

# Bodangora Wind Farm

## ENVIRONMENTAL ASSESSMENT

May 2012  
By Bodangora Wind Farm Pty Ltd



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## CERTIFICATION OF PROJECT DETAILS AND ENVIRONMENTAL ASSESSMENT

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This Environmental Assessment (EA) supports an updated project application submitted by Bodangora Wind Farm Pty Ltd under the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the construction and operation of the proposed Bodangora Wind Farm, located within the Wellington Council.

The project will involve the construction and operation of up to 33 wind turbines, each with a generation capacity of between 2.0 and 4.0 megawatts (MW) and a total installed capacity of up to 120MW, a 33kV/132kV substation, access works, overhead and underground 33kV cabling, and temporary and permanent wind monitoring masts.

The details of the properties to which the project application refers are described in Chapter 4 of this EA, and as shown within the updated Project Application submitted to the Department of Planning.

Please note that the proponent for the project is now 'Bodangora Wind Farm Pty Ltd', as opposed to Inflegen Energy Development Pty Ltd. Inflegen Energy Development Pty Ltd is the parent company of Bodangora Wind Farm Pty Ltd, which has been established for the purpose of the development of the proposed wind farm.



## Certification of Project Details and Environmental Assessment

### Project Proponent

Frank Boland  
Bodangora Wind Farm Pty Ltd  
Level 22, 56 Pitt Street  
Sydney NSW 2000

### Proponent Certification

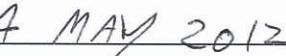
I, Frank Boland, certify that this document provides:

- a true representation of the proposed project;
- accurately represents the consultation undertaken;
- does not seek to materially mislead; and
- that Bodangora Wind Farm Pty Ltd is committed to implementing the project environmental management measures set out in this document.

Signed

Dated



  
14 MAY 2012

### EA prepared by MasterPlan SA Pty Ltd

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MPIA, CPP

Director, MasterPlan SA Pty Ltd  
33 Carrington Street  
Adelaide SA 5000

### Consultant Certification

I, Greg Vincent, certify that this EA document:

- addresses the Director-General's assessment requirements for the EA;
- provides a thorough assessment of the potential impacts of the proposed Bodangora Wind Farm; and
- that the information contained in this EA does not seek to materially mislead.

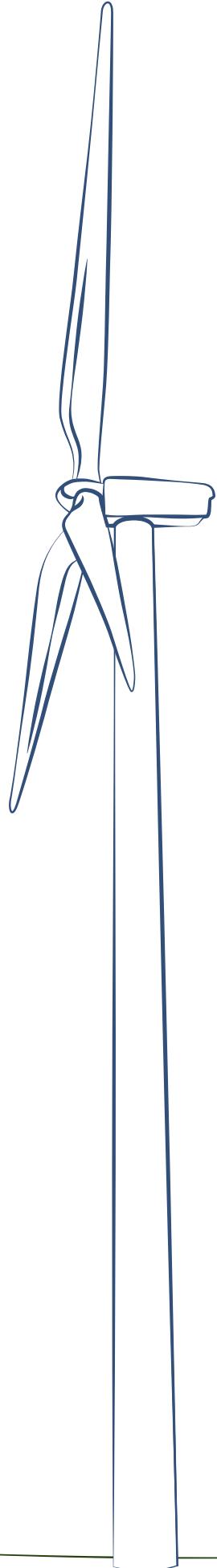
Signed



Dated

14 May 2012

# Executive Summary



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## EXECUTIVE SUMMARY

This Environmental Assessment (EA) has been prepared by MasterPlan SA Pty Ltd on behalf of the proponent, Bodangora Wind Farm Pty Ltd for the development of a wind farm at Bodangora, in the Central Western Region of New South Wales.

The EA has been prepared in conjunction with and specialist input from the following contributors:

- Infigen Energy Pty Ltd;
- Moir Landscape Architecture Pty Ltd;
- Kevin Mills and Associates Pty Ltd;
- Greg Richards and Associates Pty Ltd;
- New South Wales Archaeology Pty Ltd;
- Sonus Pty Ltd; and
- Lawrence Derrick and Associates Pty Ltd.

This EA supports a Major Project Application lodged under Part 3A of the Environmental Planning and Assessment Act 1979 for the proposed development. The EA addresses the Director-General's Requirements for the assessment and consultation undertaken for the project issued by the Department of Planning on 12 November 2010, and supplementary Director-General's Requirements issued on 16 August 2011. Pursuant to the Draft NSW Wind Farm Planning Guidelines, this EA has regard to the key provisions of the guidelines which should be adopted in applications for which the Director-General's Requirements have been issued but where the EA is yet to be exhibited.

The proposed Bodangora Wind Farm is located in Central Western NSW, between 40 and 60 kilometres south-east of Dubbo, and approximately 20 kilometres north-east of Wellington. All project elements, including the grid connection are situated wholly within the Wellington Council. The project area is 8,469 hectares in size, and comprises the holdings of eight private land owners, all of which have agreements with the proponent.

The wind farm will involve the construction and operation of up to 33 wind turbine generators, with a total installed capacity of up to 120 megawatts (MW). The proposal will utilise a renewable energy resource, and provide electrical generation of approximately 333,000 MWh/year to assist the National Electricity Market in meeting the forecast increases in electricity demands.

Ancillary components of the development include a 33/132 kilovolt (kV) substation plus switchyards and transformers to provide connection to the existing 132kV Wellington - Beryl transmission line, a communications tower located near the substation, new and upgraded access tracks, a site office, a construction lay down area, and underground and overhead 33kV cabling. The construction phase of the project is expected to continue for approximately 18 – 24 months, and once commissioned, the wind farm will have a generating life of approximately 25 years.

Infigen Energy Development Pty Ltd (Infigen Energy) is the parent company of Bodangora Wind Farm Pty Ltd, and has been involved in the planning, development and operation of multiple wind farms across Australia. Based on a review of feasible renewable energy options and comprehensive analysis of wind monitoring data and modelling, the proponent has identified a viable wind resource at Bodangora.

The project layout proposed is the result of comprehensive wind modelling, environmental investigations and as a result of the outcomes of the community and agency consultation undertaken to date. Generally, consultation undertaken has indicated broad community support for the project. Where concerns have been raised, the proponent has responded with modifications to the project layout and the provision of additional information. Future stages of the proposal will involve the exhibition of the EA, and continued community consultation in accordance with the methodology proposed.

A variety of environmental assessments have been undertaken to examine the existing situation, the likely impacts of the proposal, and mitigation and management mitigation measures proposed. Environmental Assessments have included noise impact, visual impact (including shadow flicker and blade glint), flora and fauna (including avifauna), Aboriginal and European heritage, traffic and transport, land use, hazards (including bushfire, aviation and physical safety), water resources and site drainage, soils and geology, and the social and economic impact of the project.

All issues identified are expected to be appropriately mitigated, and no issues have been identified which are likely to preclude the proposed development. The following address some of the key concerns identified for the project during community consultation:

- The project is compatible with the primary land uses of the region, including animal grazing and cropping. The development will comprise only 3.0 percent of the project area as a whole, and accordingly existing land uses can largely continue without effect. The project should not affect the operation of aerial agricultural activities to neighbouring properties of the wind farm.

- Whilst the project will be visible over a broad area, as the viewing distance increases, the scale and visual impact of the wind farm decreases. The wind farm is not expected to be detrimental to the existing landscape of the region. Neighbouring dwellings will have at most a 'low' visual impact, with the majority of neighbouring properties having a 'nil-low' impact. Turbines 8, 9, 28, 40 and 47 were removed from the project layout, primarily to minimise visual impact following the results of the community consultation.
- The project noise has been assessed for the worst case scenario, and all turbines and substation noise is expected to comply with the noise criteria set by the relevant guidelines for all dwellings in the locality. Construction noise is likely to exceed the recommended noise guidelines, and accordingly an extensive range of mitigation measures are proposed, including engineering measures, management measures, monitoring, and a thorough community awareness programme. Accordingly, through the implementation of mitigation measures, no unreasonable impact is expected to neighbouring properties over the 18 - 24 month construction period.
- The project is expected to provide an improvement to the immediate local road network within the project area. Further assessments will be undertaken to assess the requirement for road upgrades in the wider areas, and to consider the impacts of road degradation as a result of heavy vehicle movements.

The construction and operation of the project will be subject to a range of mitigating measures, as described throughout the various sections of the EA. A compilation of the proposed measures is provided in Chapter 19, representing the project's draft Statement of Commitments.

In summary, the Bodangora Wind Farm will be a significant development, is a worthy environmental initiative, and represents an important contribution to future renewable energy generation capability in NSW. Overall, it is considered that any adverse impacts will be relatively minor and will be outweighed by the positive longer term environmental, social and economic benefits of the project.

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