

Development Consent

Section 89E of the *Environmental Planning & Assessment Act 1979*

As delegate of the Minister for Planning, the Planning Assessment Commission approves the development application referred to in schedule 1, subject to the conditions in schedules 2 to 4.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.



Mr Garry West
Member of the Commission



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Sydney

12 April 2017

SCHEDULE 1

Application Number: SSD 6039
Applicant: Newtricity Biala Property Ltd
Consent Authority: Minister for Planning
Land: See Appendix 1
Development: Biala Wind Farm

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DEFINITIONS

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|----------------------------------|---|
| Aboriginal stakeholders | Aboriginal stakeholders registered for cultural heritage consultation for the development |
| Ancillary infrastructure | All wind farm infrastructure with the exception of wind turbines, including but not limited to collector substations, switching stations, permanent offices and site compounds, electricity transmission lines and internal roads |
| Applicant | Newtricity Biala Property Ltd (formerly Newtricity), or any person who seeks to carry out the development approved under this consent |
| BCA | Building Code of Australia |
| CASA | Civil Aviation Safety Authority |
| CCC | Community Consultative Committee |
| Conditions of this consent | Conditions contained in schedules 1 to 4 inclusive |
| Construction | The construction of the development, including but not limited to the construction of wind turbines, ancillary infrastructure and road upgrades (excludes pre-construction minor works) |
| Council | Upper Lachlan Shire Council |
| CPI | Consumer Price Index (All Groups Price Index for Sydney) |
| Curtilage | The land immediately surrounding a residence, including any closely located and associated buildings or structures, where domestic and/or recreational activities take place |
| Day | The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and public holidays |
| Decommissioning | The removal of wind turbines and any associated above ground infrastructure |
| Department | Department of Planning and Environment |
| Development | The development as described in the EIS |
| DPI | Department of Primary Industries |
| EIS | The environmental assessment for the <i>Biala Wind Farm</i> , prepared by Environmental Resources Management Pty Ltd (ERM) and dated 31 July 2015, as modified by the <i>Biala Wind Farm Response to Submissions</i> , prepared by ERM and dated February 2016 and <i>Additional Information</i> , prepared by ERM and dated 15 June 2016, 13 July 2016, 16 March 2017 and 27 March 2017. |
| EEC | Endangered ecological community, as defined under the TSC Act |
| EP&A Act | <i>Environmental Planning and Assessment Act 1979</i> |
| EP&A Regulation | <i>Environmental Planning and Assessment Regulation 2000</i> |
| EPA | Environment Protection Authority |
| EPL | Environment Protection Licence issued under the POEO Act |
| Evening | The period from 6pm to 10pm |
| Feasible | Feasible relates to engineering considerations and what is practical to build or implement |
| Heavy vehicle | As defined under the <i>Heavy Vehicle National Law (NSW)</i> , but excluding light and medium rigid trucks and buses no more than 8 tonnes and with not more than 2 axles |
| Heritage Act | <i>Heritage Act 1977</i> |
| Heritage item | An item as defined under the Heritage Act and/or an Aboriginal object or Aboriginal place as defined under the NP&W Act |
| Incident | A set of circumstances that: <ul style="list-style-type: none"> • causes or threatens to cause material harm to the environment; and/or • breaches or exceeds the limits or performance measures/criteria in this consent. |
| Material harm to the environment | Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial |
| Minimise | Implement all reasonable and feasible measures to reduce the impacts of the development |
| Minister | Minister for Planning, or delegate |
| Mitigation | Activities associated with reducing the impacts of the development |
| Night | The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and NSW Public Holidays |
| Non-associated residence | Any residence on privately-owned land where the owner has not reached a commercial or in kind agreement with the Applicant in relation to the development. In some cases, this agreement will be restricted. First, it may only cover certain aspects of the development (such as the noise or |

visual impacts). In such cases, the residence is only associated for those aspects covered by the agreement, and remains a non-associated residence for all those aspects that are not covered by the agreement. Second, while the agreement may cover a certain aspect of the development (such as noise impacts), it may limit the extent of any such impact (by setting absolute noise levels at a residence, for instance). In these cases, the residence is only associated to the extent that the impact is covered by the agreement, and is considered to be non-associated for any impacts that exceed the limits specified in the agreement

| | |
|------------------------------|--|
| NP&W Act | <i>National Parks and Wildlife Act 1974</i> |
| OEH | Office of Environment and Heritage |
| OLS | Obstacle Limitation Surface |
| Operation | The operation of the development, but does not include commissioning trials of equipment or use of temporary facilities |
| Over-dimensional | Over-mass and/or over-size/length vehicles |
| POEO Act | <i>Protection of the Environment Operations Act 1997</i> |
| Pre-construction minor works | Includes the following activities: <ul style="list-style-type: none"> • building/road dilapidation surveys; • investigative drilling, excavation or salvage; • minor clearing or translocation of native vegetation; • establishing temporary site office (in locations meeting the criteria identified in the conditions of this consent) • installation of environmental impact mitigation measures, fencing, enabling works; and • minor access roads and minor adjustments to services/utilities, etc. |
| Privately-owned land | Land that is not owned by a public agency or publicly-owned commercial entity (or its subsidiary) |
| Public infrastructure | Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc. |
| RAAF | Royal Australian Air Force – Aeronautical Information Services |
| Reasonable | Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements |
| Rehabilitation | The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting |
| Residence | Any dwelling in existence at the date of this consent, or a dwelling that is either the subject of a development consent or a development application that was lodged but not yet determined at the date of this consent once a final occupation certificate has been issued for the dwelling |
| RFS | Rural Fire Service |
| RMS | Roads and Maritime Services |
| Secretary | Secretary of the Department, or nominee |
| Shadow flicker | The flickering effect caused by the intermittent shading of the sun by the rotating blades of the wind turbines |
| Site | The land defined in Appendix 1 |
| Temporary facilities | Temporary facilities used for the construction and/or decommissioning of the development, including but not limited to temporary site offices and compounds, concrete batching plants, materials storage compounds, maintenance workshops, testing laboratories or material stockpiles |
| TSC Act | <i>Threatened Species Conservation Act 1995</i> |
| VPA | Voluntary Planning Agreement |
| Wind turbine | Turbines used for the generation of electricity by wind, including the tower, blades and associated components |

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

DEFERRED COMMENCEMENT

1. This consent does not operate until:
 - (a) the development of the transmission line required to connect the wind farm to the high voltage electricity network:
 - has been granted consent, or approval by a determining authority within the meaning of section 110 of, under the *Environmental Planning and Assessment Act 1979*; or
 - if the development is an activity which does not require consent or approval, a determining authority has assessed and determined to carry out the activity under Part 5 of the *Environmental Planning and Assessment Act 1979*;
 - (b) the applicant has forwarded a copy of the consent, approval or determination (as the case may be) to the Department; and
 - (c) the Secretary has notified the Applicant that it is satisfied that the requirement at 1(a) has been met.

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

2. In addition to meeting the specific environmental performance criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or decommissioning of the development.

TERMS OF CONSENT

3. The Applicant must carry out the development:
 - (a) generally in accordance with the EIS; and
 - (b) in accordance with the conditions of this consent.

Note: The general layout of the development is shown in Appendix 2.

3. If there is any inconsistency between the above documents, the most recent document must prevail to the extent of the inconsistency. However, the conditions of this consent must prevail to the extent of any inconsistency.
4. The Applicant must comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:
 - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent;
 - (b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; and
 - (c) the implementation of any actions or measures contained in these documents.

LIMITS ON CONSENT

Wind Turbines

5. The Applicant may construct, operate and replace or upgrade as necessary up to 31 wind turbines.

Notes:

- *To avoid any doubt, the Applicant does not require additional approval to replace or upgrade wind turbines over time, as long as the replacement or upgrade is carried out in accordance with the conditions of this consent.*
- *To identify the approved wind turbines, see the figures and corresponding GPS coordinates in Appendix 2.*

Wind Turbine Height

6. No wind turbines may be greater than 185 metres in height (measured from above ground level to the blade tip).

Micro-siting Restrictions

7. The Applicant may micro-site the wind turbines and ancillary infrastructure without further approval provided:
 - (a) no wind turbine is moved more than 100 metres from the relevant GPS coordinates shown in Appendix 2, except for turbine T29;
 - (b) wind turbine T29 is moved at least 350 metres from the wedge-tailed eagle nest shown on the figure in Appendix 5, and if practicable, over 500 metres from this nest;

- (c) the closest turbine is moved no closer to residence H06, H07, H09, H11 or H12 shown in the figure in Appendix 2;
- (d) the revised location of a wind turbine is at least 50 metres from existing hollow-bearing trees; or where the proposed turbine location is already within 50 metres of existing hollow-bearing trees, the revised location of the turbine is not moved any closer to the existing hollow-bearing trees; and
- (e) the revised location of the wind turbine and/or ancillary infrastructure would not result in any non-compliance with the conditions of this consent.

Limits on construction

- 8. The Applicant must not undertake the construction of turbines T01, T02 and T03 during September and October, unless otherwise agreed in writing with the owner of Residence H07.

Final Layout Plans

- 9. Prior to the commencement of construction, the Applicant must submit detailed plans of the final layout of the development to the Secretary, including:
 - (a) details on the micro-siting of any wind turbines and/or ancillary infrastructure; and
 - (b) the GPS coordinates of the final wind turbine locations.

Note: If the construction of the development is to be staged, then the provision of these plans may be staged.

NOTIFICATION OF DEPARTMENT

- 10. Prior to the commencement of the construction, operation and/or decommissioning of the development or the cessation of operations, the Applicant must notify the Department in writing of the date of commencement or cessation.

If the construction, operation and/or decommissioning of the development is to be staged, then the Applicant must:

- (a) notify the Department in writing prior to the commencement of the relevant stage, and clearly identify the development that would be carried out during the relevant stage; and
- (b) inform the local community and the Community Consultative Committee about the proposed staging plans.

STRUCTURAL ADEQUACY

- 11. The Applicant must ensure that:
 - (a) the wind turbines are constructed in accordance with the relevant standards, including the structural design requirements of *IEC 61400-1 Wind turbines – Part 1: Design Requirements* (or equivalent); and
 - (b) all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- *Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.*
- *Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.*

DEMOLITION

- 12. The Applicant must ensure that all demolition work on site is carried out in accordance with *AS 2601-2001: The Demolition of Structures*, or its latest version.

PROTECTION OF PUBLIC INFRASTRUCTURE

- 13. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:
 - (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
 - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

This condition does not apply to the upgrade and maintenance of the road network, which is expressly provided for in the conditions of this consent.

OPERATION OF PLANT AND EQUIPMENT

14. The Applicant must ensure that all plant and equipment used on site, or in connection with the development, is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

UPDATING & STAGING OF STRATEGIES, PLANS OR PROGRAMS

15. With the approval of the Secretary, the Applicant may submit any strategy, plan or program required by this consent on a progressive basis.

To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval.

With the agreement of the Secretary, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all the parties referred to under the relevant condition of this consent.

Notes:

- *While any strategy, plan or program may be submitted on a progressive basis, the Applicant must ensure that all development being carried out on site is covered by suitable strategies, plans or programs at all times.*
- *If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.*

COMMUNITY ENHANCEMENT

16. Prior to the commencement of construction, unless the Secretary agrees otherwise, the Applicant must enter into a VPA with the Council in accordance with:
- (a) Division 6 of Part 4 of the EP&A Act; and
 - (b) the terms of the applicable offer summarised in Appendix 3.

SCHEDULE 3 ENVIRONMENTAL CONDITIONS - GENERAL

VISUAL

Visual Impact Mitigation

1. For a period of 5 years from the commencement of construction, the owner of:
 - (a) residence H03a; and
 - (b) any non-associated residence within 4 kilometres of any wind turbine,may ask the Applicant to implement visual impact mitigation measures on their land to minimise the visual impacts of the development on their residence (including its curtilage).

Upon receiving such a written request from the owner of these residences, the Applicant must implement appropriate mitigation measures (such as landscaping and vegetation screening) in consultation with the owner.

These mitigation measures must be reasonable and feasible, aimed at reducing the visibility of the wind turbines from the residence and its curtilage, and commensurate with the level of visual impact on the residence.

All mitigation measures must be implemented within 12 months of receiving the written request, unless the Secretary agree otherwise.

If the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.

Notes:

- To avoid any doubt, mitigation measures are not required to be implemented to reduce the visibility of wind turbines from any other locations on the property other than the residence and its curtilage.
- The identification of appropriate visual impact mitigation measures will be more effective following the construction of the wind turbines. While landowners may ask for the implementation of visual impact mitigation measures shortly after the commencement of construction, they should consider the merits of delaying this request until the wind turbines are visible from their residence.

2. Prior to the commencement of construction, the Applicant must notify the relevant owners of the residences referred to in condition 1 above, that they have the right to request the Applicant to implement visual impact mitigation measures at their residence (including its curtilage) at any time within 5 years of the commencement of construction.

Visual Appearance

3. The Applicant must:
 - (a) minimise the off-site visual impacts of the development;
 - (b) ensure the wind turbines are:
 - painted off white/grey, unless otherwise agreed by the Secretary; and
 - finished with a surface treatment that minimises the potential for glare and reflection;
 - (b) ensure the visual appearance of all ancillary infrastructure (including paint colours), blends in as far as possible with the surrounding landscape; and
 - (d) not mount any advertising signs or logos on wind turbines or ancillary infrastructure.

Lighting

4. The Applicant must:
 - (a) minimise the off-site lighting impacts of the development;
 - (b) ensure that any aviation hazard lighting complies with CASA's requirements;
 - (c) minimise the visual impacts of any aviation lighting by implementing measures such as:
 - partial shielding of lights;
 - operating the lights only at night or during times of reduced visibility; and
 - turning the lights on and off simultaneously;
 - (d) ensure that all external lighting associated with the development (apart from any aviation hazard lighting):
 - is installed as low intensity lighting (except where required for safety or emergency purposes);
 - does not shine above the horizontal;
 - uses best management practice for bat deterrence; and

- complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*, or its latest version.

Shadow Flicker

5. The Applicant must ensure that shadow flicker from operational wind turbines does not exceed 30 hours per year at any non-associated residence.

NOISE

Construction & Decommissioning Noise

6. The Applicant must:
 - (a) minimise the construction or decommissioning noise of the development, including any associated traffic noise; and
 - (b) ensure that the noise generated by any construction or decommissioning activities is managed in accordance with the best practice requirements outlined in the *Interim Construction Noise Guideline* (DECC, 2009), or its latest version.
7. Unless the Secretary agrees otherwise, the Applicant must only undertake construction or decommissioning activities between:
 - (a) 7 am to 6 pm Monday to Friday;
 - (b) 8 am to 1 pm Saturdays; and
 - (c) at no time on Sundays and NSW public holidays.

The following construction or decommissioning activities may be undertaken outside these hours without the approval of the Secretary:

- activities that are inaudible at non-associated residences;
- the delivery of materials as requested by the NSW Police Force or other authorities for safety reasons; or
- emergency work to avoid the loss of life, property and/or material harm to the environment.

Blasting

8. The Applicant may only carry out blasting on site between 9 am and 5 pm Monday to Friday and between 8 am and 1 pm on Saturday inclusive. No blasting is allowed on Sundays or public holidays.
9. The Applicant must ensure that any blasting carried out on site does not exceed the criteria in Table 1.

Table 1: Blasting criteria

| Location | Airblast overpressure (dB(Lin Peak)) | Ground vibration (mm/s) | Allowable exceedance |
|-------------------------------|---|--------------------------------|---|
| Any non- associated residence | 120 | 10 | 0% |
| | 115 | 5 | 5% of the total number of blasts or events over a period of 12 months |

Operational Noise Criteria – Wind Turbines

10. The Applicant must ensure that the noise generated by the operation of wind turbines does not exceed the relevant criteria in Table 2 at any non-associated residence.

Table 2: Noise criteria dB(A)

| Residence | Criteria (dB(A)) with Reference to Hub Height Wind Speed (m/s) | | | | | | | | | |
|-------------------------------------|--|----|----|----|----|----|----|----|----|------------|
| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 or more |
| H03, H04 | 35 | 35 | 36 | 37 | 38 | 39 | 40 | 42 | 43 | 46 |
| H05 | 35 | 35 | 35 | 35 | 35 | 37 | 38 | 39 | 41 | 43 |
| H06 | 35 | 35 | 35 | 35 | 35 | 36 | 38 | 40 | 43 | 46 |
| H07 | 35 | 35 | 36 | 37 | 38 | 40 | 41 | 44 | 46 | 50 |
| H09 | 36 | 37 | 38 | 40 | 41 | 42 | 44 | 45 | 47 | 48 |
| H11 | 35 | 35 | 35 | 36 | 37 | 39 | 40 | 42 | 43 | 46 |
| H12 | 35 | 35 | 37 | 39 | 40 | 42 | 43 | 45 | 46 | 48 |
| H13, H14 | 35 | 35 | 36 | 37 | 38 | 39 | 39 | 40 | 40 | 40 |
| H15 | 35 | 35 | 35 | 35 | 36 | 36 | 37 | 37 | 38 | 39 |
| H17 | 36 | 37 | 38 | 40 | 41 | 42 | 44 | 45 | 47 | 48 |
| DA18 | 35 | 35 | 37 | 39 | 40 | 42 | 43 | 45 | 46 | 48 |
| All other non-associated residences | The higher of 35 dB(A) or the existing background noise level plus 5 dB(A) | | | | | | | | | |

Note: To identify the residences referred to in Table 2, see the applicable figure in Appendix 2.

Noise generated by the operation of the wind turbines is to be measured in accordance with the relevant requirements of the South Australian Environment Protection Authority's *Wind Farms – Environmental Noise Guidelines 2009* (or its latest version), as modified by the provisions in Appendix 4. If this guideline is replaced by an equivalent NSW guideline, then the noise generated is to be measured in accordance with the requirements in the NSW guideline.

However, these criteria do not apply if the Applicant has an agreement with the relevant owner/s of these residences to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.

Operational Noise Criteria – Ancillary Infrastructure

11. The Applicant must ensure that the noise generated by the operation of ancillary infrastructure does not exceed 35 dB(A) $L_{Aeq}(15 \text{ minute})$ at any non-associated residence.

Noise generated by the development is to be measured in accordance with the relevant requirements of the *NSW Industrial Noise Policy* (or its equivalent) as modified by the provisions in Appendix 4.

Operational Noise Monitoring

12. Within 6 months of the commencement of operations, the Applicant must:
 - (a) undertake noise monitoring to determine whether the development is complying with the relevant conditions of this consent; and
 - (b) submit a copy of the monitoring results to the Department and the EPA.
13. The Applicant must undertake further noise monitoring of the development if required by the Secretary.

AIR

14. The Applicant must:
 - (a) minimise the off-site dust, fume and blast emissions of the development; and
 - (b) minimise the surface disturbance of the site.

SOIL & WATER

Water Supply

15. The Applicant must ensure that it has sufficient water for all stages of the development; and if necessary, adjust the scale of the development to match its available water supply.

Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development.

Water Pollution

16. Unless an EPL authorises otherwise, the Applicant must comply with Section 120 of the POEO Act.

Note: Section 120 of the POEO Act makes it an offence to pollute any waters.

Operating Conditions

17. The Applicant must:
- ensure the wind turbines and ancillary infrastructure, particularly any access roads on steep slopes, are designed, constructed and maintained to minimise any soil erosion;
 - minimise any soil erosion associated with the construction and decommissioning of the development by implementing the relevant mitigation measures in *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004), or its latest version;
 - ensure all waterway crossings are constructed in accordance with the relevant *Water Guidelines for Controlled Activities on Waterfront Land (2012)*, or their latest version;
 - store and handle all dangerous or hazardous materials on site in accordance with *AS1940-2004: The storage and handling of flammable and combustible liquids*, or its latest version;
 - ensure the concrete batching plants and substation are suitably bunded; and
 - minimise any spills of hazardous materials or hydrocarbons, and clean up any spills as soon as possible after they occur.

BIODIVERSITY

Restrictions on Clearing and Habitat

18. The Applicant must:
- ensure that no more than 1.05 hectares of the Tablelands Snow Gum, Black Salee, Candlebark and Ribbon Gum Grassy Woodland EEC is cleared for the development, unless the Secretary agrees otherwise;
 - minimise:
 - the impacts of the development on hollow-bearing trees and termite mounds;
 - the impacts of the development on threatened bird and bat populations; and
 - the clearing of native vegetation and key habitat within the approved disturbance footprint.

Biodiversity Offset

19. Within 2 years of the commencement of construction, unless the Secretary agrees otherwise, the Applicant must retire biodiversity credits of a number and class specified in Table 3 below, to the satisfaction of OEH.

The retirement of the credits must be carried out in accordance with the *NSW Biodiversity Offsets Policy for Major Projects*, and can be achieved by:

- acquiring or retiring credits under the biobanking scheme in the TSC Act;
- making payments into an offset fund that has been established by the NSW Government; or
- providing suitable supplementary measures.

Table 3: Ecosystem credit requirements

| Biometric Vegetation Type | Biometric Condition | Impact Area (ha) | Credits Required |
|---|--|-------------------------|-------------------------|
| PCT ID 351: Brittle Gum – Board-leaved Peppermint – Red Stringy open forest in the north-western part (Yass to Orange) of South Eastern Highlands Bioregion | Moderate_Good_Moderate | 0.67 | 44 |
| | Moderate_Good_Sparse | 0.24 | |
| | Moderate_Good_Derived Native Grassland | 1.11 | |
| PCT ID 1097: Ribbon Gum – Narrow-leaved Peppermint grassy open forest on basalt plateaux, Sydney Basin Bioregion and South Eastern Highlands Bioregion | Moderate_Good_Moderate | 1.05 | 41 |

Biodiversity Management Plan

20. Prior to the commencement of construction, the Applicant must prepare a Biodiversity Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with OEH; and
 - include:
 - updated baseline mapping of the vegetation communities and key fauna habitat on site;
 - a description of the measures that would be implemented for:
 - minimising the amount of native vegetation clearing within the approved development footprint;
 - minimising the loss of key fauna habitat, including tree hollows and termite mounds;
 - minimising the impacts on fauna on site, including undertaking pre-clearance surveys;
 - rehabilitating and revegetating temporary disturbance areas;
 - protecting native vegetation and key fauna habitat outside the approved disturbance area;
 - maximising the salvage of resources within the approved disturbance area – including vegetative and soil resources – for beneficial reuse (including fauna habitat enhancement) during the rehabilitation and revegetation of the site;
 - collecting and propagating seed (where relevant);
 - controlling weeds and feral pests;
 - controlling erosion; and
 - bushfire management;
 - a detailed program to monitor and report on the effectiveness of these measures.

Following the Secretary's approval, the Applicant must implement the Biodiversity Management Plan.

Bird and Bat Adaptive Management Plan

21. Prior to the commissioning of any wind turbines, the Applicant must prepare a Bird and Bat Adaptive Management Plan for the development in consultation with OEH, and to the satisfaction of the Secretary. This plan must include:
- at least 12 months worth of current (or updated) baseline data on threatened and 'at risk' bird and bat species and populations in the locality that could be affected by the project;
 - a detailed description of the measures that would be implemented on site for minimising bird and bat strike during operation of the development, including:
 - minimising the availability of raptor perches;
 - prompt carcass removal;
 - controlling pests; and
 - using best practice methods for bat deterrence, including managing potential lighting impacts;
 - trigger levels for further investigation of the potential impacts of the project on particular bird or bat species or populations;
 - an adaptive management program that would be implemented if the development is having an adverse impact on a particular threatened or 'at risk' bird or bat species or population, including the implementation of measures to:
 - reduce the mortality of these species or populations (such as restricting operation of certain turbines during certain periods); or
 - enhance and propagate these species or population in the locality; and
 - a detailed program to monitor and report on the effectiveness of these measures, and any bird or bat strikes on site.

Following the Secretary's approval, the Applicant must implement the Bird and Bat Adaptive Management Plan.

HERITAGE

Protection of Aboriginal Heritage Sites

22. The Applicant must:
- ensure the development does not cause any direct or indirect impact on the Aboriginal heritage sites identified in the table in Appendix 6, unless the Secretary agrees otherwise; and
 - minimise any impacts on BWF PAD1, and carry out detailed test excavations and salvage of potential archaeological deposits at this site if impacts cannot be avoided.

Note: The locations of the Aboriginal heritage items referred to in this condition are shown on the figure in Appendix 6.

Heritage Management Plan

23. Prior to the commencement of construction, the Applicant must prepare a Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared by a suitably qualified and experienced person whose appointment has been endorsed by the Secretary;
 - be prepared in consultation with OEH and Aboriginal stakeholders;
 - include updated baseline mapping of the heritage items within and adjoining the development disturbance area;
 - include a description of the measures that would be implemented for:
 - protecting Aboriginal heritage sites outside the development disturbance area;
 - minimising and managing the impacts of the development on heritage items within the disturbance footprint, including:
 - test excavations and salvage (if required) of potential Archaeological deposits that will be impacted by the development (including heritage item BWF PAD 1);
 - salvage of heritage items BWF 8 and BWF 18; and
 - a strategy for the long term management of any Aboriginal heritage items or material collected during the test excavation or salvage works
 - a contingency plan and reporting procedure if:
 - Aboriginal heritage items outside the approved disturbance area are damaged;
 - previously unidentified Aboriginal heritage sites are found; or
 - Aboriginal skeletal material is discovered;
 - ensuring workers on site receive suitable heritage inductions prior to carrying out any development on site, and that records are kept of these inductions;
 - ongoing consultation with Aboriginal stakeholders during the implementation of the plan; and
 - a program to monitor and report on the effectiveness of these measures and any heritage impacts of the project.

Following the Secretary's approval, the Applicant must implement the Heritage Management Plan.

TRANSPORT

Designated Heavy and Over-Dimensional Vehicle Routes

24. The Applicant must ensure that:
- all over-dimensional vehicle access to and from the site is via the Hume Highway southern interchange through Goulburn, north along Crookwell-Goulburn Road and then bypassing Crookwell township via Grange Road, Cullen Street, Kialla Road and Range Road connecting to Grabben Gullen Road;
 - all heavy vehicle access to and from the site is via the Hume Highway to Gunning then north along Grabben Gullen Road; and
 - development related heavy vehicles must not travel on Hume Street and Yass Street in Gunning (south of Collector Road).

Notes:

- The Applicant is required to obtain relevant permits under the Heavy Vehicle National Law (NSW) for the use of over-dimensional vehicles on the road network.*
- The identified over-dimensional and heavy vehicle access routes are shown in the figure in Appendix 8.*

Road Upgrades

25. Prior to any over-dimensional vehicles accessing the site, the Applicant must carry out the road upgrades in the schedule of works in Appendix 7 to the satisfaction of Council.

Road Maintenance

26. The Applicant must:

- (a) prepare a dilapidation survey of:
 - the designated heavy vehicle route:
 - prior to the commencement of any construction or decommissioning works other than pre-construction minor works; and
 - within 1 month of the completion of any construction or decommissioning works other than pre-construction minor works;
 - the designated over-dimensional vehicle route:
 - prior to the use of the route by any over-dimensional vehicles for the construction or decommissioning of the development; and
 - within 1 month of the completion of the use of the route by over-dimensional vehicles for the construction or decommissioning of the development;
- (b) rehabilitate and/or make good any development-related damage:
 - identified during the carrying out of the relevant construction and/or decommissioning works if it could endanger road safety, as soon as possible after the damage is identified but within 7 days at the latest; and
 - identified during any dilapidation survey carried out following the completion of the relevant construction and/or decommissioning works within 2 months of the completion of the survey, unless the relevant roads authority agrees otherwise,to the satisfaction of the relevant roads authority.

If the construction and/or decommissioning of the development is to be staged, the obligations in this condition apply to each stage of construction and/or decommissioning.

If there is a dispute about the scope of any remedial works or the implementation of these works, then either party may refer the matter to the Secretary for resolution.

Unformed Crown Roads

27. The Applicant must ensure any unformed Crown road reserves affected by the development are maintained for future use.

Traffic Management Plan

28. Prior to the commencement of construction, the Applicant must prepare a Traffic Management Plan for the development in consultation with RMS and Council, and to the satisfaction of the Secretary. This plan must:

- (a) detail the measures that would be implemented to:
 - minimise the traffic safety impacts of the development and disruptions to local road users during the construction and decommissioning of the development, including:
 - temporary traffic controls, including detours and signage;
 - notifying the local community about development-related traffic impacts;
 - avoiding potential conflicts between development-related traffic and the stock movements of the owner of Residence H07 by implementing measures such as:
 - o consulting with the landowner to confirm likely stock movement frequency, timing and duration;
 - o notification protocols for stock movements, including a dedicated phone number; and
 - o temporary traffic controls on Grabben Gullen Road such as traffic flags or signals;
 - avoiding potential conflict between development-related traffic and school buses in consultation with school bus operators by implementing measures such as avoiding traffic movements during school bus service times or providing an escort for school buses;
 - ensuring development-related traffic does not track dirt onto the public road network;
 - ensuring loaded vehicles entering or leaving the site have their loads covered or contained;
 - there is sufficient parking on site for all development-related traffic;
 - responding to any emergency repair requirements or maintenance during construction and/or decommissioning; and
 - a traffic management system for managing over-dimensional vehicles;
 - comply with the traffic conditions in this consent;
- (b) include a drivers code of conduct that addresses:
 - travelling speeds;
 - procedures to ensure that drivers adhere to the designated heavy and over-dimensional vehicle routes; and
 - procedures to ensure that drivers implement safe driving practices;
- (c) include a detailed program to monitor and report on the effectiveness of these measures and the code of conduct.

Following the Secretary's approval, the Applicant must implement the Traffic Management Plan.

AVIATION

Notification of Aviation Authorities

29. Prior to the construction of any wind turbine or wind monitoring mast, the Applicant must provide the following information to CASA, Airservices Australia, and the RAAF (together the authorities):
- coordinates in latitude and longitude of each wind turbine and mast;
 - final height of each wind turbine and mast in Australian Height Datum;
 - ground level at the base of each wind turbine and mast in Australian Height Datum;
 - confirmation of compliance with any OLS; and
 - details of any proposed aviation hazard lighting.
30. Within 30 days of the practical completion of the construction of any wind turbine or mast, the Applicant must:
- provide confirmation to the authorities that the information that was previously provided remains accurate; or
 - update the information previously provided.

RADIOCOMMUNICATIONS

31. Prior to the construction of any wind turbines, the Applicant must:
- re-route the fixed point-to-point microwave link crossing the middle of the site to the satisfaction of RFS; and
 - implement measures to minimise the risk of television broadcasting interference due to the development at residences H03, H05, H06 and H07.
32. If the development results in the disruption to any radiocommunications services (including point-to-point microwave links) in the area, then the Applicant must make good any disruption to these services as soon as possible following the disruption, but no later than 1 month following the disruption of the service unless the relevant service provider or user or Secretary agrees otherwise.

If there is a dispute about the mitigation measures to be implemented or the implementation of these mitigation measures, then either party may refer the matter to the Secretary for resolution.

BUSHFIRE

33. The Applicant must:
- ensure that the development:
 - provides for asset protection in accordance with the RFS's *Planning for Bushfire Protection 2006* (or equivalent);
 - is suitably equipped to respond to any fires on site;
 - develop procedures to manage potential fires on site, in consultation with the RFS; and
 - assist the RFS and emergency services as much as possible if there is a fire in the vicinity of the site.

SAFETY

34. The Applicant must:
- prepare a Safety Management System for the development in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'* prior to commissioning any wind turbines on site; and
 - implement, and if necessary update, the system over the remaining life of the development.

WASTE

35. The Applicant must:
- minimise the waste generated by the development;
 - classify all waste generated on site in accordance with the EPA's *Waste Classification Guidelines 2014* (or its latest version);
 - store and handle all waste generated on site in accordance with its classification;
 - not receive or dispose of any waste on site; and
 - ensure all waste is disposed of at appropriately licensed waste facilities.

REHABILITATION & DECOMMISSIONING

Rehabilitation Objectives – Decommissioning

36. Within 18 months of the cessation of operations, unless the Secretary agrees otherwise, the Applicant must rehabilitate the site to the satisfaction of the Secretary. This rehabilitation must comply with the objectives in Table 4.

Table 4: Rehabilitation Objectives

| Feature | Objective |
|--|--|
| Development site (as a whole) | <ul style="list-style-type: none">• Safe, stable and non-polluting• Minimise the visual impact of any above ground ancillary infrastructure agreed to be retained for an alternative use as far as is reasonable and feasible |
| Revegetation | <ul style="list-style-type: none">• Restore native vegetation generally as identified in the EIS |
| Above ground wind turbine infrastructure (excluding wind turbine pads) | <ul style="list-style-type: none">• To be decommissioned and removed, unless the Secretary agrees otherwise |
| Wind turbine pads | <ul style="list-style-type: none">• To be covered with soil and/or rock and revegetated |
| Above ground ancillary infrastructure | <ul style="list-style-type: none">• To be decommissioned and removed, unless an agreed alternative use is identified to the satisfaction of the Secretary |
| Internal access roads | <ul style="list-style-type: none">• To be decommissioned and removed, unless an agreed alternative use is identified to the satisfaction of the Secretary |
| Land use | <ul style="list-style-type: none">• Restore or maintain land capability as described in the EIS |
| Community | <ul style="list-style-type: none">• Ensure public safety |

Progressive Rehabilitation

37. The Applicant must:
- (a) rehabilitate all areas of the site not proposed for future disturbance progressively, that is, as soon as reasonably practicable following construction or decommissioning;
 - (b) minimise the total area exposed at any time; and
 - (c) employ interim rehabilitation strategies to minimise dust generation, soil erosion and weed incursion on parts of the site that cannot yet be permanently rehabilitated.

Dismantling of Wind Turbines

38. Any individual wind turbines which cease operating for more than 12 consecutive months must be dismantled within 18 months after that 12 month period, unless the Secretary agrees otherwise.

SCHEDULE 4 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. Prior to the commencement of construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
 - (a) provide the strategic framework for environmental management of the development;
 - (b) identify the statutory approvals that apply to the development;
 - (c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (d) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise;
 - respond to any non-compliance;
 - respond to emergencies; and
 - (e) include:
 - copies of any strategies, plans and programs approved under the conditions of this consent; and
 - a clear plan depicting all the monitoring to be carried out in relation to the development, including a table summarising all the monitoring and reporting obligations under the conditions of this consent.

Following the Secretary's approval, the Applicant shall implement the Environmental Management Strategy.

Revision of Strategies, Plans and Programs

2. Within 3 months of the submission of:
 - (a) an incident report under condition 4 below;
 - (b) an audit report under condition 7 below; or
 - (c) any modification to the conditions of this consent (unless the conditions require otherwise),the Applicant must review and, if necessary, revise the strategies, plans, and programs required under this consent to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted to the Secretary for approval.

Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.

Community Consultative Committee

3. The Applicant must:
 - (a) operate a Community Consultative Committee for the development prior to the commencement of construction; and
 - (b) operate this Committee following establishment, to the satisfaction of the Secretary, and in accordance with the *Community Consultative Committee Guidelines for State Significant Projects (2016)*, or its latest version.

REPORTING

Incident Reporting

4. The Applicant must immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Applicant shall provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

Regular Reporting

5. The Applicant must provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

AUDITING

6. Within 1 year of the commencement of construction, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
- be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - include consultation with the relevant agencies;
 - assess the environmental performance of the development and assess whether it is complying with the requirements in this consent and any relevant EPL/s;
 - review the adequacy of any approved strategy, plan or program required under the abovementioned approvals; and
 - recommend measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under these approvals.

Notes:

- This audit team must be led by a suitably qualified auditor and/or experts in any other fields specified by the Secretary.*
- The Department's Independent Audit Guideline for State Significant Development provides an audit and reporting framework for the independent audit that will guide compliance with this condition.*

7. Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report and a timetable for the implementation of these recommendations as required.
8. The Applicant must implement these recommendations to the satisfaction of the Secretary.

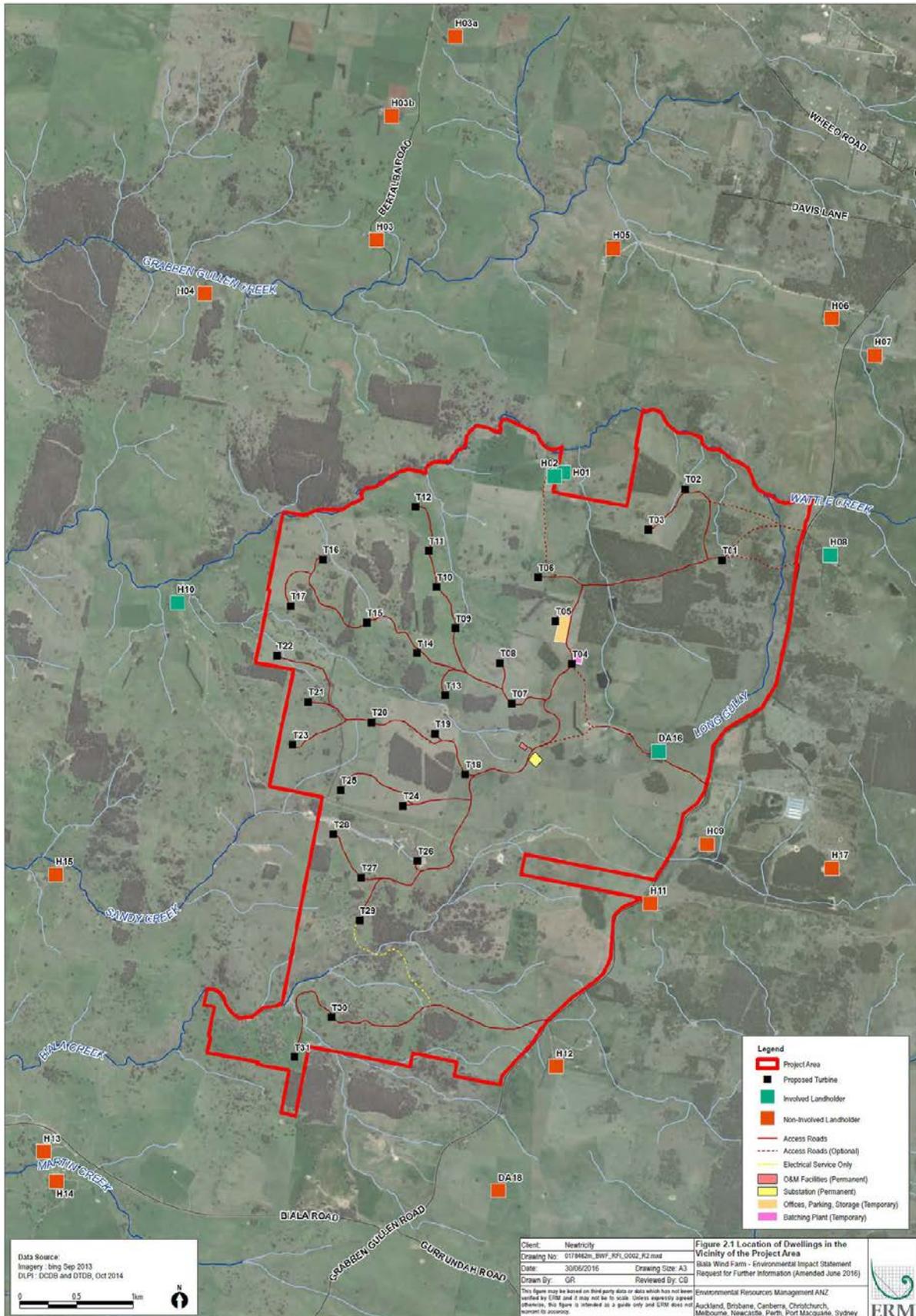
ACCESS TO INFORMATION

9. The Applicant must:
- make the following information publicly available on its website as relevant to the stage of the development:
 - the EIS;
 - the final layout plans for the development;
 - current statutory approvals for the development;
 - approved strategies, plans or programs required under the conditions of this consent;
 - the proposed staging plans for the development if the construction, operation and/or decommissioning of the development is to be staged;
 - a comprehensive summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent;
 - a complaints register, which is to be updated on a monthly basis;
 - minutes of CCC meetings;
 - the annual Statement of Compliance with the EPL
 - any independent environmental audit, and the Applicant's response to the recommendations in any audit; and
 - any other matter required by the Secretary; and
 - keep this information up to date, to the satisfaction of the Secretary.
-

**APPENDIX 1
SCHEDULE OF LAND**

| Lot Number | Deposited Plan (DP) |
|--|---------------------|
| 10, 11, 12 | 1117737 |
| 7,20, 114, 131, 151, 192, 217, 255, 256, 257, 258, 259, 286, 287, 299, 301, 302, 319,329, 333, 334, 335, 336, 340, 345, 347, 348, 350, 351, 352, , 365 | 754126 |
| 1, 2 | 1115746 |
| 1, 2 | 878594 |
| 18, 19 | 878997 |

APPENDIX 2 DEVELOPMENT LAYOUT



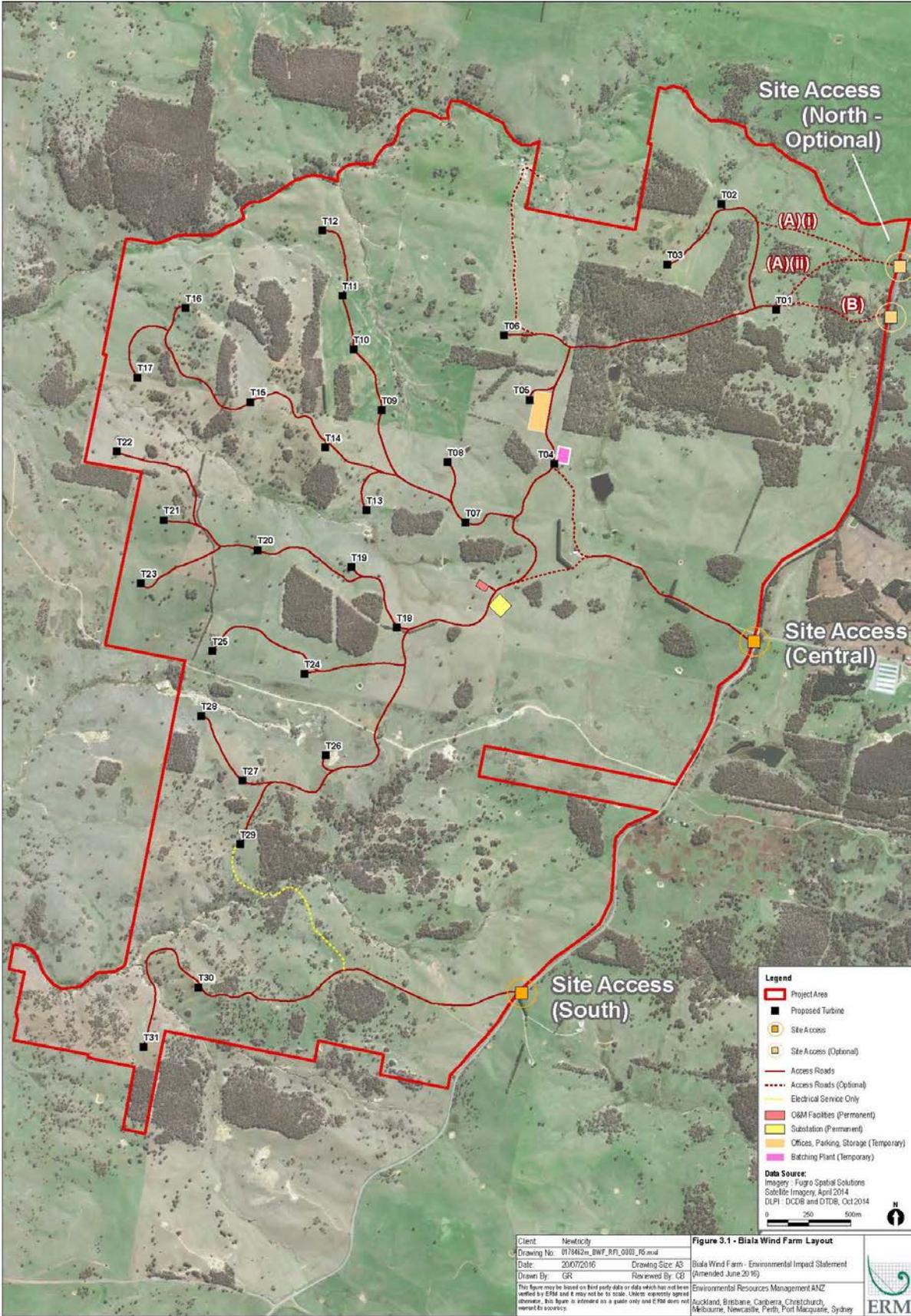


Table 2-1: GPS Coordinates of turbines

| Turbine ID | Easting (m) ¹ | Northing (m) ¹ |
|------------|--------------------------|---------------------------|
| T01 | 717864 | 6171824 |
| T02 | 717535 | 6172459 |
| T03 | 717211 | 6172095 |
| T04 | 716535 | 6170896 |
| T05 | 716389 | 6171280 |
| T06 | 716235 | 6171670 |
| T07 | 716003 | 6170542 |
| T08 | 715899 | 6170905 |
| T09 | 715503 | 6171219 |
| T10 | 715337 | 6171583 |
| T11 | 715269 | 6171908 |
| T12 | 715149 | 6172300 |
| T13 | 715415 | 6170615 |
| T14 | 715165 | 6170992 |
| T15 | 714719 | 6171266 |
| T16 | 714332 | 6171832 |
| T17 | 714042 | 6171415 |
| T18 | 715593 | 6169908 |
| T19 | 715322 | 6170274 |
| T20 | 714763 | 6170375 |
| T21 | 714201 | 6170556 |
| T22 | 713921 | 6170969 |
| T23 | 714064 | 6170175 |
| T24 | 715042 | 6169630 |
| T25 | 714491 | 6169769 |
| T26 | 715169 | 6169139 |
| T27 | 714673 | 6168987 |
| T28 | 714425 | 6169376 |
| T29 | 714657 | 6168605 |
| T30 | 714409 | 6167741 |
| T31 | 714079 | 6167384 |

Notes: 1. Coordinate system is WGS84 Zone 55H

APPENDIX 3
GENERAL TERMS OF APPLICANT'S VPA OFFER

The VPA with the Upper Lachlan Shire Council shall include provisions for the payment, collection, management and distribution of the contributions under the agreement, with a focus on funding community projects in the area surrounding the project site. Payment details shall include:

- \$2,500 per wind turbine per annum as installed at the development over the operational life of the development, commencing on the date on which the development begins 'operation' and ceasing when the development is 'decommissioned' in accordance with the definitions in this consent, and CPI adjusted over time commencing at the September 2010 quarter.

APPENDIX 4 NOISE COMPLIANCE ASSESSMENT

PART A: SOUTH AUSTRALIAN WIND FARMS: ENVIRONMENTAL NOISE GUIDELINES 2009 (MODIFIED)

South Australian *Wind Farms: Environmental Noise Guidelines 2009* (Modified) refers to the South Australian EPA document modified for use in NSW.

The modifications are as follows:

Tonality

The presence of excessive tonality (a special noise characteristic) is consistent with that described in *ISO 1996.2: 2007 Acoustics — Description, measurement and assessment of environmental noise – Determination of environmental noise levels* and is defined as when the level of one-third octave band measured in the equivalent noise level $L_{eq}(10\text{minute})$ exceeds the level of the adjacent bands on both sides by:

- 5dB or more if the centre frequency of the band containing the tone is in the range 500Hz to 10,000Hz;
- 8dB or more if the centre frequency of the band containing the tone is in the range 160 to 400Hz; and/or
- 15dB or more if the centre frequency of the band containing the tone is in the range 25Hz to 125Hz.

If tonality is found to be a repeated characteristic of the wind turbine noise, 5 dB(A) should be added to measured noise levels from the wind farm. If tonality is only identified for certain wind directions and speeds, the penalty is only applicable under these conditions. The tonal characteristic penalty applies only if the tone from the wind turbine is audible at the relevant receiver. Absence of tone in noise emissions measured at an intermediate location is sufficient proof that the tone at the receiver is not associated with the wind farm's operation. The assessment for tonality should only be made for frequencies of concern from 25 Hz to 10 KHz and for sound pressure levels above the threshold of hearing (as defined in *ISO 389.7: 2005 Acoustics - Reference zero for the calibration of audiometric equipment - Part 7: Reference threshold of hearing under free-field and diffuse-field listening conditions*).

Low Frequency Noise

The presence of excessive low frequency noise (a special noise characteristic) [i.e. noise from the wind farm that is repeatedly greater than 65 dB(C) during the day time or 60 dB(C) during the night time at any relevant receiver] will incur a 5 dB(A) penalty, to be added to the measured noise level for the wind farm, unless a detailed internal low frequency noise assessment demonstrates compliance with the proposed criteria for the assessment of low frequency noise disturbance (UK Department for Environment, Food and Rural Affairs (DEFRA, 2005)) for a steady state noise source.

Notes:

- For the purposes of these conditions, a special noise characteristic is defined as a repeated characteristic if it occurs for more than 10% of an assessment period. This equates to being identified for more than 144 minutes during any 24 hour period. This definition refers to verified wind farm noise only.
- The maximum penalty to be added to the measured noise level from the wind farm for any special noise characteristic individually or cumulatively is 5 dB(A).

PART B: NOISE COMPLIANCE ASSESSMENT

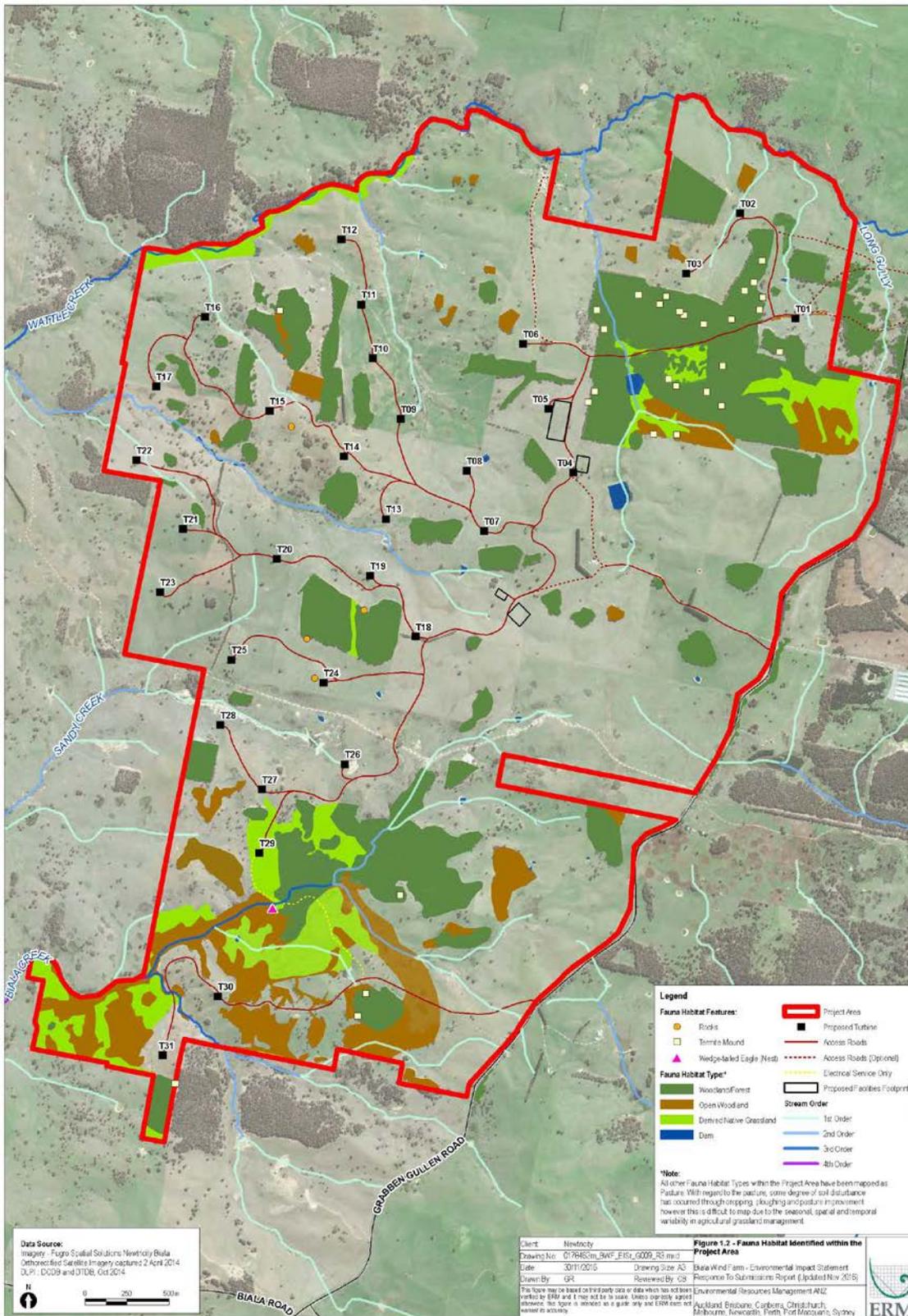
Applicable Meteorological Conditions – Wind Turbines

1. The noise criteria in Table 2 of the conditions are to apply under all meteorological conditions.

Applicable Meteorological Conditions – Other Facilities

2. The noise criteria in condition 10 are to apply under all meteorological conditions except the following:
 - a) wind speeds greater than 3 m/s at 10 m above ground level; or
 - b) temperature inversion conditions between 1.5 °C and 3°C/100m and wind speeds greater than 2 m/s at 10 m above ground level; or
 - c) temperature inversion conditions greater than 3°C/100m.

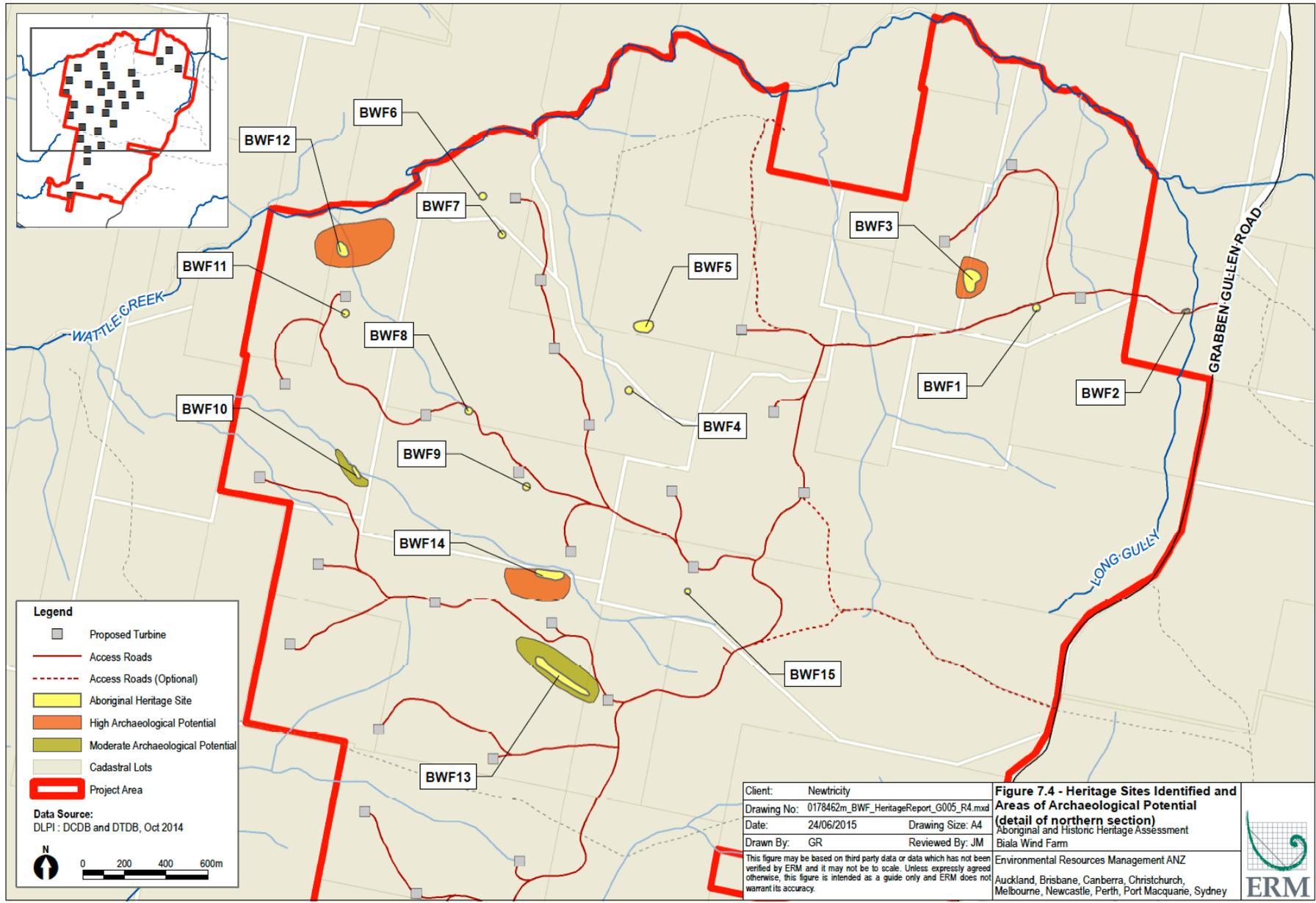
APPENDIX 5 BIODIVERSITY

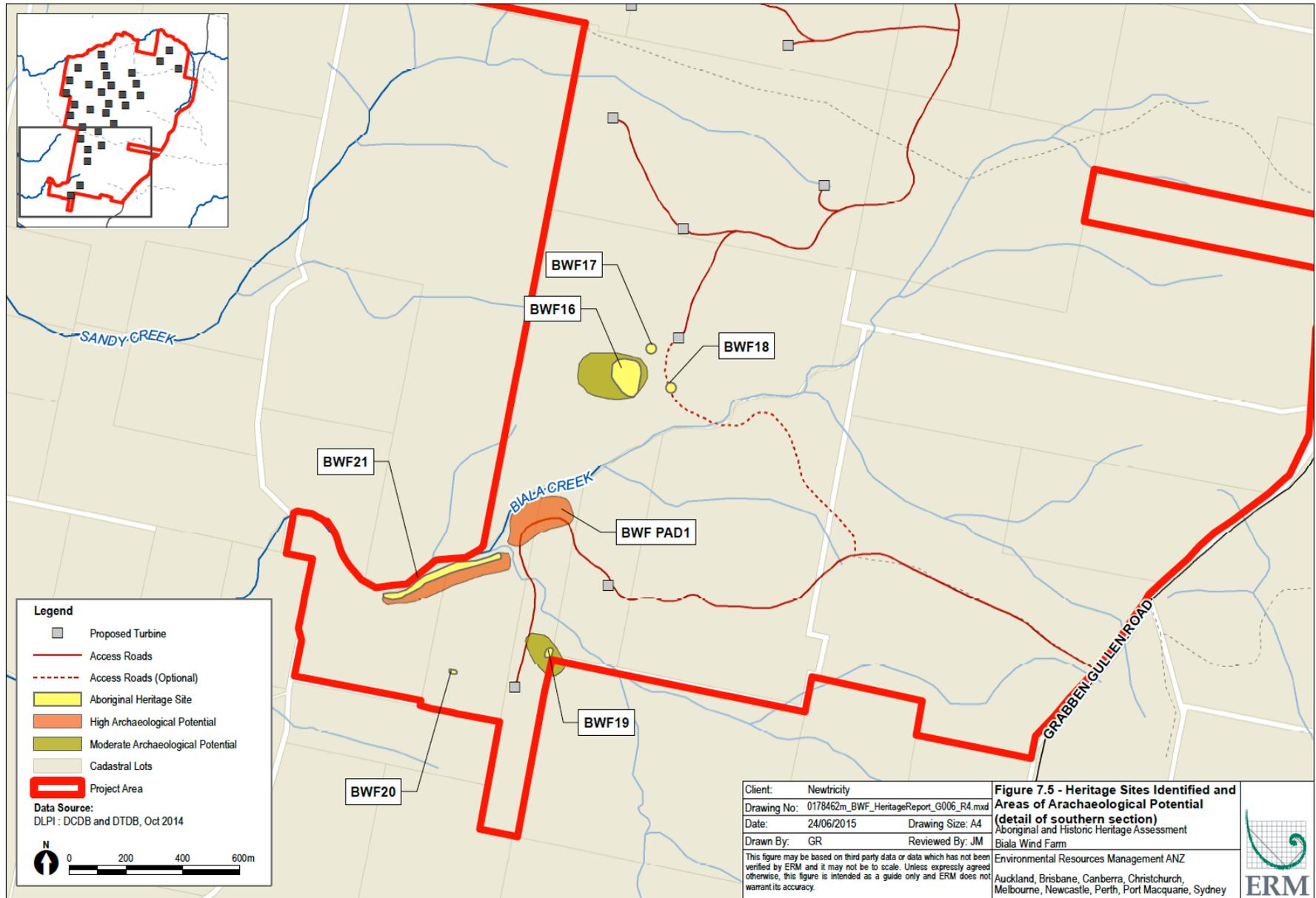


**APPENDIX 6
ABORIGINAL HERITAGE SITES**

Aboriginal Heritage Sites - Avoid Impact

| Site |
|---|
| BWF1, BWF2, BWF3, BWF4, BWF5, BWF6, BWF7, BWF9, BWF10, BWF11, BWF12, BWF13, BWF14, BWF15, BWF16, BWF17, BWF19, BWF20, BWF21 |





APPENDIX 7 SCHEDULE OF ROAD UPGRADES



ADMIN 011 261 892

Upper Lachlan Shire Council

All correspondence addressed to the General Manager, PO Box 42, Gunning NSW 2581

Crookwell Office: 44 Spring Street, Crookwell NSW 2585

p: 02 4830 1000 | f: 02 4832 2066 | e: council@upperlachlan.nsw.gov.au | www.upperlachlan.local.nsw.gov.au

Gunning Office: 123 Yasa Street, Gunning NSW 2581

p: 02 4845 4100 | f: 02 4845 1426 | e: council@upperlachlan.nsw.gov.au

Teralga Office: Teralga Community Service Centre, Orchard Street, Teralga NSW 2580

p: 02 4840 2099 | f: 4840 2205 | e: teralgacouncil@nsw.gov.au

Councils Requirements for the Reconstruction of the Roads Involved With the Over Mass and Overdimension Route to the Bialla Windfarm Project:

This schedule was developed during a field inspection of the route with representatives from Newtricity, ERM consultants, GTA consultants and ULSC on 3 December 2015.

The locations shown are based on chainages that are measured from the intersection of the Goulburn – Crookwell Rod (Main Road 54) AND Grange Road.

The works required are as follows:

- I. Replacement of causeways
 - a. Kialla Road – Seven causeways require replacement with pipe culverts to enable long vehicles to cross without ‘bottoming out’ on the pavement (and subsequently damaging the pavement);
 - b. Range Road – Two causeways require replacement with culverts
- II. Rehabilitation of Pavements
 - a. Kialla Road – rehabilitation is required to the pavements at the following locations:
 - i. 7.69km – 8.29km (600m)
 - ii. 11.19km – 12.67km (1.5km)
 - b. Range Road rehabilitation is required to the pavements:
 - i. 12.81km – 20km (7.3km)

The scope of the work is as follows:

- a. Remove grass and debris from the roadside out to the required width.
- b. Clear roadside drains to ensure that sound drainage is provided for the pavement and that it connects adequately to the road cross drainage culverts and causeways.
- c. Install approved soil erosion protection structures to drains and other areas as required.
- d. Shape shoulders to correct crossfall (4%) and add gravel to ensure correct width and cross sectional shape is achieved.

- e. Tyne existing pavement ,reshape to ensure correct crossfall is achieved and add 100mm of approved material that will be imported from an approved quarry.
- f. Add pavement stabilisation chemicals in accordance with geotechnical recommendations and mix with approved pavement mixing machine to achieve a homogenous pavement of minimum 200mm thickness.
- g. Shape and compact the pavement to specification.
- h. Apply topsoil to roadside areas to match adjusted levels to existing.
- i. Final trim pavement.
- j. Apply 14/7 double/double coat seal.
- k. Ensure that all erosion control devices are in place and working correctly.
- l. Apply 7mm reseal at completion of windfarm construction.

The specifications for this work are as follows:

- a. Seal width - 6.5m
- b. Shoulder width 1m (each side).
- c. Min. Crossfall 4% (on straight alignment)
- d. Superelevation (and transitions) on curves to be determined between contractor and ULSC.
- e. Min. compaction for pavement materials is 100% of standard compaction value.

Councils experience with the type of rehabilitation required indicates that the costs of such works are around \$280,000 - \$300,000/km. This will vary due to timing and the effect of time over the costs of inputs.

III. Intersection treatments to facilitate turning with long/wide loads:

- a. MR54 (Goulburn Road)/Grange Road intersection will require removal of several trees on the south eastern side of the intersection. It should be noted that the trees on the northern side of MR54 must not be touched;
- b. Grange Road/Cullen Street – this intersection will require widening. It should be noted that the widening cannot be constructed on the inside of the intersection due to the presence of a large protected tree;
- c. Cullen Street/Kialla Road – this intersection has a bypass track that was constructed for the Gullen Range Windfarm. The landowner of the land may be willing to enter into a similar arrangement with Newtricity;
- d. Kialla Road/Range Road – this intersection will require some earthworks to allow it to be traversed by over mass and overdimension vehicles;
- e. Range Road/Grabben Gullen Road – this intersection will require some modification for use by over mass and overdimension vehicles;
- f. Access arrangements to the Windfarm site – Council is aware that Newtricity wishes to use three locations to access the site from Grabben Gullen Road. As

was determined during the site inspection, none of these have adequate sight distance. Council acknowledges that adequate site could be available by relocating each access. Council understands that Newtricity has arranged for alternate access arrangements to be put in place. The locations appear to have adequate available sight distance and (subject to final measurements and design) will satisfy Council's requirements.

APPENDIX 8 OVER-DIMENSIONAL & HEAVY VEHICLE ACCESS ROUTES

