 of the Water Act 1912, except as specified in Schedule 2 of this Order.

Any terms that are defined in Schedule 3 of this Order have the meanings set out in that Schedule.

This Order takes effect upon being published in the NSW Government Gazette and remains in force until this Order is revoked by a subsequent Order published in the NSW Government Gazette.

This Order repeals any previous Orders made under section 113A of the Water Act 1912 for those water shortage zones listed in Schedule 1 of this Order.

Dated at Sydney this 4th day of July 2008.

DAVID HARRISS,
Deputy Director General,
NSW Department of Water and Energy
Signed for the Water Administration Ministerial Corporation
(by delegation).

SCHEDULE 1

Water Shortage Zones

This order applies to any groundwater located within those parts of the State of New South Wales falling within the eastern boundary of the Murray Darling Basin and the Queensland, South Australian and Victorian borders as shown by the shaded areas in Map 1, except for groundwater within those groundwater management areas and parishes listed in Table 1. It excludes groundwater within the water sources to which the following water sharing plans apply:

1. Water Sharing Plan for the Upper and Lower Namoi Groundwater Sources 2003
2. Water Sharing Plan for the Lower Gwydir Groundwater Sources 2003
3. Water Sharing Plan for the Lower Lachlan Groundwater Sources 2003
4. Water Sharing Plan for the Lower Macquarie Groundwater Sources 2003
5. Water Sharing Plan for the Lower Murray Groundwater Sources 2003
6. Water Sharing Plan for the Lower Murrumbidgee Groundwater Sources 2003
7. Water Sharing Plan for the NSW Great Artesian Basin Groundwater Sources 2008.

SCHEDULE 2

Exemptions

Applications for licences under Part 5 of the Water Act 1912 can continue to be made for the following purposes:

1. Water supply for stock watering.
2. Water supply for domestic consumption on any landholding greater than 12 hectares that is located within the area supplied by a council's water supply system
3. Water supply for domestic consumption on any landholding located outside the area supplied by a council's water supply system.
4. Water supply for town water supply by a water supply authority, or a council or county council exercising water supply functions under Division 2 or Part 3 of Chapter 6 of the Local Government Act 1993.
5. Water supply for recreational facilities located on public land.
6. Monitoring and test bores for groundwater investigation and/or environmental management purposes.
7. Water supply for Aboriginal cultural purposes provided that the annual extraction does not exceed 10 megalitres.
8. Bores on property where there is an existing licence under Part 5 of the Water Act 1912 and there is no increase in entitlement.
9. Bores providing water supply for emergency services including, but not limited to fire fighting.
10. Conversion to a production bore licence where a test bore licence already exists. This exemption expires 12 months from the date of commencement of this Order

NEW SOUTH WALES GOVERNMENT GAZETTE No. 81

11. Bores required for integrated development where general terms of approval have been provided by the Department of Water and Energy prior to the commencement of this Order and for which a development consent has been granted.
12. Bores required for a project approved under Part 3A of the Environmental Planning and Assessment Act 1979.
13. A dewatering activity that removes less than 10 megalitres of groundwater.
14. Water supply for the purpose of dust suppression in the construction of a public road.
15. The use of saline water where the salinity level exceeds 14,000 milligrams per litre (ppm).

SCHEDULE 3

Dictionary

Development consent: has the same meaning as defined in the Environmental Planning and Assessment Act 1979;

Domestic consumption: has the same meaning as defined in section 52 of the Water Management Act 2000;

Groundwater management areas: Area defined by maps held by the Department of Water and Energy and for the purposes of this order includes all groundwater below the ground surface within these mapped boundaries;

Integrated development: has the same meaning as defined in the Environmental Planning and Assessment Act 1979;

Murray Darling Basin: has the same meaning as defined in section 4 of the Water Act 2007 (Cth);

Public land: has the same meaning as defined in the Local Government Act 1993 Dictionary;

Public road: has the same meaning as defined in the Roads Act 1993;

Recreational facilities: includes, but is not limited to parks, playgrounds, ovals, sporting grounds, golf courses and gymnasiums but excludes any commercial operations relating to those activities;

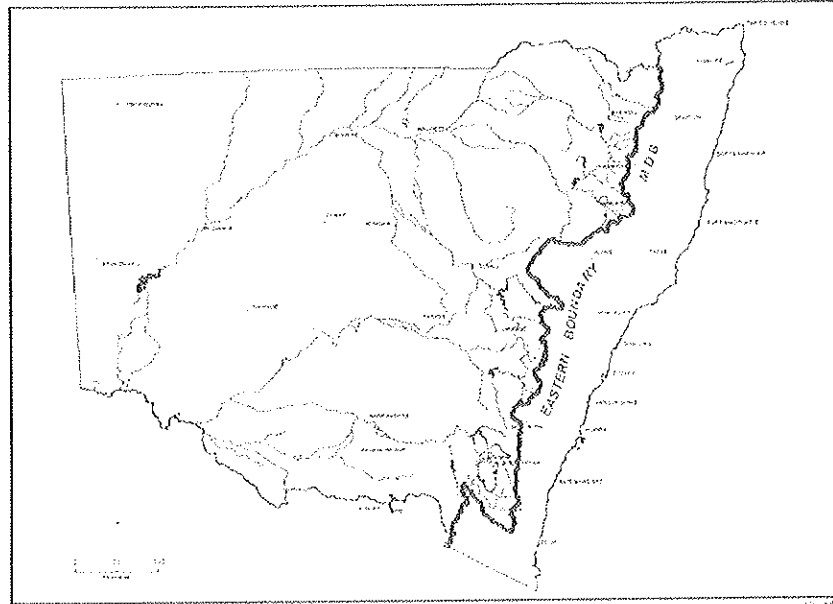
Stock watering: has the same meaning as defined in section 52 of the Water Management Act 2000;

Table 1

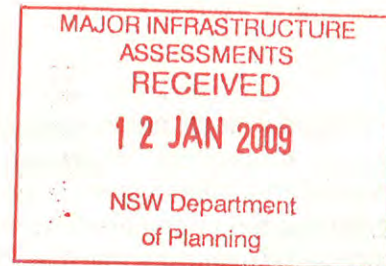
<i>Ground Water Management Area (GWMA)</i>	<i>GWMA No</i>
Peel Valley Alluvium	005
Upper Macquarie Alluvium	009
Cudgegong Valley Alluvium	10
Upper Lachlan Alluvium	11
Mid Murrumbidgee Alluvium	13
Billabong Creek Alluvium	14
Upper Murray Alluvium	15
Coolahurrugundy-Halbrager Valley	19
Bell Valley Alluvium	20
Belubula Valley Alluvium	21
Border Rivers Alluvium	22
Miscellaneous Alluvium of Barwon Region	23
Bungendore Alluvium	54
GAB Alluvial	63
Orange Basalt	801
Young Granite	802
Mid & Upper Murrumbidgee Fractured Rock	806
Peel Valley Fractured Rock	819
Parishes	
The Parishes of Goran, Brothers, Howes Hill, Calala, Merrigula, Tamarang, Trinke, Coolanbilla, Springfield, Weston, Doona, Mema, Rodd, Pringle, Lawson, Moredevil, Coomoo Coomoo, Yarraman and Kickerbell in the County of Pottinger, all being within the Oxley Basin.	

<i>Ground Water Management Area (GWMU)</i>	<i>GWMU No</i>
The Parishes of Windy, Telford, Hudson and Moan in the County of Bucklan, all being within the Oxley Basin.	
The Parishes of Galambine, Wilbertree, Eurundury and Bumberra in the County of Phillip, all being within the Lachlan Fold Belt.	

Map 1



Our reference: FIL07/7 DOC08/60321



Ms Dinuka McKenzie
Senior Environmental Planning Officer
Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

8 January 2009

Dear Ms McKenzie,

I refer to the project focus meeting for the proposed Flyers Creek Wind Farm held on 19 November 2008 and the Department of Planning's request for government agencies to provide recommended Director-General requirements for the Environmental Assessment (EA) for this project dated 16 December 2008.

Please note that the Department of Environment and Climate Change (DECC) has responsibilities under the *Protection of the Environment Operations Act (1997)*, *National Parks and Wildlife Act (1974)*, the *Threatened Species Conservation Act (1995)* and the *Native Vegetation Act (2003)*. Please note that the DECC exercises certain statutory functions and powers in the name of the Environment Protection Authority (EPA).

DECC has reviewed the Preliminary Environmental Assessment (PEA) and based on this information, the proposal will not require an environment protection licence should planning consent be granted. Changes to Schedule 1 of the Protection of the Environment Operations Act 1997 that came into force on 28 April 2008 eliminated the need for operators of wind farm developments to obtain an environment protection licence from the EPA.

However, the PEA has identified issues that DECC has regulatory responsibility for which must be addressed in the EA. These matters are summarised below and presented in further detail in Attachment A.

- The potential impacts on Biodiversity, specifically, Threatened Species, Flora, Fauna, Endangered Ecological Communities and their associated habitats and Native Vegetation;
- The potential impacts on Aboriginal Cultural Heritage.

It is strongly recommended that the applicant consult with the DECC on these issues during the assessment period.



As the proposal does not require an environment protection licence, DECC has not specified a requirement to provide information on the issues that would otherwise be regulated by an environment protection licence. However, DECC has identified several matters that it recommends also be addressed in any impact assessment to aid the Department of Planning in its evaluation of the completed Environmental Assessment for the proposal. These are contained in Attachment B

Should you have any further enquiries regarding this matter please contact Jason Scarborough at the Bathurst Office of the DECC by telephoning (02) 6332 7607.

Yours sincerely



DARRYL CLIFT
Head Regional Operation Unit - Bathurst
Environment Protection and Regulation

Attachment A – Specific Information Required by DECC

Attachment B – Recommended Assessment / Information for Environmental Protection

Attachment C – Guidance Material

Attachment A

Specific Information Required by DECC

The EA must provide sufficient information for DECC to be able to fully assess the development in so far as how the impacts relate to environmental legislation administered by DECC. The EA must include a comprehensive description of the production processes, all discharges and emissions to the environment, an assessment of likely environmental impacts, and a comprehensive description of any proposed control measures.

Details are required on the location of the proposed development, including the affected environment, to place the proposal in its local and regional environmental context including surrounding land uses, planning zonings and potential sensitive receptors.

The EA should describe mitigation and management options that will be used to prevent, control, abate or mitigate identified environmental impacts associated with the project and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

The following environmental impacts of the project need to be assessed, quantified and reported on:

- (1) Biodiversity
- (2) Aboriginal cultural heritage

1. Potential Impacts of the Project on Biodiversity

(a) Threatened Species

- (i) In relation to identified Threatened Species, the EA must follow the guidance provided in the document "Threatened Species Survey and Assessment: Guidelines for Developments and Activities - Working Draft" (2004).
- (ii) The EA must include a quantitative risk assessment in relation to the risk of blade strike (or other blade related injuries/fatalities) to avifauna, particularly focusing on risks to Threatened Species.
- (iii) A field survey should be conducted and documented in accordance with the guidelines.
- (iv) Likely impacts on threatened species and their habitat need to be assessed, evaluated and reported on. The EA should specifically report on the considerations listed in Step 3 of the draft guidelines.
- (v) The EA must describe the actions that will be taken to avoid impacts, or to mitigate unavoidable impacts of the project on threatened species and their habitat. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.
- (vi) Step 4 of the draft guidelines requires that where measures to avoid or mitigate are not possible, offset strategies need to be considered.
- (vii) The EA must clearly state whether it meets each of the key thresholds set out in Step 5 of the draft guidelines.

(b) Native Vegetation

The EA needs to address the potential impact on native vegetation; specifically:

- (i) The hectares of native vegetation that will have to be cleared to accommodate the proposal.
- (ii) The floristics of the botanical communities of native vegetation that will need to be cleared.
- (iii) The extent of native vegetation on the site which may be remnant vegetation, protection re-growth or non-protected re-growth as defined by the Native Vegetation Act 2003.
- (iv) The requirement to develop a suitable offset(s) to improve or maintain environmental outcomes for the lawful clearing of native vegetation, in relation to four environmental values: water quality, soils, salinity and biodiversity (including threatened species).
- (v) The general requirements of the Native Vegetation Act 2003, especially in relation to Vulnerable Land.

(c) Biodiversity in general

- (i) In situations where the avoidance of impacts of the project on Threatened Species, Flora, Fauna, Endangered Ecological Communities and their associated habitats and Native Vegetation is not possible or practical, a description of the mitigation measures proposed is required (for example, the strategic siting of infrastructure to avoid impacting on biodiversity). This should include an assessment of the effectiveness and reliability of the proposed mitigation measures.
- (ii) Any residual impacts after the implementation of proposed mitigation measures will require assessment using the "BioBanking Assessment Methodology" (2008). The Proponent should note that DECC may require Biodiversity Credits to be obtained to offset any residual biodiversity impacts.

2. Potential Impacts of the Project on Aboriginal Cultural Heritage Values

- (a) The EA should address and document the information requirements set out in the draft "Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation" (2005) involving surveys and consultation with the Aboriginal community.
- (b) Identify the nature and extent of impacts on Aboriginal cultural heritage values across the project area.
- (c) Describe the actions that will be taken to avoid or mitigate impacts or compensate to prevent unavoidable impacts of the project on Aboriginal cultural heritage values. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.
- (d) The EA needs to clearly demonstrate that effective community consultation with Aboriginal communities has been undertaken in determining and assessing impacts, developing options and making final recommendations.

Attachment B

Recommended Assessment / Information for Environmental Protection

Based on the information provided, the Proposal will not require an environment protection licence because the activity is not scheduled under the Protection of the Environment Operations Act 1997. However, for the purposes of assessing potential environmental impacts of the project during the construction and operational phases (and proposed mitigation measures), DECC recommends that the following should be assessed, quantified and reported on:

- (1) Noise impacts
- (2) Water quality impacts
- (3) Waste generation and management

1. Noise

- (a) DECC strongly recommends that the potential noise impacts be assessed using the Noise Assessment Guideline for Wind Energy Facilities (South Australia EPA 2003), which DECC has adopted. DECC notes the incorporation of compliance assessment procedures in the draft 2008 version of these guidelines.
- (b) The EA should identify all potential noise sources and describe the extent to which noise emissions are likely to impact on any residential and/or other sensitive receivers in the vicinity of the site.
- (c) The EA should a full assessment of how noise from this proposal will impact the surrounding environment and include information on the following:
 - (i) Identify all noise sources from the development (including both construction and operation phases). Detail all potentially noisy activities including ancillary activities such as transport of goods and raw materials at the construction stage, and maintenance of the wind turbine generators (WTG's) during operation stage;
 - (ii) Identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, and other premises. This should include any residences on the property on which the WTG's are proposed (See also section 2.3 of the SA EPA Wind Farm Noise Guidelines February 2003);
 - (iii) Typically the noise assessment should include a map of the locality showing any identified noise sensitive locations in relation to the site;
 - (iv) Identify the land use zoning of the site and the immediate vicinity and the potentially affected areas.
- (d) The baseline conditions should be described, as follows:
 - (i) Determine the existing background noise levels for the identified noise sensitive residential receivers in accordance with the SA EPA Wind Farm Noise Guidelines (February 2003).
 - (ii) Quantify winds that impinge on the microphone during noise monitoring. This is normally carried out at a height of 1200 to 1500mm above the ground.
 - (iii) Prevailing wind speeds and directions shall be measured in accordance with the SA EPA Wind Farm Noise Guidelines (February 2003).
- (e) The noise impact assessment report should provide details of all monitoring of existing ambient noise levels including:
 - (i) Details of equipment used for the measurements;
 - (ii) A description of the monitoring sites and where the equipment was positioned including photographs;

- (iii) A statement justifying the choice of monitoring site, including the procedure used to choose the site, having regards to the requirements of the SA EPA Wind Farm Noise Guidelines (February 2003);
 - (iv) A description of the ambient noise environment including dominant and background noise sources at the assessment sites;
 - (v) The final LA90 values, based on the SA EPA's regression analysis method, for each integer wind speed from cut in to rated power;
 - (vi) Graphs showing background noise at the receiver v's wind speed at the windfarm,
 - (vii) A record of periods of affected data (due to rain and/or excessive wind at the measurement location) methods used to exclude invalid data and a statement indicating that the data conforms to the SA EPA Wind Farm Noise Guidelines (February 2003) requirements;
 - (viii) A statement qualifying the effectiveness of the microphone windshield protection for the range of wind speeds under consideration in the noise assessment.
- (f) Determine the noise criteria for the site. For each identified potentially affected receiver, this should include:
- (i) Determination of the background noise levels for the range of integer wind speeds from cut in up to rated power;
 - (ii) Determination of the noise criteria applicable to each assessment location based on the LAeq,10, adjusted for tonality, should not exceed 35dB(A) or the background noise (LA90) by more than 5dB(A), whichever is the greater, at all relevant receivers for each integer wind speeds from cut in to rated power of the WTG.
- (g) Determine expected noise level and noise character (eg: tonality, impulsiveness, vibration, etc) likely to be generated from noise sources during:
- (i) site establishment;
 - (ii) construction;
 - (iii) operational phases;
 - (iv) transport including traffic noise generated by the proposal, where appropriate; and
 - (v) Other services (such as maintenance).
- (h) The noise impact assessment report should include noise source data for each wind turbine generator (WTG) source in 1/3 octave band centre frequencies including methods or references used to determine noise source levels. This data should address all proposed operating modes for the WTG's.
- (i) Determine the noise & vibration levels to be received at all locations identified as relevant receivers under the SA EPA Wind Farm Noise Guidelines (February 2003) for each integer wind speed from cut in speed to the speed of rated power. Potential impacts should be determined for the operating meteorological conditions (including wind speeds from cut in to rated power). Predicted noise levels from site establishment and construction phases should be assessed following the guidelines in the EPA, Environmental Noise Control Manual.
- (j) The proponents assessment of the potential noise impacts should consideration of low frequency noise including infrasound.
- (k) The noise impact assessment report should include:
- (i) A plan showing the location of each noise source (WTG and ancillary equipment as relevant) for each prediction scenario as applicable;
 - (ii) A list of the number and type of noise sources used in each prediction scenario to simulate all potential significant operating conditions on the site;

- (iii) Any assumptions made in the predictions in terms of source heights, directivity effects, shielding from topography, buildings or barriers, etc;
- (iv) Methods used to predict noise impacts including identification of the noise model used. The model used shall be supported with sufficient justification to demonstrate that the model has been proven to accurately predict noise from WTG under Australian conditions. Calibration of the model against existing wind farm operations is preferable, however other calibration methods may be considered on a case by case basis. An estimation of the models accuracy is essential;
- (v) The predicted noise impacts from the operation scenario under the operating meteorological conditions (ie wind speeds from cut in to rated power) as well as calm conditions such as during maintenance periods where appropriate;
- (vi) Noise contours for the key prediction scenarios should be derived.
- (l) Discuss the findings from the predictive modelling and, where relevant noise criteria have not been met, recommend additional mitigation measures to meet the criteria.
- (m) The noise impact assessment report should include details of any mitigation proposed including the attenuation that will be achieved and the revised noise impact predictions following mitigation.
- (n) Where blasting is intended at the site establishment or construction stage, the following details of the blast design should be included in the noise assessment:
 - (i) bench height, burden spacing, spacing burden ratio;
 - (ii) blast hole diameter, inclination and spacing;
 - (iii) type of explosive, maximum instantaneous charge, initiation, blast block size, blast frequency.
- (o) The noise impact assessment should include contingency measures or safeguards that provide for additional noise attenuation measures that are feasible and reasonable (and committed to by the proponent) should higher noise levels than those predicted result following commissioning of the WTG.
- (p) The noise impact assessment shall identify, and commit to, the compliance assessment requirements presented in the SA EPA Wind Farm Noise Guidelines (February 2003) and the measures to be employed in the wind farm development to ensure that, if approved, a compliance assessment satisfying these requirements can be undertaken.

2. Water Quality

- (a) The local drainage systems near the site are defined as 'waters' pursuant to the POEO Act. Section 120 of the POEO prohibits the pollution of waters by any person. The environmental outcomes for the project in relation to water should be no pollution of waters (including surface and groundwater) during construction or operation of the site.
- (b) As such, impacts of any specific activities involved in site preparation should be identified. The environmental assessment should describe measures to control erosion and sedimentation during construction activities, including construction of the WTG. Further guidance is available in the guideline "Managing Urban Stormwater - Soils and Construction", NSW Landcom, 4th Edition, March 2004.
- (c) All areas disturbed during construction which are not included in the working area of the plant must be revegetated to a high standard.
- (d) All activities must be carried out with due diligence, duty of care, and according to the most current best management practices. Accordingly, all personnel involved in the construction works should be aware of the details of the works plans, legislation and associated pollution controls before any works commence.

3. Waste

- (a) Quantities of waste associated with the construction and operation of the proposal should be estimated. As a general principal, the quantities of waste generated as part of the proposal should be minimised and resource recovery opportunities for waste generated maximised.
- (b) An estimation of the classification of wastes generated as part of the construction and operation of the proposal should be stated. Wastes should be classified according to the DECC document "Waste Classification Guidelines - Part 1: Classifying Waste" (2008).
- (c) Details should be provided of the proposed management of wastes associated with the construction and operation of the proposal, including destinations. This information should be particularly detailed for any wastes classified as liquid, special, restricted, or hazardous.

Attachment C

Guidance Material

Assessing Environmental Impacts

Water quality

- National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000)
- NWQMS Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC 2000)
- The relevant targets within the State Water Management Outcomes Plan
- The relevant values for the most recent government endorsed water quality and river flow objectives of the affected catchments.

Stormwater

- Managing Urban Stormwater: Soils and Construction – Volume 1, 4th Edition (Landcom 2006)
- Managing Urban Stormwater: Soils And Construction - Volume 2a Installation Of Services (DECC 2008)
- Managing Urban Stormwater: Soils and Construction Volume 2c Unsealed roads (DECC 2008)
- A Resource Guide For Local Councils: Erosion And Sediment Control (DECC 2006)

Noise and vibration

- Noise Assessment Guideline for Wind Energy Facilities (SA EPA, 2003)

Assessing Threatened Species Impacts

- Threatened Species Survey and Assessment: Guidelines for Developments and Activities - Working Draft (DECC 2004)

BioBanking

- BioBanking Assessment Methodology (DECC 2008)

Assessing Aboriginal Cultural Heritage Impacts

- Draft Guidelines For Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DECC 2005).
- Interim Community Consultation Requirements for Applicants (DECC 2004)
- Aboriginal Cultural Heritage Standards and Guidelines Kit (DECC 1997)

Waste

- Waste Classification Guidelines - Part 1: Classifying Waste (DECC 2008).



Australian Government

Department of the Environment, Water, Heritage and the Arts

MAJOR INFRASTRUCTURE
ASSESSMENTS
RECEIVED

14 JAN 2009

NSW Department
of Planning

Ms Dinuka McKenzie
Senior Environmental Planning Officer
Major Infrastructure Assessments
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Dear Ms McKenzie

Re: Flyers Creek Wind Farm, Blayney Local Government Area

Thank you for the opportunity to provide comment on the Flyers Creek Wind Farm Project, a declared Major Project to be assessed and determined by the Minister for Planning under Part 3A of the *Environmental Planning and Assessment Act 1979*.

At this stage, it is not possible for the Department to provide formal comment on matters we consider should be addressed in an Environmental Assessment for the above project, as the action has not been referred for consideration under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The proponent for this project, Flyers Creek Wind Farm Pty Ltd, will need to consider whether or not their action is likely to have a significant impact on a matter of National Environmental Significance (NES), in relation to Commonwealth actions, and actions on, or that will impact on, Commonwealth land. Under the EPBC Act, an action includes a project, development, activity or series of activities; and matters of NES include world and national heritage properties, wetlands of international importance, nationally threatened species and ecological communities, migratory species protected under international agreements, nuclear actions and Commonwealth marine areas. I have enclosed a brochure to this letter providing further information about the EPBC Act.

If the proponent does consider that their action is likely to have a significant impact on a matter of NES, they must refer their proposal to the Department for assessment and a decision on whether there is a need for Commonwealth approval would be made within 20 business days. Substantial penalties apply to a person who takes such an action without approval.

Not all actions, however, affecting matters protected by the EPBC Act will have a significant impact and require approval. Guidelines for determining if the impact of an action is likely to be significant are available from the Department's website at www.environment.gov.au/epbc/publications.

RECEIVED
21/01/2009
12:23 PM
CATHY SKIPKINGTON
CATHY SKIPKINGTON

If the question of significance is unclear, or the proponents would like surety in relation to their proposal, I would recommend the proponent makes a referral. A referral form and information for making a referral is available from the Department's website at www.environment.gov.au/epbc/assessments.referral-form.html.

If you have any questions on the above, please call the Environment Impact Assessment Policy Section on (02) 6274 2744 or email epbc.referrals@environment.gov.au.

Yours sincerely



Cathy Skipington
Assistant Secretary
Environment Assessment Branch

9 January 2009

Keiran.P Thomas - Flyers Creek Wind Farm

From: "Cameron Dobson" <CameronD@sf.nsw.gov.au>
To: <keiran.p.thomas@planning.nsw.gov.au>
Date: 09/01/2009 15:40
Subject: Flyers Creek Wind Farm

Hello Keiran.

In relation to the above, Forests NSW only interest/concern in this matter would be in relation to the routing of the farm to grid connection and the potential for that to impact on the plantation resource within Canobolas State Forest.

As such the scope of the EIS should incorporate the footprint of both the directly effected properties, and those that are effected by the grid connection route.

Thanks and apologies for making this submission by email.

Cameron Dobson
Regional Planning Manager

for Gavin Jeffries
Regional Manager
Forests NSW - Macquarie Region

Ph (02) 6330 1011 (direct)
Ph (02) 6331 2044 (switch)
Fx (02) 6331 5528

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AERIAL AGRICULTURAL ASSOCIATION OF AUSTRALIA LTD.

ABN 13 002 501 886 • ACN 002 501 886

14th December 2009

Mr Jeff Bembrick
Senior Environmental Consultant
Connell Wagner PPI
PO Box 538
NEUTRAL BAY NSW 2089

RECEIVED
AURECON
17 DEC 2009
SYDNEY

Dear Mr Bembrick.

Re: Aviation Windfarm and Powerlines Policies

The Aerial Agricultural Association of Australia represents the interests of professional aerial applicators of crop protection products, fertilizers and related operations including firebombing.

AAAA plays an important role in providing safety-related information to stakeholders in an effort to minimize risks and conflicts with infrastructure that may pose a threat to legal low-level aviation.

After several years of helping to fill the safety gap created by the non-regulation of windfarm and powerline marking and notification, AAAA has now developed a formal policy position on windfarms and powerlines. AAAA will continue to assist with notification of wind monitoring tower positions to members as outlined in the policy.

AAAA's aim is to inform regulators, asset developers and windfarm and powerline operators alike of the need for action on their part to fulfill their duty of care to Australia's aerial applicators.

A copy of the policy is attached for your information. The policy is also available on the AAAA website at www.aerialag.com.au.

Should you have questions regarding this matter, do not hesitate to contact me in the office at any time. Thank you for your time and I look forward to working with you to make legal low-level aviation as safe as possible.

Yours sincerely



Phil Hurst
CEO



Australian Government

Department of Sustainability, Environment, Water, Population and Communities

Contact Officer: Tess Burdon

Telephone: 02 6274 1841 Facsimile: (02) 6274 1607

Mr Jeff Bembrick
Aurecon Group
PO Box 538
Neutral Bay NSW 2089

Dear Mr Bembrick

Following conversations between yourself and Ms Tess Burdon of this department, I am writing to provide further information about the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and how it might apply to the proposed Flyers Creek Wind Farm development. I understand that the Aurecon Group have been engaged to facilitate the planning assessment and approvals process for the proposed development.

The EPBC Act protects matters of national environmental significance, including nationally listed threatened species and ecological communities, migratory species, and wetlands of internationally importance, among others.

Information available to the department indicates that the proposed wind farm site includes remnant patches of the critically endangered 'White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland', which is listed as a critically endangered ecological community under the EPBC Act. In addition, the site is known to support habitat for the Superb Parrot, which is listed as a vulnerable species under the EPBC Act.

The EPBC Act requires that actions that are likely to have a significant impact on one or more matters of national environmental significance be referred to the Minister for Environment for assessment and approval. Substantial penalties apply to persons who take an action that has a significant impact on a matter protected by the EPBC Act without approval. These include civil penalties of up to \$5.5 million (for a body corporate), and/or criminal penalties of up to seven years imprisonment. In the absence of a referral, and such a decision, the EPBC Act also provides for injunctions by third parties. The potential for delay may be a valid consideration in deciding whether or not a referral should be made for proposals that may be locally contentious, subject to tight timeframes or if legal certainty is needed about the possible application of the EPBC Act.



INVESTOR IN PEOPLE

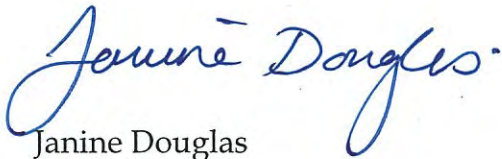
GPO Box 787 Canberra ACT 2601 Telephone 02 6274 1111 Facsimile 02 6274 1666

www.environment.gov.au



If you have any questions about the matters raised in this letter please contact Tess Burdon, Senior Compliance Officer, on 02 6274 1841. Alternatively, if you would like to discuss referral of the proposal, please contact Fiona Beynon, Director - NSW Assessments, on 02 6275 9263.

Yours sincerely



Janine Douglas
Director (a/g)
EPBC Act Compliance - NSW

25 January 2011



43.5395 11/1; C11/56

Aurecon Australia Pty Ltd
PO Box 538
NEUTRAL BAY NSW 2089

Dear Mr Bembrick

Proposed Flyers Creek Wind Farm; Invitation to Comment

Thank you for your letter dated 19 January 2011 inviting the Roads and Traffic Authority (RTA) to comment specifically on the possible transportation routes for restricted access vehicles (RAV's) transporting plant and equipment for the proposed Flyers Creek Wind Farm.

The preliminary information provided to the RTA was limited to a localised area bounded by Benereee, Carcoar, Mandurama and Burnt Yards.

As the sections of the proposed transport routes in the subject area are predominately on local roads the RTA is primarily concerned with access to those routes via intersections with the classified road, and more particularly the State road, network. It appears from the mapping provided that those intersections through which access may be required include the intersection of:

- Blayney-Orange Road (MR245) and Glenorie Road at Milthorpe
- Blayney-Orange Road (MR245) and Victoria Road at Milthorpe
- Mid Western Highway (HW6) and Blayney-Orange Road (MR245) at Blayney
- Mid Western Highway (HW6) and Errowanbang Road South of Carcoar
- Mid Western Highway (HW6) and Copper Street at Mandurama.

In order that access via any of the noted intersections or any other intersection with a classified road may be permitted RTA concurrence pursuant to Section 138 of the *Roads Act 1993* will be required. In principal the RTA does not object to the use of any of those intersections as part of the transport route. However RTA concurrence cannot be provided until it is demonstrated that those intersections can safely and effectively cater for the RAV's. In this respect the RTA requires an assessment of the existing pavement design and layout at any affected intersections, swept paths demonstrating the turning manoeuvres required for the various RAV's to navigate the intersections and details of any proposed improvements to those intersections to accommodate the vehicles. An assessment of these aspects will assist both the RTA and the proponent in identifying the preferable transport route(s). The RTA is happy to consider such information either as part of a continuing pre-application dialogue or as part of the Environmental Assessment.

Roads and Traffic Authority

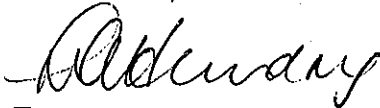
The RTA also notes:

- Transportation of oversize components via the public road system should be minimised where possible. Alternative transport options including rail transport should be considered.
- The applicant will be required to obtain permits for any oversize and overmass vehicles and loads.
- The applicant will be required to submit detailed Traffic Management Plans indicating the proposed routes and associated impacts (temporary street closures, removal and replacement of road infrastructure, etc.) which will be required in order for the necessary materials and machinery to be delivered to site. Traffic Management Plans are also to include assessment of how high risk locations that prevent safe two-way passage of traffic are to be negotiated. It is essential that the applicant is accountable for this process rather than the haulage contractor.
- If any parts of the proposed route are unable to cater for the transport of components the applicant is required to improve any part of the road along the route so that it can cater for the length, size and volume of loads. This may include the applicant constructing stopping bays (suitable hard stand areas) at distances and dimensions determined by the RTA. These areas would be required along the proposed route to allow the following vehicle queue to pass.
- The RTA requires that any disturbances to traffic lanes, shoulders, verges or other disturbance within the road reserve be reinstated to pre-existing or better condition. This includes any impact on the road pavement, culverts, bridges, causeways, stock grids, signage and traffic islands.
- A full and independent risk analysis and inspection of the transport route will be required and the RTA supplied with the report. Further analysis and reporting to assess possible damage to and repair of the route will be required on a regular basis.
- The RTA will require a commitment from the applicant to provide funding for the maintenance and repair of any affected classified roads for the duration of transportation of oversize and over-mass vehicles and loads to the satisfaction of the RTA.
- Vehicles transporting loads will not be permitted to travel in convoys or platoons.
- Queues of vehicles behind slow moving large loads increase the risk of rear end crashes when queues become excessive. A queue of three heavy vehicles or 15 light vehicles is that which would be required to be cleared to prevent the risk of rear-end crashes and risky overtaking manoeuvres.
- Consideration should be given for the best time of day to minimise traffic impacts, this will require the applicant to liaise with the RTA Special Permits Unit. Overnight transport is not normally allowed under a Special Permit.
- The applicant may be required to liaise with other State transport authorities should the origin of materials and machinery to be transported be outside of New South Wales. If this is the case the requirements of those other authorities are to be communicated to the RTA for co-ordination.
- The requirements outlined in the RTA publication *Operating Conditions: specific permits for oversize and overmass vehicles and loads* will need to be followed. This publication is available online at www.rta.nsw.gov.au/heavyvehicles/oversizeovermass.

- All arrangements for the control of traffic on classified roads shall be in accordance with the RTA publication *Traffic Control at Work Sites*. A Road Occupancy Licence will be required prior to any works commencing within three metres of the traffic lanes and submission of the Traffic Management Plan will be part of Road Occupancy Licence.
- The applicant will be required to undertake private financing and construction for any works on, over, under or connecting to a State road or any other road in which the RTA has a statutory interest. Accordingly a formal agreement in the form of a Works Authorisation Deed (WAD) will be required between the applicant and the RTA.
- All works associated with the project including consultation and planning will be at no cost to the RTA.

If you would like to discuss the proposal further please contact Susie Mackay (02) 6861 1688.

Yours faithfully

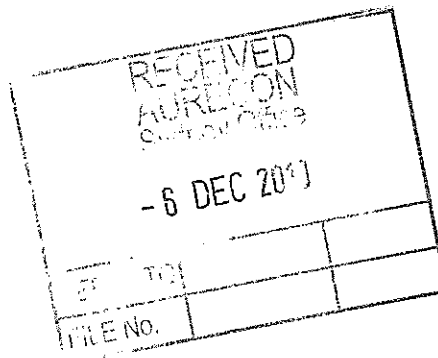


1 FEB 2011

Tony Hendry
Road Safety & Traffic Manager
Western



Australian Government
Department of Defence
Defence Support Group



2004/1044160/7
Ref: AF6158927

Mr Jeff Bembrick
Principal Environmental Consultant
Aurecon Australia Pty Ltd
PO Box 538
NEUTRAL BAY, NSW, 2089

Dear Mr Bembrick

RE: FLYER'S CREEK WIND FARM - ENVIRONMENTAL ASSESSMENT

Thankyou for referring the abovementioned wind energy project to the Department of Defence (Defence) for comment. As per the provided information, this wind farm will consist of up to 46 wind turbines up to 150m high and located 20km south of the town of Orange, NSW. As tall structures, wind farms have potential to pose a number of concerns for Defence, particularly with regard to aircraft safety, military low flying and radar interference. In this regard the following comments are made:

Military helicopters transit through this area at low level from time to time. As wind monitoring masts may be difficult for pilots to see, Defence requests that any wind monitoring masts be marked with aviation marker balls. These markers should be placed on guy wires and be of the maximum size permitted by the mast's design and engineering. The wind turbines will not require specific aviation marking if they are painted to contrast with the sky and their surroundings.

There is also an ongoing need to obtain and maintain accurate information about tall structures so that risks associated with inadvertent collision by low flying aircraft can be reduced. The RAAF Aeronautical Information Service (RAAF AIS) in Melbourne is responsible for recording the location and height of tall structures. The information is held in a central database managed by RAAF AIS and relates to the erection, extension or dismantling of tall structures, the top measurement of which is:

- a. 30 metres or more above ground level - within 30 kilometres of an aerodrome, or
- b. 45 metres or more above ground level elsewhere.

The wind turbines and masts will meet the above definition of tall structure. Defence requests that RAAF AIS be supplied with location and height details once final design positions are known and before construction commences. After construction is complete,

the Defence requests that the proponent provide RAAF AIS with "as constructed" details. RAAF AIS has a web site with a Vertical Obstruction Report Form at www.raafais.gov.au/obstr_form.htm which can be used to enter the location and height details of tall structures.

Should you wish to discuss the content of this advice further, please contact Mr Brenin Presswell, Executive Officer on (02) 6266 8138 or by email at brenin.presswell@defence.gov.au.

Yours sincerely



John Kerwan

Director Land Planning & Spatial Information
Department of Defence
BP3-1-A052
Brindabella Park
Canberra ACT 2600

15 November 2010

Cc. RD DSO NSW
RAAF AIS

Anthony Ko

From: Wong Yan [Yan.Wong@transgrid.com.au]
Sent: Friday, 28 January 2011 4:07 PM
To: Anthony Ko
Cc: Wong Yan; Wong SP
Subject: FW: Flyers Creek Wind Farm Development Proposal

Hi Anthony

I have carried a desktop study to investigate the possible impact of these wind turbines on our uWave path between Macquarie RRS and Mt Coonambro RRS. Based on the provided information, it appears that your turbines, 29, 30, 31 and 36, have no apparent impact on our radio path.

Regards

Yan Wong
Microwave Design Engineer
Design/Capital Program Delivery
TransGrid
T: 02 9284 3248
F: 02 9284 3440
E: yan.wong@transgrid.com.au
W: www.transgrid.com.au

From: Wong SP
Sent: Monday, 24 January 2011 3:35 PM
To: Wong Yan
Subject: FW: Flyers Creek Wind Farm Development Proposal

You are in charge now

regards,

SP Wong
Manager - Telecommunications Design
Design/Capital Program Delivery
Tel: 02-92843493
Fax: 02-92843440
email: sp.wong@transgrid.com.au

From: Anthony Ko [mailto:KoA@ap.aurecongroup.com]
Sent: Monday, 24 January 2011 3:28 PM
To: Wong SP
Cc: Jeffrey Bembrick; Frank Boland
Subject: Flyers Creek Wind Farm Development Proposal

Hi SP Wong,

Following on from our phone conversation, please find attached the correspondence providing details of the proposed Flyers Creek Wind Farm development and the proximity of three proposed turbine sites to an existing microwave link path.

Could you please forward this to the relevant representative and provide me with their contact details so that comments can be sought on the proposal.

Kind Regards

Anthony Ko | Energy | Aurecon
Ph: +61 2 8197 4645 | **Fax:** +61 2 8197 4620 | **Mob:** +61 450 923 315
Email: koa@ap.aurecongroup.com
PO Box 538, Neutral Bay | NSW 2089 | Australia
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Jeff Bembrick
Senior Environmental Consultant
Aurecon Australia Pty Ltd
PO Box 538
Neutral Bay NSW 2089

George Baitch
Senior Surveyor, Policy and Standards Development
Survey Infrastructure and Geodesy
Land and Property Management Authority
PO Box 143
Bathurst NSW 2795
(02) 6332 8234 p
(02) 6332 8230 f
0418 463 699 m
george.baitch@lpma.nsw.gov.au
www.lpma.nsw.gov.au

31 April 2009

Our Ref: 10/05735

Dear Jeff

**Re: Construction of Flyers Creek Wind Farm near Trigonometrical Stations
Calvert and Hopkins on TR 37025 - Preliminary Advice.**

Thank you for your email dated 14 April 2010 requesting preliminary advice on the proposal to construct the Flyers Creek Wind Farm adjacent to Trigonometrical Stations Calvert and Hopkins. I apologise for the delay in this response.

Your request has been investigated for its impact on the Trigonometrical Stations, their eccentric marks, lines of sight to surrounding Trigonometrical Stations, and for visibility to GPS satellites. This investigation was conducted in light of this Department's policy on maintenance and preservation of Trigonometrical Stations.

You asked for preliminary advice at the early stage of planning the turbine array locations and have asked what constraints may apply in the vicinity of the above two Trigonometrical Stations.

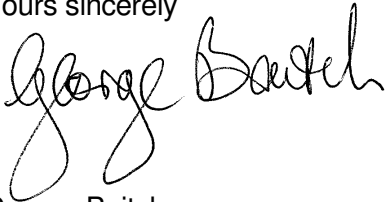
Specifically to provide preliminary advice on the following questions *[responses shown in red]*:

- *Whether each of the stations are 'Major' or 'Minor' station (from our discussion you seemed to indicate that minor stations only need a small setback.*
 - *Both Trigonometrical Stations Calvert (TS 5592) and Hopkins (TS 7069) are known as a "Spine Stations" which is the basis of the State's network breakdown. They have the highest possible horizontal accuracy of Class 2A and Order 0. In addition TS Hopkins is protected by Trigonometrical Reserve 37025. The Trigonometrical Stations are marked by concrete pillars, mast and vanes that were placed in 1983.*
- *What siting considerations would apply - If the closest turbine were located on the southern side of the Trig Stations what would be the minimum separation that you would require - would it relate to blade length so that the turbine does not overhang the trig station?*
 - *No amount of overhang for either of these Trigonometrical Stations would be acceptable.*
 - *TS Calvert is of lesser strategic importance, and accordingly, the wind turbines could be located reasonably close (say 100m).*
 - *TS Hopkins has significant strategic importance, and accordingly, it would be preferable if the wind turbines were sited further away (say at least 200m) and well away from Trigonometrical Reserve 37025.*
- *Is there an arc to the north of the trig station that you would like to keep clear and to what distance, - you mentioned 200m as a low impact distance, can it be less than this on northern side?*
 - *It would be preferable for you to locate any turbines further away from TS Hopkins (say at least 200m) and from TS Calvert at least 100m).*

I attach a copy of our Guidelines for the development of Wind Farms in the vicinity of Trigonometrical Stations Calvert and Hopkins, and their ray diagrams and summary cards.

I thank you for consulting with this Authority on the location of your Turbines and I look forward to receiving your draft proposal for consideration prior finalisation of your plans.

Yours sincerely

A handwritten signature in black ink, reading 'George Baitch'. The signature is fluid and cursive, with the first name 'George' and the last name 'Baitch' clearly distinguishable.

George Baitch
for Surveyor General

Jeffrey Bembrick

From: Tattam, Steve [steve.tattam@AirservicesAustralia.com]
Sent: Thursday, 6 January 2011 2:45 PM
To: Jeffrey Bembrick
Cc: Jonathan.Upson@infigenenergy.com
Subject: RE: Flyers Ck Wind Farm - Layout adjustment - (Airservices Reference: NSW-WF-016)

Dear Jeff,

I refer to your request for Airservices assessment of the proposed development Flyers Creek Wind Farm – (Airservices Reference: NSW-WF-016). Please note the impact that the proposed development will have on aviation for Orange Airport. As part of our assessment, Airservices advised both Orange and Bathurst Regional Councils (the aerodrome operators) of this development proposal and any applicable potential impact.

Orange Aerodrome

At maximum heights of 1078.0m (3537ft), 1064.0m (3491ft), 1095.0m (3593ft), 1058.0m (3472ft), 1092.0m (3583ft) and 1053.0m (3455ft) AHD, the proposed turbines: 1, 3, 4, 19, 20 and 33 will affect the NDB-A (approach) procedure. No other sector or circling altitude, nor any approach or departure at Orange airport is affected.

Note: The maximum height the penetrating turbines can be is as follows:

Turbines 1, 3, 4 and 33:	1040m (3413ft) AHD
Turbine 19:	1046m (3432ft) AHD
Turbine 20:	1064m (3491ft) AHD

This proposed wind farm will not impact the technical performance of Precision/Non-Precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM or Satellite/Links.

Plotted position of closest turbine to YORG NDB is 202°T (SSW) – 13.06km.

If applicable to the airport, no assessment was conducted in relation to Naverus designed RNP-AR type procedures or any other procedures designed by external Part 173 providers.

Bathurst Aerodrome

At a maximum height of 1092.0m (3583ft) AHD, the proposed wind farm will not affect any sector or circling altitude, nor any approach or departure at Bathurst airport.

This proposed wind farm will not impact the technical performance of Precision/Non-Precision Nav Aids, HF/VHF Comms, A-SMGCS, Radar, PRM or Satellite/Links.

Plotted position of closest turbine to YBTH NDB is 256°T (WSW) – 53.79km.

If applicable to the airport, no assessment was conducted in relation to Naverus designed RNP-AR type procedures or any other procedures designed by external Part 173 providers.

Regards,

Steve Tattam

Senior Advisor
Airport Relations/Industry Relations
Corporate & International Affairs
Airservices Australia
GPO Box 357, Canberra, ACT, 2601

Secretariat to ASTRA - <http://www.astra.aero/>

| P 02 6268 4891 | M 0402 776 524 | E steve.tattam@airservicesaustralia.com | W <http://www.airservicesaustralia.com> |

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From: Jeffrey Bembrick [mailto:BembrickJ@ap.aurecongroup.com]
Sent: Monday, 8 November 2010 11:28 AM
To: Tattam, Steve
Cc: Jonathan.Upson@infigenenergy.com
Subject: Flyers Ck Wind Farm - Layout adjustment

Hi Steve

Thanks for the discussion this morning

As indicated there has been an adjustment to Turbine 33 - The revised location is in the attached Table

Also included in the table are the locations of the three by 80m high met masts installed by Infigen Energy in 2008.

If any further questions please do not hesitate to call me. - Look forward to a response from Air Services

Regards Jeff

Jeff Bembrick | **Energy** | **Aurecon**
Ph: 61 2 8197 7620 | Fax: 61 2 8197 4620 | Mob: 0438105866
Email: BembrickJ@ap.aurecongroup.com
PO Box 538, Neutral Bay | NSW 2089 | Australia
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<http://www.aurecongroup.com/apac/groupentity/>

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NSW DEPARTMENT OF
PRIMARY INDUSTRIES

Flyers Creek Wind Farm Pty Ltd
Level 51, Rialto Tower South
525 Collins Street
MELBOURNE VIC 3000

Attention: Adrian Rizza

Dear Adrian,

Re: Major Project Application No. 08/0252: Proposed Flyers Creek Wind Farm

This letter is to inform you of the requirements of the Mineral Resources and Fisheries branches of the Department of Primary Industries for the Environmental Assessment of the abovementioned project. It is my understanding that you have already been advised of the requirements regarding Forestry and there are no concerns regarding Agriculture. I wish to apologise for the lateness of this response which has been due mainly to communication oversights within our department.

There are significant concerns with the proposal with regards to its potential impacts on mineral resources as it is sited upon highly prospective ground and has the potential to adversely impact upon mineral exploration and any future mining within the area. The potential impact of the proposal upon key fish habitats in adjacent waterways also needs to be addressed.

Should you require further clarification regarding Fisheries issues, please contact Stephen Clipperton, Fisheries Conservation Manager – Central and Far West on 02 6881 1279 or 0427 107883. For further information regarding Minerals issues, please contact Gary Burton, Senior Geologist on 02 6360 5330 or 0428 264886.

Yours Faithfully

per

Iain Paterson
Acting Chief Geoscientist, Land Use
Minerals & Land Use Assessment
Geological Survey of NSW
Department of Primary Industries
Maitland

3rd February 2009

**Proposed Flyers Creek Wind Farm
Department of Primary Industries Comments**

Minerals Issues

Geologically, the proposed wind farm area consists largely of Ordovician age volcanics and associated intrusions which are acknowledged to be amongst the most mineral-prospective rock units in the region. A large portion of the area is assigned to the Forest Reefs Volcanics which hosts the Cadia-Ridgeway gold-copper system. Numerous mineral occurrences are known both within and adjacent to the subject area, particularly in its northern part, and several anomalous areas have been identified in the general area by mineral exploration companies.

The proposed area is covered by several current exploration licences: EL2033 and EL2378 (Climax Australia Pty Ltd) and EL5922 (Templar Resources Ltd). A substantial amount of money has been spent on each of these tenements over the years and, being situated on such prospective ground, will continue to attract substantial exploration dollars.

The northern part of the area is particularly important as Newcrest Mining Ltd (in joint venture with Climax Australia Pty Ltd) has delineated a low grade resource at the Gooleys Prospect. Electromagnetic geophysical methods (chiefly induced potential, or IP), as well as drilling, have been important in studying this, and other, prospects in the area. Helimagnetics have also been used in this area in the past.

The EA needs to fully acknowledge the potential impact of the wind farm upon the ability of mineral exploration companies to continue to conduct effective exploration of the area and any future mining that may take place and what measures will be taken to minimise that impact. Of chief importance is the potential impact of the location of the turbines and how they may become obstacles to airborne geophysical surveys and drilling rigs, or whether they may produce geophysical artefacts that could hamper the interpretation of geophysical data. The precise location of the underground and overhead cables and any related infrastructure also needs to be considered and what effect they may have on geophysical surveys, particularly electromagnetic ones, and what can be done to minimise any such effects. As stated above, magnetic and electromagnetic methods have been instrumental in the exploration of the general area.

It is vital that the proponent liaise closely with the companies holding potentially impacted tenements and that any concerns raised by them are adequately addressed. The proponent should seek further advice from DPI Mineral Resources when the extent of the development and the locations of the proposed turbines have been more precisely defined.

Fisheries Issues

Fundamentally all developments should aim to achieve **no net impacts** on receiving waterways. The study area is located within the upper Lachlan catchment and has connectivity to Flyers Creek and the Belubula River. These waterways are Class 1 major fish habitat (DPI fisheries classification) and as such have high conservation value. Any landuse activity within or adjacent to a waterway in the study area has the potential to impact on the aquatic environment of these rivers.

It is DPI fisheries policy that consideration is given to the aquatic environment with planning and development of the proposal. DPI fisheries should be consulted in the design phase of any waterway crossings that will be part of the easement or road corridor associated with the proposal. This is to ensure that the works are designed and constructed in accordance with best management practice and with minimal impact on the aquatic environment within the immediate vicinity of the proposed works. DPI request that a referral process be built into the Statement of Commitments in relation to waterway crossing design and construction.

The EA needs to take into consideration threatened aquatic species listed under the *Fisheries Management Act 1994* (FM Act). The upper Lachlan River catchment is habitat and within the historical range of several threatened fish species.

See attached DPI fisheries requirements for EA. The list should not be considered all-inclusive when preparing the EA, but rather it should act as a guide to the information that should be presented in an EA. The EA should reflect the extent and quality of the aquatic habitat present at the site.

Attachment 1

FISHERIES ENVIRONMENTAL ASSESSMENT REQUIREMENTS - Matters to be addressed

1. GENERAL REQUIREMENTS

The EA should include the information outlined below:

- A description of proposal and study area
- A topographic map of the locality at a scale of 1:25 000 should be provided. This map should detail the location of all component parts of the proposal, any areas locally significant for threatened species (such as aquatic reserves), and areas of high human activity (such as townships, regional centres and major roads).
- All waterbodies and waterways within the proposed area of development are to be identified.
- Description of aquatic vegetation, snags, gravel beds and any other protected, threatened or dominant habitats should be presented.
- Area, density and species composition should be included and mapped.
- Identification of recognised recreational and commercial fishing grounds, aquaculture farms and/or other waterway users.
- Presented maps or plans
- Details of the location of all component parts of the proposal, including any auxiliary infrastructure, timetable for construction of the proposal with details of various phases of construction
- Size of the area affected
- Plan of study area
- Land tenure details for all land parcels
- For each freshwater body identified on the plan, the plan should include, either by annotation or by an accompanying table, hydrological and stream morphology information such as: hydrological and stream morphological information, flow characteristics, including any seasonal variations, bed substrate, and bed width

Dredging and Reclamation Activities

- Purpose of works
- Method of dredging/reclamation to be used
- Duration of works
- Time of works
- Dimension of area to be dredged/reclaimed
- Depth of dredging activities
- Nature of sediment to be dredged, including Acid Sulphate Soil
- Method of marking area subject to works
- Environmental safeguards to be used during and after works
- Measures for minimising harm to fish habitat under the proposal
- Spoil type and source location for reclamation activities
- Method of disposal of dredge material
- Location and duration of spoil stockpiling, if planned
- Volume of material to be extracted or placed as fill

Activities that Block Fish Passage

- Type of activity eg works in a stream that change flow or morphological characteristics
- Length of time fish passage is to be restricted
- Timing of proposed restriction
- Remediation works

Threatened Species

- Threatened aquatic species assessment (Section 5c, EP&A Act 1979)
- Test of Significance (7 Part Test)

2. INITIAL ASSESSMENT

A list of threatened species, endangered populations and endangered ecological communities must be provided. In determining these species, consideration must be given to the habitat types present within the study area, recent records of threatened species in the locality and the known distributions of these species. A seven part test is required for each threatened species

In describing the locality of the proposal, discussion must be provided in regard to the previous land and water uses and the effect of these on the proposed site. Relevant historical events may include land clearing, agricultural activities, water abstraction/diversion, dredging, de-snagging, reclamation, siltation, commercial and recreational activities.

A description of habitat including components such as stream morphology, in-stream and riparian vegetation, water quality and flow characteristics, bed morphology, vegetation (both aquatic and adjacent terrestrial), water quality and flow characteristics must be given. The condition of the habitat within the area must be described and discussed, including the presence and prevalence of introduced species. A description of the habitat requirements of threatened species likely to occur in the study area must be provided.

In defining the proposal area, discussion must be provided in regard to possible indirect effects of the proposal on species/habitats in the area surrounding the subject site: for example, through altered hydrological regimes, soil erosion or pollution. The study area must extend downstream and/or upstream as far as is necessary to take all potential impacts into account.

Please Note: Persons undertaking aquatic surveys may be required to hold or obtain appropriate permits or licences under relevant legislation.

3. ASSESSMENT OF LIKELY IMPACTS

The EA must:

- describe and discuss significant habitat areas within the study area;
- outline the habitat requirements of threatened species likely to occur in the study area;
- indicate the location, nature and extent of habitat removal or modification which may result from the proposed action;
- discuss the potential impact of the modification or removal of habitat;
- identify and discuss any potential for the proposal to introduce barriers to the movement of fish species; and
- describe and discuss any other potential impacts of the proposal on fish species or their habitat.

For all species likely to have their lifecycle patterns disrupted by the proposal to the extent that individuals will cease to occupy any location within the subject site, the EA

must describe and discuss other locally occurring populations of such species. The relative significance of this location for these species in the general locality must be discussed in terms of the extent, security and viability of remaining habitat in the locality.

4. AMELIORATIVE MEASURES

In discussing alternatives to the proposal, and the measures proposed to mitigate any effects of the proposal, consideration must be given to developing long term management strategies to protect areas within the study area which are of particular importance for fish species. This may include proposals to restore or improve habitat.

Any proposed pre-construction monitoring plans or on-going monitoring of the effectiveness of the mitigation measures must be outlined in detail, including the objectives of the monitoring program, method of monitoring, reporting framework, duration and frequency.

DPI is available to provide advice to consent and determining authorities regarding DPI fisheries' opinion as to whether the requirements have been met if requested, pending the availability of resources and other statutory priorities.

All communications to be addressed to:

Headquarters
NSW Rural Fire Service
Locked Mail Bag 17
GRANVILLE NSW 2142

Headquarters
NSW Rural Fire Service
15 Carter Street
LIDCOMBE NSW 2127

Telephone: (02) 8741 5555

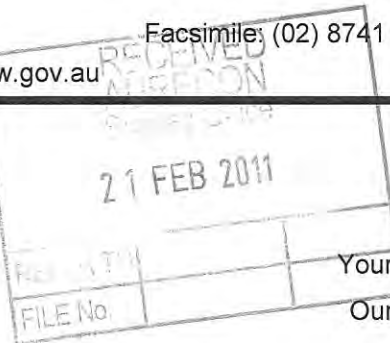
e-mail: development.assessment@rfs.nsw.gov.au

Facsimile: (02) 8741 5500



The General Manager
Aurecon Australia Pty Ltd
PO Box 538
Neutral Bay NSW 2089

ATTENTION: Anthony Ko



Your Ref: none

Our Ref: D11/0172
DA11020776114 BH
ID:76114/70212/5

16 February 2011

Dear Mr Ko

Land Use Application for Flyers Creek Wind Farm Proposal - Invitation To Comment

I refer to your letter dated 1 February 2011 seeking advice regarding bush fire protection for the above Land Use Application.

The following assessment requirements regarding bush fire protection should be addressed:

1. It is noted that the site contains land mapped as bush fire prone. Therefore the applicant will need to demonstrate that the proposed development satisfies the aims and objectives of *Planning for Bush Fire Protection 2006* (PBP) and compliance with the performance criteria for each bush fire protection measure.
2. In addition The NSW Rural Fire Service endorses the proposed production of a bush fire risk management plan. This plan should address fire management on a landscape scale.
The proposed plan should contain;
 - a. Contact person / department and contact details
 - b. Objectives of the Fire Management Plan and statement of how the proponent intends to comply with clause 63 (2) and 64 of Part 4 Division 1 of *The Rural Fires Act 1997*
 - c. Schedule and description of works for the construction of asset protection zones for the protection of dwellings within the properties and wind farm assets and their continued maintenance
 - d. Water supply for fire fighting purposes, its location and use by/compatibility with NSW Rural Fire Service Tankers
 - e. Fire fighting capability and preparedness
 - f. Details of access to the infrastructure including alternate emergency access/egress
 - g. Location of fire trails and schedule and description of works for their construction and their continued maintenance.

- h. Details of any proposed boundary fuel breaks or fire breaks
- i. Any proposed prescribed burning for fuel reduction or ecological management
- j. Details of liaison with the local bush fire mitigation officer and how the plan fits with the district bush fire risk plan and any strategic fire advantage zones, including whether these need to be included on site.

For any enquiries regarding this correspondence please contact Bruce Hansen.

Yours faithfully,



Nika Fomin

Team Leader - Development Assessment & Planning

99 Burrangong Road
Young NSW 2594
Private Bag 4
Young NSW 2594

Phone 61 2 6382 8222
Fax 61 2 6382 4263
www.pipelinetrust.com.au

APA Group



Australian Pipeline Ltd
ACN 091 344 704

Australian Pipeline Trust
ARSN 091 678 778

APT Investment Trust
ARSN 115 585 441

3rd March 2011

Jeff Bembrick
Energy Aurecon
Email: BembrickJ@ap.aurecongroup.com
PO Box 538,
Neutral Bay NSW 2089

Dear Mr Bembrick

Proposed Wind Farm, Flyers Creek Blayney

APA Group have assess the information that has been supplied concerning the development of a wind farm involving approx 45 wind turbines in the Flyers Creek area.

This proposed development affects 7km of the Orange Spur gas pipeline. Using the information supplied it would appear that 3 – 4 tracks would cross the pipeline easement, but until exact locations and loads are advised we are unable to recommend what is required.

Information supplied states that an overhead Transmission line of 33kV may be required to crossing the pipeline. A crossing of 33kV should not pose a concern but construction methods, separation distance, overhead or underground installation would need to be sort before recommendations could be made.

APA would also need to ensure that your access restrictions did not restrict our access to the pipeline easement.

To better assess this proposal APA requires a risk assessment in accordance with AS 2885.1 – 2007 to be completed prior to final approval of the proposed Wind Farm and may require an APA representative to attend this assessment

If you have any questions or concerns please do not hesitate to contact our Lands Department on 02 6382 8231 or 1800 623 121.

Yours faithfully

Fiona Douglas
Acting Lands Manager

Phone: 02 6382 8232
Email: fiona.douglas@apa.com.au